

► **2021-2022**
UNDERGRADUATE
CATALOG



CALIFORNIA UNIVERSITY
OF PENNSYLVANIA

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July 2021

California University of Pennsylvania Undergraduate Catalog

[Download the undergraduate catalog \(PDF\)](#)

This catalog is edited by the Academic Affairs Office.

California University of Pennsylvania

250 University Avenue
California PA 15419-1394
724-938-4404
www.calu.edu

The core values of California University of Pennsylvania (Cal U) are integrity, civility and responsibility.

Cal U is a member of Pennsylvania's State System of Higher Education.

Pennsylvania's State System of Higher Education

2986 North Second Street
Harrisburg PA 17110
717-720-4000
www.passhe.edu

Table of Contents

California University of Pennsylvania Undergraduate Catalog	2
Disclaimer.....	10
From the President.....	11
About California University of Pennsylvania	12
Identity and Mission.....	14
Governance and Administration.....	14
Academic Policies and Procedures.....	18
Accreditations.....	18
University Police.....	22
Louis L. Manderino Library.....	22
Admissions	24
Evaluation of Applicants.....	24
Specific Admission Requirements.....	25
Transfer Student Policies.....	27
Academic Departments and Programs	29
Accelerated Bachelor's-to-Master's Programs	31
B.A. in Arabic to M.A. in Arabic.....	32
B.A. in Jurisprudence to M.S. in Legal Studies.....	34
B.A. in Mathematics to PSM in Applied Math.....	37
B.A. in Sociology: Social Deviance to M.Ed. in School Counseling.....	40
B.A. in Sociology: Social Deviance to M.S. in Clinical Mental Health Counseling.....	43
B.S. in Business Administration: Integrated Business to MBA.....	46
B.S. in Business Administration: MIS to MBA.....	50
B.S. in Commercial Music Technology to MBA.....	54
B.S. in Criminal Justice to M.A. in Applied Criminology.....	57
B.S. in Exercise Science to M.S. in Exercise Science and Health Promotion.....	60
B.S. in Health Science: Pre-Athletic Training to M.S. in Athletic Training.....	63
B.S. in Professional Studies in Education to M.Ed. in School Counseling.....	66
B.S. in Professional Studies in Education to M.S. in Clinical Mental Health Counseling.....	70
B.S.B.A. in Accounting to M.Acc.....	73
B.S.B.A. in Accounting to MBA.....	77
B.S.B.A. to MBA.....	80
B.S.Ed. in Grades Pre-K-4 Education to M.Ed. in Integrative STEM Education K-12.....	84
B.S.Ed. in Grades Pre-K-4 Education to M.Ed. in Reading Specialist.....	87
B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. in Integrative STEM Education K-12.....	91
B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. in Reading Specialist... ..	95
B.S.Ed. in Middle Level Grades 4-8 Education: Math to M.Ed. in Integrative STEM Education K-12.....	98
B.S.Ed. in Middle Level Grades 4-8 Education: Science to M.Ed. in Integrative STEM Education K-12... ..	102
B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Integrative STEM Education K-12.....	106
B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Reading Specialist.....	110
Department of Biology, Geology and Environmental Sciences	114
A.S. in Veterinary Technology.....	115
B.A. in Anthropology: Archaeology Concentration.....	117
B.A. in Anthropology: Forensic Concentration.....	119
B.S. in Biology.....	122
B.S. in Biology: Mortuary Science.....	124
B.S. in Biology: Plant Biology Concentration.....	126
B.S. in Biology: Pre-Chiropractic Medicine Concentration.....	128

Table of Contents

B.S. in Biology: Pre-Professional Concentrations.....	130
B.S. in Environmental Studies: Conservation Ecology Concentration.....	133
B.S. in Environmental Studies: Environmental Science Concentration.....	135
B.S. in Fisheries and Wildlife Biology.....	137
B.S. in Geology.....	140
B.S. in Molecular Biology.....	142
B.S. in Veterinary Technology.....	144
Minor in Anthropology.....	146
Minor in Biology.....	147
Minor in Environmental Geosciences.....	147
Minor in Environmental Science.....	148
Minor in Fisheries and Wildlife.....	149
Minor in Geology.....	149
Minor in Hydrology.....	151
Department of Business, Economics and Enterprise Sciences.....	152
A.S. in Accounting.....	153
B.S. in Business Administration: Integrated Business Concentration.....	155
B.S. in Business Administration: Management Information Systems Concentration.....	157
B.S.B.A. in Accounting.....	159
B.S.B.A. in Economics.....	162
B.S.B.A. in Finance.....	164
B.S.B.A. in Human Resource Management.....	167
B.S.B.A. in ISBC: Corporate Communication Concentration.....	169
B.S.B.A. in ISBC: Event Planning and Management Concentration.....	172
B.S.B.A. in ISBC: Geo-Business Concentration.....	175
B.S.B.A. in ISBC: Parks and Recreation Management Concentration.....	177
B.S.B.A. in ISBC: Tourism and Hospitality Management Concentration.....	180
B.S.B.A. in Interdisciplinary Studies in Business and Commerce.....	183
B.S.B.A. in Management.....	185
B.S.B.A. in Marketing.....	188
Certificate in Forensic Accounting.....	190
Certificate in Innovation and Entrepreneurship.....	191
Minor in Accounting.....	192
Minor in Arts Administration.....	192
Minor in Business.....	193
Minor in Economics.....	194
Minor in Event Planning and Management.....	195
Minor in Finance.....	195
Minor in Forensic Accounting.....	196
Minor in Geo-Business.....	197
Minor in Geographic Information Technology.....	197
Minor in Human Resource Management.....	198
Minor in Management.....	198
Minor in Management Information Systems.....	199
Minor in Marketing.....	199
Minor in Parks and Recreation.....	200
Minor in Tourism Studies.....	201
Department of Computer Science, Information Systems and Engineering Technology.....	203
A.A.S. in Electrical Engineering Technology.....	204
A.S. in Computer Engineering Technology.....	205
A.S. in Digital Media Technology.....	207
A.S. in Technical Studies.....	208
A.S. in Technical Studies: Robotics Engineering Technology.....	210

Table of Contents

A.S. in Technology Studies: UAS Technology.....	211
B.S. in Computer Engineering Technology.....	213
B.S. in Computer Information Systems.....	215
B.S. in Computer Science.....	218
B.S. in Digital Media Technology.....	221
B.S. in Electrical Engineering Technology.....	223
B.S. in Industrial Technology Management.....	226
B.S. in Mechatronics Engineering Technology.....	228
Minor in Computer Information Systems.....	231
Minor in Computer Science.....	231
Minor in Digital Media Technology.....	232
Minor in Electrical Engineering Technology.....	233
Minor in Robotics Engineering Technology.....	234
Department of Criminal Justice and Psychology.....	235
A.S. in Technical Studies: Applied Policing and Technology Concentration.....	236
B.S. in Criminal Justice.....	237
B.S. in Criminal Justice: Criminology Concentration.....	239
B.S. in Criminal Justice: Cyber Forensics Concentration.....	242
B.S. in Criminal Justice: Forensic Investigation Concentration.....	244
B.S. in Criminal Justice: Homeland and International Security Concentration.....	247
B.S. in Criminal Justice: Law and Justice Concentration.....	251
B.S. in Psychology.....	254
Certificate in Diversity and Multicultural Competence.....	256
Certificate in Mental Health Technician.....	256
Minor in Criminal Justice.....	257
Minor in Forensic Investigation / Cyber Forensics.....	257
Minor in Leadership.....	258
Minor in Psychology.....	261
Department of Culture, Media, and Performance.....	263
B.A. in Communication Studies.....	264
B.A. in English: Creative Writing Concentration.....	267
B.A. in English: Journalism Concentration.....	270
B.A. in English: Literature Concentration.....	273
B.A. in Theatre.....	276
B.A. in Theatre: Design and Entertainment Technology Concentration.....	278
B.A. in Theatre: Musical Theatre.....	281
B.S. in Commercial Music Technology.....	283
B.S. in Commercial Music Technology: Commercial Music Business Concentration.....	288
B.S. in Graphic Design.....	292
Minor in Acting.....	295
Minor in Art History.....	295
Minor in Communication Studies.....	296
Minor in Creative Writing.....	297
Minor in Dance.....	297
Minor in Design and Entertainment Technology.....	298
Minor in Graphic Design.....	300
Minor in Journalism.....	301
Minor in Literature.....	301
Minor in Music.....	302
Minor in Musical Theatre Performance.....	304
Minor in Philosophy.....	305
Minor in Theatre.....	306
Minor in Theatre History and Literature.....	307
Minor in Writing.....	307

Table of Contents

Department of Education	309
A.S. in Early Childhood Education	310
B.S. in Professional Studies in Education.....	312
B.S.Ed. in Art: Secondary Education.....	314
B.S.Ed. in Biology: Secondary Education.....	317
B.S.Ed. in Chemistry: Secondary Education.....	320
B.S.Ed. in Communications: Secondary Education.....	323
B.S.Ed. in Earth and Space Science: Secondary Education.....	325
B.S.Ed. in English: Secondary Education.....	328
B.S.Ed. in Grades Pre-K-4 Education.....	331
B.S.Ed. in Mathematics: Secondary Education.....	334
B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading.....	337
B.S.Ed. in Middle Level Grades 4-8 Education: Mathematics.....	340
B.S.Ed. in Middle Level Grades 4-8 Education: Science.....	343
B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies.....	346
B.S.Ed. in Physics: Secondary Education.....	350
B.S.Ed. in Social Studies: Secondary Education.....	352
B.S.Ed. in Special Education Pre-K-12.....	355
B.S.Ed. in Technology Education.....	358
Minor in Education Multidisciplinary.....	361
Minor in Foundations of Secondary Education.....	362
Post-Baccalaureate Certification Only: Grades 4-8 Education: Language Arts and Reading.....	362
Post-Baccalaureate Certification Only: Grades 4-8 Education: Mathematics.....	365
Post-Baccalaureate Certification Only: Grades 4-8 Education: Science.....	367
Post-Baccalaureate Certification Only: Grades 4-8 Education: Social Studies.....	370
Post-Baccalaureate Certification Only: Pre-K-4.....	372
Department of Exercise Science and Sport Studies	375
B.S. in Exercise Science.....	375
B.S. in Exercise Science: Professional Golf Management Concentration.....	378
B.S. in Sport Management Studies.....	380
B.S. in Sport Management Studies: Professional Golf Management Concentration.....	382
Department of Health Sciences	385
A.A.S. in Physical Therapist Assistant.....	385
B.S. in Health Science.....	387
B.S. in Health Science: Pre-Athletic Training Concentration.....	389
Certificate in Aging Specialist.....	391
Minor in Gerontology.....	392
Minor in Health Science.....	393
Department of Health and Human Service Professions	394
B.S. in Communication Disorders.....	394
BSW in Social Work.....	397
Certificate in Trauma-Informed Care (TIC).....	401
Minor in Social Work.....	401
Minor in Women's Studies.....	402
Department of Humanities	406
A.A. in Liberal Studies.....	407
B.A. in Arabic Language and Culture.....	408
B.A. in Global Studies.....	411
B.A. in History.....	413
B.A. in Jurisprudence: Legal Studies Concentration.....	415
B.A. in Liberal Studies.....	417
B.A. in Political Science.....	419
B.A. in Political Science: Pre-Law Concentration.....	421

Table of Contents

B.A. in Social Sciences.....	423
B.A. in Sociology.....	425
B.A. in Sociology: Social Deviance Concentration.....	427
B.F.A. in Art Studio.....	429
Certificate in Arabic Language and Culture.....	434
Certificate in History of War, Service and the American Experience.....	435
Certificate in Spanish for Business.....	436
Certificate in Spanish for Law Enforcement.....	437
Certificate in Studio Art.....	437
Certificate: Violence and Incidence Collaborative Evaluation in Schools.....	441
Minor in African American Studies.....	442
Minor in Arabic.....	442
Minor in French.....	443
Minor in History.....	444
Minor in Political Science.....	444
Minor in Pre-Law.....	445
Minor in Sociology.....	446
Minor in Spanish.....	447
Minor in Studio Art.....	447
Department of Mathematics and Physical Sciences.....	449
B.A. in Mathematics.....	450
B.A. in Physics.....	452
B.S. in Chemistry.....	454
B.S. in Earth Science: Climate Science Concentration.....	457
B.S. in Earth Science: Meteorology Concentration.....	459
B.S. in Statistics and Data Science.....	462
Certificate in Data Science.....	464
Minor in Chemistry.....	465
Minor in Mathematics.....	465
Minor in Meteorology.....	466
Minor in Physics.....	467
Minor in Statistics.....	467
Department of Nursing and Allied Health.....	469
A.S. in Radiologic Technology/Science.....	469
BSN in Nursing (RN to BSN).....	471
B.S. in General Education.....	474
Honors Program.....	476
Military Science (ROTC).....	478
The Basic Program.....	478
B.S. in Science and Technology: Multidisciplinary Studies.....	480
TRIO and Academic Development Services.....	483
Exploratory Studies.....	484
General Education Courses.....	485
Building a Sense of Community (1 Cr.).....	486
Composition (3-6 Crs.).....	487
Composition Course Menu.....	487
Ethics and Multicultural Emphasis List (EMEL).....	489
Ethics and Multicultural Emphasis List Course Menu.....	490
Fine Arts (3 Crs.).....	492
Fine Arts Course Menu.....	492

Table of Contents

General Education (9-12 Crs.)	494
Health and Wellness (3 Crs.)	495
Health and Wellness Course Menu.....	495
Humanities (3 Crs.)	496
Humanities Course Menu.....	496
Laboratory Component Courses (one course)	499
Laboratory Component Course Menu.....	499
Mathematics and Quantitative Literacy (3 Crs.)	501
Mathematics and Quantitative Literacy Course Menu.....	501
Natural Sciences (3-4 Crs.)	502
Natural Sciences Course Menu.....	502
Public Speaking (3 Crs.)	504
Public Speaking Course Menu.....	504
Social Sciences (3 Crs.)	505
Social Sciences Course Menu.....	505
Special Experience Component Courses (one course)	507
Special Experience Component Course Menu.....	507
Technological Literacy (3 Crs.)	509
Technological Literacy Course Menu.....	509
Writing-Intensive Component Courses (two courses)	511
Writing-Intensive Component Course Menu.....	511
Course Descriptions	514
Student Affairs	918
Vice President's Office / Dean of Students.....	919
Student Handbook.....	920
Accommodations for Students with Disabilities.....	920
Center for Volunteer Programs and Service Learning.....	921
Commuter and Non-Traditional Student Services.....	921
Counseling and Psychological Services.....	921
Dining Services.....	922
End Violence Center.....	922
Housing.....	922
Recreational Services.....	922
Wellness Center.....	923
Financial Aid	925
Academic Success	926
Academic Advising.....	926
Academic Scheduling and Placement Testing Center.....	927
Academic Support Programs and Services.....	927
FERPA and Parent/Guest Portal.....	929
Prior Learning Assessment.....	929
Office of Diversity, Equity and Inclusion	930
Human Resources	931
Nondiscrimination Statement.....	932
Policies.....	932
Military and Veterans Affairs	934

Table of Contents

State Authorization	935
Global Online Complaint Process.....	935
Tuition and Fees	936

Disclaimer

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From the President

California University of Pennsylvania has been a place of opportunity for nearly 170 years. Since the institution was founded in 1852, students have come to California to build a strong academic foundation, fulfill their personal potential and prepare for successful careers.

Today, Cal U offers a high-quality academic experience, whether students are on campus or online. Undergraduates choose from among more than 100 programs of study, while graduate-level degree, certificate and professional certification programs offer opportunities for advanced study and professional growth.

Cal U faculty members are experts in their fields. Although many professors are involved in research or other scholarly pursuits, their passion is teaching. Working side by side with a team of student support professionals, our faculty members are committed to empowering students to become confident, successful learners.

Many academic programs include hands-on components, and students are encouraged to extend their learning beyond the classroom. Through practical, applied learning activities, Cal U students engage with and serve the community, putting their education to work as they address real-world issues. Both the Career and Professional Development Center and the Internship Center give our students a competitive advantage as they prepare to enter the workplace.

Cal U is a student-centered university, and we understand the importance of a vibrant and inclusive campus environment. The University's secure, comfortable, on-campus residence halls are second to none. About a mile away, on our upper campus, the Student Association Inc. makes apartment-style living available at Vulcan Village.

More than 100 student clubs and organizations offer leadership opportunities and a broad range of activities. The Herron Recreation and Fitness Center is open daily for individual workouts, group fitness classes and intramural sports. On the upper campus, Roadman Park and the Student Association's SAI Farm host athletic contests and outdoor recreation, as well as academic projects and fieldwork. Renowned speakers, performers and entertainers visit our campus regularly, creating an atmosphere rich in culture and creativity.

Cal U is proud to be a diverse, caring and scholarly learning community, dedicated to academic excellence. We strive to support each student and to graduate knowledgeable, confident, career-ready professionals. Inspired by our core values of integrity, civility and responsibility, we give our students the tools and teaching they need to rise up and achieve.

I invite you to unlock your story and build your future at Cal U.

Sincerely,

Robert J. Thorn, interim University President



About California University of Pennsylvania

California University of Pennsylvania lies within the borough of California, a community of approximately 6,300 residents located on the banks of the Monongahela River, less than an hour's drive south of Pittsburgh. It is accessible via Interstate 70 Exits 15 (PA 43), 16 (Speers) or 17 (PA 88, Charleroi) or via U.S. 40 (PA 43 or 88). The Mon Valley Fayette Expressway (PA 43) links California to the federal Interstate Highway System. The University is approximately 30 minutes from Exit 8 (New Stanton) of the Pennsylvania Turnpike, and an hour from Pittsburgh International Airport.

The main campus consists of 98 acres, including the Phillipsburg annex. The 98-acre recreation complex, George H. Roadman University Park, is located just over a mile from campus. This complex includes a football stadium, an all-weather track, tennis courts, a baseball diamond, a softball diamond, soccer and rugby fields, a cross country course, areas for intramural sports and picnic facilities.

Adjoining Roadman Park is the 94-acre SAI Farm, purchased in 2010. The parcel includes a cross country course, recreation space and a farmhouse that has been renovated for student meetings. Together, Roadman Park and the SAI Farm comprise the University's upper campus.

In the University's award-winning residence halls, students enjoy the comfort and convenience of on-campus living, usually sharing a bathroom with no more than one other person. All residence halls are air-conditioned and have state-of-the-art sprinkler and security systems.

Roadman Park is the site of an upper-campus housing complex, Vulcan Village, whose residents live in attractive, furnished garden-style apartments owned by the nonprofit Student Association Inc. Most Vulcan Village apartments have individual baths, living room, dining area, completely furnished kitchen (including dishwasher and microwave) and full-size washer and dryer. Vulcan Flyer shuttles make it easy for Vulcan Village residents to ride to and from the main campus.

The geographic location of the University gives the resident student opportunities to explore and pursue a wide variety of activities. The University is a short drive from scenic locations for camping, hiking, fishing, hunting, white-water rafting, canoeing and skiing. In addition to varied cultural activities on campus, students have easy access to the Pittsburgh metropolitan area, located only 35 miles north of the campus. This provides an opportunity to enjoy the Pittsburgh Symphony Orchestra; the Pittsburgh Ballet; the Civic Light Opera; the David L. Lawrence Convention Center; the Pittsburgh Steelers, Penguins and Pirates; various museums; and all of the excitement and attractions of a major metropolitan area.

History

The institution that is now California University of Pennsylvania began as an academy in 1852. It has evolved over the years into a comprehensive university, one of the 14 state-owned institutions that comprise Pennsylvania's State System of Higher Education.

1852: A two-story academy, offering education from kindergarten through college, is established in the recently founded community of California, Pa.

1865: The academy obtains a charter as a normal school for its district and becomes a teacher-preparatory institution.

1874: The institution is renamed the South-Western Normal School.

1914: The commonwealth acquires the institution and renames it the California State Normal School. The curriculum becomes exclusively a two-year preparatory course for elementary school teachers.

1928: The institution becomes California State Teachers College, returning to its previous status as a four-year-degree-granting institution, concentrating on industrial arts and special education.

California University of Pennsylvania

1959: Liberal arts curricula are introduced and the college becomes California State College.

1962: A graduate program is introduced.

1974: The college develops a special mission in science and technology.

1983: On July 1, 1983, the college becomes part of the Pennsylvania State System of Higher Education and changes its name to California University of Pennsylvania.

1983: The College of Science and Technology becomes fully operational.

1996: The College of Science and Technology is renamed the Eberly College of Science and Technology, honoring the Eberly Foundation for its philanthropic generosity.

1998: The University formally adopts three core values: integrity, civility and responsibility.

2002: The University Council of Trustees formally adopts a list of rights and responsibilities.

2004-2007: The University responds to student needs and completely redesigns the concept of residence life. Six suite-style residence halls are constructed on the main campus, and an apartment complex now known as Vulcan Village is constructed on the upper campus.

2009: After a major renovation and expansion project, Herron Recreation and Fitness Center is re-dedicated.

2010: The Student Association Inc. purchases SAI Farm and begins developing the location as a site for student recreation, learning and meetings.

2011: The Phillipsburg Soccer Facility is dedicated.

2012: Geraldine M. Jones is named acting President of the University; she is named interim President the following year.

2013: In May, the former Residence Hall A is renamed the G. Ralph Smith II Honors Hall in recognition of a former English professor whose bequest to the University is the largest in its modern history. In October, the former Residence Hall C is renamed Ivan '41 and Adelaide Ivill '38 Guesman Hall in honor of the philanthropic alumni couple.

2015: Natali Student Center is re-dedicated after a two-year renovation and expansion project.

2016: Geraldine M. Jones is inaugurated as California's seventh President.

2018: The largest gift in the institution's history establishes the Rutledge Institute for Early Childhood Education, named for donors Karen and Tom '77 Rutledge.

2019: Coover Hall, which houses applied engineering and technology programs, plus courses in art and graphic design, is rededicated, following a two-year renovation.

2021: Robert Thorn is named interim President of the University, following the retirement of President Geraldine M. Jones.

(Additional information about the University and its history may be found in the book *California University of Pennsylvania: The People's College in the Monongahela Valley*, by Regis J. Serinko, published in 1992.)

Identity and Mission

Identity

California University of Pennsylvania, a comprehensive regional institution of higher education and a member of Pennsylvania's State System of Higher Education, is a diverse, caring and scholarly learning community dedicated to excellence in the liberal arts, science and technology, and professional studies that is devoted to building character and careers, broadly defined. The University is inspired by its core values of **Integrity, Civility** and **Responsibility** and is guided by its Bill of Rights and Responsibilities:

- We have the right to safety and security;
- We have the responsibility to ensure the safety and security of others;
- We have the right to be treated with respect;
- We have the responsibility to treat others with respect;
- We have the right to expect the best;
- We have the responsibility to give our best;
- We have the right to be treated fairly;
- We have the responsibility to treat others fairly.

Vision

Supporting the vision of Pennsylvania's State System of Higher Education, California University of Pennsylvania will exemplify academic excellence, innovation, service, personal growth and social justice for all.

Mission

The mission of California University of Pennsylvania is to provide a high-quality, student-centered education that prepares an increasingly diverse community of lifelong learners to contribute responsibly and creatively to the regional, national and global society, while serving as a resource to advance the region's cultural, social and economic development. Accordingly, the Cal U Strategic Plan 2015-2020 looks to our mission for inspiration and guidance.

This strategic plan is designed to empower the University to serve as a resource in the region and the Commonwealth. The strategic plan consists of five goals, with 17 objectives (strategies) that are designed to enable the strategic plan to be a "living document" that will lead California University of Pennsylvania into the future.

The strategic plan focuses the University on three key initiatives to assure the success of the University in the coming years. Those initiatives are:

- Enhancing the academic excellence and experience of our students.
- Operating with sound and efficient fiscal and governance practices.
- Achieving optimal enrollment in these challenging times.

Legacy

Founded in 1852, and now in its second 150 years of service, the University is committed above all to academic excellence and intellectual rigor in the context of personal and institutional Integrity, Civility and Responsibility.

Adopted by the Council of Trustees of California University of Pennsylvania on June 4, 2003.

Governance and Administration

Pennsylvania State System of Higher Education

Chancellor

Daniel Greenstein

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William "Bill" Gindlesperger
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California University of Pennsylvania

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Robert J. Thorn

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Barry Niccolai '93
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Joy Folmar, administrative assistant II

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Mark Aune, director of honors program
Lanie Bilitski, administrative assistant
Jodie Bonidie, academic events coordinator
Leonard Colelli, associate provost for assessment and accreditation
Brenda Fredette, dean, Eberly College of Science and Technology

California University of Pennsylvania

Shayne Gervais, university registrar
Yugo Ikach, dean, School of Graduate Studies and Research
Douglas Hoover, dean of library services and undergraduate research
Daphne Livingstone, executive staff assistant to the provost
Kristen Majocho, dean, College of Education and Liberal Arts
Marta McClintock-Comeaux, director of women's studies
Stephen H. Whitehead, associate provost of innovation and associate vice president for academic affairs

Administration and Finance

Fawn Petrosky, interim vice president for administration and finance
James Ahearn, director of payroll
Paul Allison, associate vice president and chief information officer for university technology services
Keith Curran, comptroller
Adam Gill, director of budget and strategic planning
Eric Guiser, director of human resources
Kristine Hall, administrative assistant
Christopher Johnston, director of parking and transportation
Michael Kanalis, director of facilities management
Edward McSheffery, chief of university police
Jack Rogers, director of student accounts
Thomas Taylor, director of administrative services
Ben Wise, fire safety specialist for environmental health and safety

Communication and Marketing

Christine Kindl, vice president for communications and marketing
Erin Angotti, SEO coordinator
Jeff Bender, director of digital communications
Emily Boarts, creative project manager
Zach Frailey, photo manager/editor
Phil Haragos, artist/illustrator 3
Keli Henderson, director of marketing
Ruth Kinder, administrative assistant I
Denise King, marketing assistant
Wendy Mackall, director of communications and public relations
John Miller, web designer/CMS coordinator
Greg Sofranko, director of creative services
Anthony Sonita, social media specialist

Diversity, Equity and Inclusion

Sheleta Camarda-Webb, interim chief diversity, equity and inclusion officer

Enrollment Management

T. David Garcia, vice president for enrollment management
Ben Brudnock, director of graduate admissions
Rhonda Gifford, director of career and professional development center
Jeffrey DeRubbo, director of financial aid
Jill Loop, director of academic success initiatives
Tracey Sheetz, dean of undergraduate admissions
Dana Turcic, executive staff assistant to the vice president for enrollment management

Student Affairs

Larry Sebek, interim vice president for student affairs/dean of students
Debra Anderson, nurse supervisor

California University of Pennsylvania

Rebecca Barnhart, residence hall director
Dawn Bellotti, RN
Jayna Bonfini, counselor, assistant professor, counseling center
Terry Carnathan, coordinator of informal recreation and wellness
Tammy Clark, administrative assistant for university housing
Debra Custer, management technician, office for students with disabilities
Cathie Czernecki, RN
Cody Deitz, residence hall director
Brenda DePaoli, executive staff assistant, division of student affairs
Melissa Dunn, director of student engagement
Robert Farquhar, management technician, conference services/student engagement/auxiliary services
Paul Fazio, assistant director of student center
Donna George, PASSHE alcohol and other drug coalition coordinator
Christa Grillo, RN
Diane Hasbrouck, director, center for volunteer programs and service learning/commuter and non-traditional student services
Thomas Hasbrouck, assistant director of recreational services
Donna Hoak, secretary, women's center/end violence center/student conduct
Cheryl Lotti, RN
John Massella, director, associate professor, office for students with disabilities
Becky McMillen, director of auxiliary enterprises
Rachel Michaels, director of student wellness support services
Gloria Minutello, technical director
Dawn Moeller, clinical psychologist/professor, counseling center
Lindsay Mongell, director of events, conference services
James Pflugh, associate dean for student conduct
Tina Pierce, certified registered nurse practitioner
Micah Reed, residence hall director
Jamison Roth, director of recreational services
Nancy Skobel, associate dean for student affairs
Stephanie Stern, counselor, assistant professor, counseling center
Anthony Steve, student affairs systems administrator, CalCard services
Timothy Susick, associate vice president for student affairs, T.R.A.I.T. coordinator
Jackie Thorn, facilities and occupancy manager, university housing
Diane Tomi, administrative assistant, wellness center/recreational services
Terry Wigle, associate dean for student affairs

Student Association Inc. (SAI) / Vulcan Village

Nicole Arthur, administrative assistant, SAI
Kimberly Cupplo, senior traditional accountant, SAI
Pam DelVerne, director of technology services, SAI
Cheryl Golembiewski, student center coordinator, SAI
Lisa Hartley, accounts payable/payroll supervisor, SAI
Jeff Helsel, director of print and multimedia journalism, SAI
Joy Helsel, director of fraternity and sorority life/special publications, SAI
Leigh Ann Lincoln, chief financial officer, SAI
Richard Morris, maintenance technician, Vulcan Village
Justin Schiefelbein, community manager, Vulcan Village
Ron Sealy, athletic practice fields foreman, SAI
Jared Shiner, contract and marketing manager, Vulcan Village
Keith Skirpan, senior housing accountant, SAI
Gary Smith, director of CUTV operations, SAI
Thomas Zeman, maintenance manager, Vulcan Village

University Development and Alumni Relations

Anthony Mauro, vice president for university development and alumni relations

Ryan Barnhart, director of alumni relations

Christian Caldwell, manager of data and support services

Cathy Connelly, senior director of development

Mariah Peoples, development assistant

Marisa Novak, executive staff assistant to vice president for university development and alumni relations

Justin James, development associate

Randi Minerva, manager of annual giving programs

Staci Tedrow, administrative assistant for alumni relations

Academic Policies and Procedures

Faculty advisers are available to assist students in academic planning and to discuss student academic progress.

Please visit <https://www.calu.edu/inside/policies/> to view the most current academic policies.

Accreditations

UNIVERSITY MEMBERSHIPS, RECOGNITIONS AND ACCREDITATIONS

MEMBER of the Pennsylvania State System of Higher Education

MEMBER of the American Association of State Colleges and Universities (AASCU)

1307 New York Ave. NW, Fifth Floor

Washington, DC 20005-4701

202-293-7070

Fax 202-296-5819

www.aascu.org

MEMBER of the American Association of Colleges of Teacher Education (AACTE)

1307 New York Ave. NW, Suite 300

Washington, DC 20005-4701

202-293-2450

Fax 202-457-8095

www.aacte.org

ACCREDITED by the Middle States Commission on Higher Education (MSCHE)

3624 Market St.

Philadelphia, PA 19104

267-284-5000

Fax 215-662-5501

www.msche.org

PROGRAM RECOGNITIONS and CERTIFICATIONS

Administrative Program for Principals (Embedded within the Master's Program) and Superintendent Letter of Eligibility (Post-Master's Certification)

Recognized by the Educational Leadership Constituent Council (ELCC)

1615 Duke St.

Alexandria, VA 22314-3483

703-518-6256
Fax 703-549-5568
<http://naesp.org>

B.S. Chemistry Program, Certified by the American Chemical Society (ACS)
1155 16th St.
Washington, DC 20036
www.acs.org/cpt

PROGRAM ACCREDITATIONS

B.A. Art, BFA Studio Art, and B.S.Ed. Art Education programs, accredited by the National Association of Schools of Art and Design (NASAD)
11250 Roger Bacon Dr. Suite 21
Reston, VA 20190
703-437-0700
Fax 703-437-6312
nasad.arts-accredit.org

B.S. (Business Administration: Management Information Systems and Integrated Global Business concentrations), B.S.B.A. (Accounting, Economics, Finance, Human Resources Management, Interdisciplinary Studies in Business and Commerce, Management, Marketing), MBA (Accounting, Applied Economics, Business Analytics, Healthcare Management, Management, Nursing Administration, Social Work Administration), and M.Acc. (Accountancy) accredited by the Accreditation Council for Business Schools & Programs (ACBSP)
World Headquarters
11520 West 119th Street
Overland Park, KS 66213 913-339-9356
<https://www.acbsp.org/>

M.S. Communication Disorders program, accredited by the American Speech-Language-Hearing Association (ASHA)
2200 Research Blvd.
Rockville, MD 20850-3289
301-296-5700
Fax 301-296-8580
www.asha.org

B.S. Computer Engineering Technology program, accredited by the Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)
111 Market Place, Suite 1050
Baltimore, MD 21202-4012
410-347-7700
Fax 410-625-2238
www.abet.org

B.S. Computer Information Systems program, accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)
415 N. Charles St.
Baltimore, MD 21201
410-347-7700
www.abet.org

B.S. Computer Science program, accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)
415 N. Charles St.

California University of Pennsylvania

Baltimore, MD 21201
410-347-7700
www.abet.org

M.Ed. School Counseling and M.S. Clinical Mental Health Counseling programs, accredited by the Council for the Accreditation of Counseling and Related Educational Programs (CACREP)
500 Montgomery St, Suite 350
Alexandria, VA 22314
703-535-5990
Fax 703-739-6209
www.cacrep.org

B.S. Electrical Engineering Technology program, accredited by the Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)
111 Market Place, Suite 1050
Baltimore, MD 21202-4012
410-347-7700
Fax 410-625-2238
www.abet.org

A.S. and B.S. Digital Media programs, accredited by the Accrediting Council for Collegiate Graphic Communications, Inc. (ACCGC)
1034 W. 15th St.
Cedar Falls, IA 50613-3659
319-266-8432
www.accgc.org

B.S. Graphic Design program, accredited by the National Association of Schools of Art and Design (NASAD)
11250 Roger Bacon Dr., Suite 21
Reston, VA 20190
703-437-0700
Fax 703-437-6312
nasad.arts-accredit.org

B.S. Mechatronics Engineering Technology, accredited by the Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET)
111 Market Place, Suite 1050
Baltimore, MD 21202-4012
410-347-7700
Fax 410-625-2238
www.abet.org

BSN and MSN (Nursing) programs, accredited by the Commission on Collegiate Nursing Education (CCNE)
655 K Street, NW, Suite 750
Washington, DC 20001
202-887-6791 x249
Fax 202-887-8476
www.ccneaccreditation.org

B.A. Parks and Recreation Management program, accredited by the National Recreation and Park Association Council on Accreditation for Parks, Recreation, Tourism and Related Professions (COAPRT)
1401 Marvin Rd. NE
STE 307, #172
Lacey, WA 98516
360-205-2096
Fax 360-453-7893

California University of Pennsylvania

<https://accreditationcouncil.org/>

A.A.S. Physical Therapist Assistant program, accredited by the American Physical Therapy Association
3030 Potomac Ave., Suite 100
Alexandria, VA 22305-3085
703-706-3243 or 800-999-2782, ext. 3243
www.capteonline.org

A.S. Radiologic Technology program, accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT)
20 N. Wacker Dr., Suite 28050
Chicago, IL 60606-3182
312-704-5300
Fax 312-704-5304
www.jrcert.org

M.S. + Certification program School Psychology program, accredited by the National Association of School Psychologists (NASP)
4340 E. West Highway, Suite 402
Bethesda, MD 20814
301-657-0270
Fax 301-657-0275
www.nasponline.org

BSW and MSW (Social Work) programs, accredited by the Council on Social Work Education (CSWE)
1701 Duke St., Suite 200
Alexandria, VA 22314
703-683-8080
Fax 703-683-8099
www.cswe.org

Educator Preparation programs, approved by NCATE, now referred to as the Council for the Accreditation of Education Preparation (CAEP)
1140 19th St. NW, Suite 400
Washington, DC 20036
202-223-0077
www.caepnet.org

B.A. Theatre program (and concentrations in Musical Theatre and Design and Entertainment Technology), Estill (voice) Education Affiliate, accredited by the National Association of Schools of Theatre (NAST)
11250 Roger Bacon Dr. Suite 21
Reston, VA 20190
703-437-0700
Fax 703-437-6312
Nast.arts-accredit.org

A.S. and B.S. Veterinary Technology programs, accredited by the AVMA Division of Education and Research Committee on Veterinary Technician Education and Activities (CVTEA)
1931 North Meacham Road, Suite 100
Schaumburg, IL 60173-4360
800-248-2862, ext. 6624
Fax 847-285-5732
www.avma.org

California University of Pennsylvania is currently seeking accreditation for their new Athletic Training program and is not accredited by the Commission on Accreditation of Athletic Training Education (CAATE). The institution will be submitting a self-study to begin the accreditation process on July 1, 2022. Submission of the self-study and completion of a site visit does not guarantee that the program will become accredited. Students that graduate from the program prior to accreditation WILL NOT be eligible to sit for the credentialing examination for athletic trainers and will not be eligible for licensure in most states.

University Police

The California University Police Department is a fully recognized law enforcement agency as authorized by 71 P.S. 646, the Administrative Code of 1929 as amended and Title 18 of the Pennsylvania Consolidated Status (Crimes and Offenses), and 24 P.S. 20-1006-A (14) 20-10A (5) of the State System of Higher Education Act.

The department consists of professionally trained individuals capable of responding to requests for assistance in routine and emergency situations. The department, a diverse group of police officers, communications officers and secretarial staff, provides continuous 24-hour assistance to the University community.

The staff includes a director/chief, assistant chief, four lieutenants (three patrol supervisors and one criminal investigator), one specialist/K-9 handler and 11 additional commissioned police officers that have received certification from a MPOETC- approved Act 120 police academy. Two security officers (dispatchers) and an administrative assistant contribute to the operation of the department.

Cal U's Police Department has also established a K-9 unit that will help track lost persons, recover evidence and engage in drug searches and public relations activities, in addition to day-to-day patrol of campus.

Additional services offered to University students, faculty and staff include parking and traffic management, criminal investigations, health, fire and safety surveys, special event planning, accident investigation and crime prevention information and presentations.

Pursuant to the Pennsylvania College and University Security Act and the Federal Crime Awareness and Campus Security Act of 1990, postsecondary institutions, including colleges and universities, must annually make available to all applicants, students and employees information with respect to campus crime statistics and the security policies of the institution.

The information is compiled by Cal U and made available through the Office of Admissions, Office of Student Affairs and University Police and on the University website.

Louis L. Manderino Library

LOUIS L. MANDERINO LIBRARY is committed to providing the resources needed to support the research needs of Cal U students. This includes a substantial collection of peer-reviewed journals, books (including e-books), online research databases and audiovisual materials. In addition to our collections, the library provides both individual and collaborative study areas, including private rooms for group use. To help reduce the stress of studying, the library has vending machines with drinks and snacks, a collection of popular DVDs, a graphic novel collection and a selection of popular reading books.

Electronic Resources: Online information retrieval has made library research more thorough and more efficient. Using the library's research databases and online catalog, students can quickly locate and access an impressive collection of scholarly journals, magazines, books, e-books, newspapers and audiovisual materials. All of the library's electronic resources are accessible from on- and off-campus locations, so students can research anywhere they have Internet access. Since the library is constantly working to provide the best resources for our students, please visit the library's website (<https://library.calu.edu>) for the current list of library resources.

Research Services and Library Instruction: With so many research options available, it can be daunting to know how to search effectively. Help with this process is available to students from the research librarians.

Students are encouraged to contact the librarians through scheduled personal appointments, in the library or by telephone, email, chat, text or a Zoom online meeting. Cal U librarians are faculty members and work with classroom professors to provide instruction sessions to students regarding the effective use of library resources in their coursework.

Shared Library Resources and Interlibrary Loan: Beyond our own collections, Cal U participates in several resource-sharing programs that offer students a wealth of additional resources. When Manderino Library does not have the book a student needs, the online E-ZBorrow system allows students to request books from scores of academic libraries in Pennsylvania, West Virginia, New Jersey and New York. This system is both fast and free. If the book cannot be obtained from an E-ZBorrow library, or if a student needs an article that is not available in the library's journal resources, these can be requested from other libraries through our Interlibrary Loan Office.

Admissions

How to Apply to California University of Pennsylvania

Address inquiries to:

Admissions Office
California University of Pennsylvania
250 University Ave.
California, PA 15419-1394

Phone: 724-938-4404
Toll Free: 1-888-412-0479
Fax: 724-938-4564
Email Address: admissions@calu.edu

Apply online at calu.edu/apply

We encourage applicants to schedule an appointment to visit the University at calu.edu/visit

General Admission Requirements

To be considered for admission as a degree-seeking student, applicants must submit the following:

1. Completed application form.
2. Non-refundable application fee.
3. Official high school transcript (or GED certificate/diploma **and** scores).
4. SAT or ACT scores (optional).
5. Transfer students must submit official transcripts from all colleges and universities attended.
6. International students should check international admission requirements.

NOTE: Some academic programs have additional requirements. Additionally, students in special categories of admission should check the section on Specific Admission Requirements for required application materials.

Evaluation of Applicants

All applications are individually evaluated. As soon as applications are complete, decisions are reached and applicants notified. Every attempt is made to complete this process within two weeks.

Admission standards have been established by the University to select those students who will be most likely to succeed in the various programs of the University.

1. Academics. An applicant must be a graduate of an approved or accredited secondary school or have an equivalent preparation as determined by any state's Department of Education.
2. Assessment and Ability Standards. An ability to do work in higher education should be evident from an assessment examination such as the SAT or ACT. Cumulative grade-point average is considered in evaluation of the application. In certain instances, other kinds of evidence may be used to determine the ability to do such work.
3. Character and Personality. Applicants must be able to demonstrate that they possess the personality traits, interests, attitudes and personal characteristics necessary for higher education.
4. Admission to Special Curricula. A student seeking admission to a special curriculum may be required to complete additional requirements or have earned specific credentials.

The Office of Admissions considers as many variables as possible in making admission decisions: class rank, GPA, type of curriculum completed in relation to proposed major, school counselor or other recommendations,

Admissions - Undergraduate Admissions

personal essay, on-campus interview, standardized test scores, activities and maturity. Each of the variables contributes to the overall assessment of applicants.

Student Credentials

All credentials presented in support of an application for admission become the property of the University and cannot be returned to the student. The complete file will be retained according to the provision of University policy and the Family Rights and Privacy Act of 1974, as amended.

All information filed in support of the application must be complete and authentic. Any false information may be grounds for denial or dismissal.

Pennsylvania Residency

Residency is determined at the time of admission. Change of residency may only occur by appealing to the residency appeals committee. For more information, contact the Office of the Provost and vice president for academic affairs at 724-938-4407 after admission and prior to registration.

Advanced Placement Credit

A student who has taken advanced placement examinations under the auspices of the Educational Testing Service may receive credit for them at California, provided the score is 3.00 or higher. Some courses require minimum scores of 4.00.

Specific Admission Requirements

Freshmen

Students attending a postsecondary institution for the first time beyond high school graduation are considered first-year (new freshmen) students. All students in this classification must submit the materials listed for General Admissions Requirements:

1. Completed application form.
2. Non-refundable application fee.
3. Official high school transcript (or GED certificate/diploma **and** scores).
4. SAT or ACT scores (optional).

Transfers

Transfer Students are defined as students seeking admission to California University of Pennsylvania (Cal U) who have earned university credit following high school graduation.

Transfer students seeking admission to Cal U must submit:

1. Completed application form.
2. Non-refundable application fee.
3. Official transcripts from all post-secondary institutions previously attended.
 - Students will not be granted transfer credits from prior institutions after matriculation to the university.
4. Submit a high school transcript if there are fewer than 12 transferrable credits from a regionally accredited institution. (Transferrable credits are a grade of D or higher and non-developmental.)

Early Admission for High School Students

High school students may be eligible for early admission to Cal U through the Office of Admissions, provided the following requirements have been met:

1. The student must submit a completed application and pay the application fee.

Admissions - Undergraduate Admissions

2. The applicant must have completed the sophomore year of high school and be enrolled in a college preparatory curriculum.
3. An early admission authorization form must be completed with all necessary signatures affixed.
4. The student's official high school transcript must be submitted and reflect a cumulative grade point average of 3.00 for the past two years. (For upcoming juniors, ninth- and tenth-grade averages will be used.)
5. The applicant must have taken the PSAT, SAT or ACT examination. Contact the Office of Admissions at 724-938-4404 for the current requirements.
6. The student's status will be classified as non-degree for each session while still in high school.
7. The student must submit an authorization form for each session that enrollment at Cal U is desired.
8. If a student desires to attend Cal U upon graduation, they must apply by submitting an application and final high school transcript. A second application fee is not required.

Graduates of Cal U

Students who graduated from Cal U and are seeking an additional degree of the same level must complete a readmissions application for the second degree. Students seeking a graduate degree are required to submit a graduate application and all requirements and pay an application fee.

Other Post-baccalaureate Students

Students who graduated from another institution and want to enroll in undergraduate programs at Cal U must submit a completed application, application fee and official transcripts from all colleges and universities attended.

International Students

International students are defined as students seeking admission to the University who possess citizenship with countries other than the United States of America and nations formally party to the Compact of Free Association.

First-time international students seeking admission to the University must submit:

1. Completed international admissions application form.
2. Non-refundable application fee.
3. Copy of the biographical page of their passport.
4. Official high school transcripts showing senior secondary grades or equivalent credential.
5. Official college entrance examination scores (optional).
6. English Language Test Scores.
7. Completed affidavit of financial support and financial documentation.

All credentials presented in support of an application for admission become the property of the University. The International Admissions official will exercise professional judgment in the context of the student's education system in their nation of origin. Assuming that all records indicate that international students could be successful, final admission is contingent upon acceptable clearance from the education authorities of the home country and from the United States Citizenship and Immigration Services (USCIS).

International students seeking to transfer to California University of Pennsylvania must submit the above items in addition to certified English translations of transcripts from all postsecondary schools attended for admission.

Visiting Students

Students who wish to enroll at Cal U with the expectation of transferring credits to their home institution and do not wish to receive a degree from Cal U are classified as visiting students. Admission is granted for the approved semester only. For more information regarding the admissions process for visiting students, contact the Office of Admissions at 724-938-4404 or admissions@calu.edu.

Non-degree Students

Students may take courses at Cal U without being a candidate for a degree. Non-degree students must submit a completed application, application fee and all appropriate official transcripts to the Office of Admissions. Tuition and fees are the same as for degree-seeking students. Students may complete up to 30 credits in a non-degree-seeking status. After reaching 30 credits, students must either declare a major or indicate in writing that they do not plan to pursue a degree at Cal U.

For more information, contact the Office of Admissions at 724-938-4404.

Veterans

Veterans of the United States armed forces who have not attended an institution of higher education since their honorable discharge are admitted to Cal U upon following the general admission procedures. Veterans may be awarded credit for their military training and military schools. All veterans, reservists and National Guard members who have been honorably discharged may be eligible for credits.

Each veteran or reservist seeking such an award must submit a copy of DD 214 to the director of Veterans Affairs. Military personnel are encouraged to submit their transcripts to the Office of Articulation and Transfer Evaluation. Evaluations are conducted based on the latest American Council of Education Guides. For more information regarding military transcripts, contact the Office of Transfer Admissions at 724-938-5939.

Active Military

Military personnel are encouraged to submit their transcripts to the Office of Transfer Admissions. Evaluations are conducted based on the latest American Council of Education Guides. For more information regarding military transcripts, contact the Office of Transfer Admissions at 724-938-5939.

Transfer Student Policies

Please contact the Office of Articulation and Transfer Evaluation at 724-938-5939 or transfer@calu.edu for answers to any questions regarding articulation agreements or transfer credits.

Student Transfer Policy

California University of Pennsylvania (Cal U) does not set a maximum number of transferable credits. The following requirements apply to undergraduate students:

- All first baccalaureate degree students will take at least 30 of the last 60 credits from Cal U.
- All first associate degree students will take at least 15 of their last 30 credits from Cal U.
- All first baccalaureate and associate students must complete at least 50% of the major coursework from any of the 14 universities that comprise the Pennsylvania State System of Higher Education.
- All students completing their first undergraduate certificate must take at least 50% of the credits required for the certificate from one of the 14 universities that comprise the Pennsylvania State System of Higher Education.
- All students completing their first undergraduate minor must take at least 50% of the credits required for the minor from one of the 14 universities that comprise the Pennsylvania State System of Higher Education.

Grades of “D” or above will be accepted for transfer. Grades in a course submitted for a major/minor program requirement must meet the minimum grade required by the department in the parallel course. The academic department reserves the right to require the course be repeated at Cal U if the minimum grade requirement is not met.

When courses are transferred, only the credits are counted. The grades of transfer courses are not included when the Cal U grade point average is calculated.

Admissions - Undergraduate Admissions

Courses taken at a community college or proprietary school, the equivalents of which are designated as upper-level courses at Cal U, will only transfer in as upper-level major equivalent courses upon the approval of the department. If the department deems the course is not an upper-level equivalent course, it will transfer in as an elective in the major area.

Developmental courses are not transferrable to Cal U.

Although credits will always transfer according to these provisions, regulations that govern the national professional accreditation of certain programs offered at Cal U may not permit some courses taken in programs not similarly accredited at other two- and four-year institutions to be transferred as the equivalents of courses that may be similarly entitled or described at Cal U. Students who transfer to Cal U under an approved Program-to-Program Articulation Agreement are guaranteed to transfer into a parallel bachelor degree program with junior standing. (<https://patrac.org>)

Academic Departments and Programs

Academic programs are organized by academic department, which are (in turn) organized by college within the University. Below is a list of academic departments, by college. Information about specific academic programs is found under each department within the catalog.

College of Education and Liberal Arts

Academic departments under the College of Education and Liberal Arts include:

- **Criminal Justice and Psychology:** The Department of Criminal Justice and Psychology offers programs in criminal justice and psychology.
- **Culture, Media, and Performance:** The Department of Culture, Media, and Performance offers programs in art history; communication studies; English; graphic design; music; philosophy; and theatre.
- **Education:** The Department of Education offers programs in administrative leadership; childhood education; secondary education; and special education.
- **Health and Human Service Professions:** The Department of Health and Human Service Professions offers programs in communication disorders; counselor education; social work; and women's studies.
- **Humanities:** The Department of Humanities offers programs in African American studies; art; history; global studies; jurisprudence; languages; liberal studies; political science; and sociology.

(The federally funded TRIO program also is housed in this college.)

Eberly College of Science and Technology

Academic departments under Eberly College of Science and Technology include:

- **Biology, Geology and Environmental Sciences:** The Department of Biology, Geology and Environmental Sciences offers programs in anthropology; biology; environmental studies; fisheries and wildlife; geology; molecular biology; and veterinary technology.
- **Business, Economics and Enterprise Sciences:** The Department of Business, Economics and Enterprise Sciences offers programs in accounting; business administration; economics; finance; human resource management; interdisciplinary studies in business and commerce; management; and marketing.
- **Computer Science, Information Systems and Engineering Technology:** The Department of Computer Science, Information Systems and Engineering Technology offers programs in computer engineering technology; computer information systems; computer science; cybersecurity; digital media technology; electrical engineering technology; industrial technology; mechatronics engineering technology; robotics engineering technology; and unmanned aerial systems/drone technology.
- **Exercise Science and Sport Studies:** The Department of Exercise Science and Sport Studies offers programs in exercise science and sports management.
- **Health Sciences:** The Department of Health Sciences offers programs in athletic training; health sciences; and physical therapy assistant.

Academic Departments and Programs

- **Mathematics and Physical Sciences:** The Department of Mathematics and Physical Sciences offers programs in applied mathematics; chemistry; earth sciences; mathematics; physics; and statistics and data science.
- **Nursing and Allied Health:** The Department of Nursing and Allied Health offers programs in radiologic technology and nursing.

Additional Programming

- General Education Degree
- Honors Program
- Military Science (ROTC)
- Science and Technology: Multidisciplinary Studies Degree

Selecting a Major

Students should select a major by either the end of the third regular semester or upon the completion of 45 credit hours. This does not prohibit students from changing their major later in their careers; however, they will have difficulty completing requirements within eight semesters if they change majors after three semesters. Students who do not wish to pursue either a single discipline or course of study have interdisciplinary program options.

Accelerated Bachelor's-to-Master's Programs

Programs

- **Arabic Language**
 - B.A. in Arabic to M.A. in Arabic
- **Athletic Training**
 - B.S. in Health Science: Pre-Athletic Training to M.S. in Athletic Training
- **Business and Economics**
 - B.S. in Business Administration: Integrated Business to MBA
 - B.S. in Business Administration: MIS to MBA
 - B.S. in Commercial Music Technology to MBA
 - B.S.B.A. in Accounting to M.Acc.
 - B.S.B.A. in Accounting to MBA
 - B.S.B.A. (Various Concentrations) to MBA (Various Concentrations)
- **Clinical Mental Health Counseling**
 - B.S. in Professional Studies in Education to M.S. in Clinical Mental Health Counseling
 - B.A. in Sociology: Social Deviance to M.S. in Clinical Mental Health Counseling
- **Criminal Justice**
 - B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology
- **Education (Elementary)**
 - B.S.Ed. in Grades Pre-K-4 Education to M.Ed. in Reading Specialist
 - B.S.Ed. in Grades Pre-K-4 Education to M.Ed. in Integrative STEM Education K-12
- **Education (Middle Level)**
 - B.S.Ed. Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. Integrative STEM Education K-12
 - B.S.Ed. Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. in Reading Specialist
 - B.S.Ed. Middle Level Grades 4-8 Education: Math to M.Ed. in Integrative STEM Education K-12
 - B.S.Ed. Middle Level Grades 4-8 Education: Science to M.Ed. in Integrative STEM Education K-12
 - B.S.Ed. Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Integrative STEM Education K-12
 - B.S.Ed. Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Reading Specialist
- **Exercise Science and Health Promotion**
 - B.S. in Exercise Science to M.S. in Exercise Science and Health Promotion
- **Legal Studies**
 - B.A. in Jurisprudence to M.S. in Legal Studies
- **Mathematics**
 - B.A. in Mathematics to PSM in Applied Math
- **School Counseling**
 - B.S. in Professional Studies in Education to M.Ed. in School Counseling
 - B.A. in Sociology: Social Deviance to M.Ed. in School Counseling

Program Requirements

To qualify to begin an approved accelerated bachelor's-to-master's degree program, undergraduate students must meet the program requirements outlined at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

B.A. in Arabic to M.A. in Arabic

Program Description

The Bachelor of Arts in Arabic Language and Culture prepares students to read, write and speak Modern Standard Arabic. Qualified undergraduate students in this program may be eligible to participate in an accelerated B.A.-to-M.A. program, which enables them to take graduate courses that apply to both their bachelor's degree in Arabic language and culture and (thereafter) a master's degree in Arabic language and linguistics.

Cal U's Master of Arts in Arabic Language and Linguistics is designed for students interested in gaining advanced expertise in Arabic language and linguistics.

Program Coordinator

Dr. Razak Surrey

Curriculum

The following curriculum shows the requirements for completing the Arabic language and culture bachelor's degree under the accelerated B.A.-to-M.A. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course 	12

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<ul style="list-style-type: none"> • ENG 102 English Composition II • General Education Options Courses (two courses) 	
Required Major Courses	18
ARB 101 Elementary Arabic I	3
ARB 102 Elementary Arabic II	3
ARB 203 Intermediate Arabic I	3
ARB 204 Intermediate Arabic II	3
ARB 350 Advanced Arabic I	3
ARB 351 Advanced Arabic II	3
Required Related Courses*	12
Select from accelerated options: <ul style="list-style-type: none"> • ARB 610 Arabic Linguistics (3 credits) • ARB 620 Arabic-English translation (3 credits) • ARB 630 Arabic Lit and Cultural Aspects (3 credits) • ARB 640 Dialect Acquisition and Variation (3 credits) • ARB 810 Special Topics in Arabic (3 credits) 	12
Related Electives	6
Select two courses in a foreign language and/or culture other than Arabic	6
Free Electives	44
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Approved Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any Approved Writing-Intensive, Upper-Division ARB courses
- **Laboratory Course (1 course required):** Any Approved Laboratory Course

* Regular B.A. options for "Required Related Courses" include:

Accelerated Bachelor's-to-Master's Degree Programs

- **MFL 481** Mod Lang Intern (3-12 credits)
- **MFL 460** Mod Lang and Cultural Intern (3-12 credits)
- **MFL 479** Mod Lang and Field Studies (3-12 credits)
- **ARB 480** Selected Topics in Arabic (3-12 credits)
- **ARB 311** Arabic Conversation (3 credits)
- **ARB 341** Contemp. Arabic Culture (3 credits)
- **ARB 342** The Culture of Islam (3 credits)
- **ARB 401** Intro. to Arabic Linguistics (3 credits)
- **ARB 402** Arabic Translation (3 credits)
- **ARB 421** Arabic Lit. in Translation (3 credits)

Program Notes:

- Graduation Requirements: Minimum GPA - 2.00; Minimum Credits - 120 for only B.A. All major and general education courses completed.
- 42 credits of the required 120 credits must include advanced-standing courses (defined as any course numbered 200 or above with at least one pre-requisite course). Any course numbered 200-299 must have at least one pre-requisite course to be counted as upper division. 300 level and above is counted automatically as upper division.
- Academic Advisement: Consult your adviser regarding an appropriate schedule and all other issues relating to your major.
- Additional Reminders: Developmental courses do not count toward the credits necessary for graduation but are calculated in your overall GPA.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/arabic-language-and-culture/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/arabic/index.aspx>

B.A. in Jurisprudence to M.S. in Legal Studies

Program Description

The accelerated B.A.-to-M.S. legal studies program enables qualified undergraduates to take graduate courses that apply to both their bachelor's and master's degrees. Students gain an advanced understanding of the law and legal principles as they fulfill bachelor's degree requirements and complete select core courses from the graduate-level legal studies program. These graduate-level courses lay the foundation for the student to ultimately examine practical legal and policy issues through the lens of a particular concentration in law and public policy, criminal justice or homeland security.

Accelerated Bachelor's-to-Master's Degree Programs

Program Coordinator

Dr. Christina A. Toras

Delivery Mode

Global Online (100% online)

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.A.-to-M.S. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any CDC Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Additional General Education Courses (three courses) 	12
Required Major Courses	9
JUR 300 Classical Jurisprudence	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
JUR 310 Medieval Jurisprudence	3
JUR 320 Anglo-American Jurisprudence	3
Required Related Courses	33
LAW 300 The Paralegal Profession	3
LAW 310 Legal Research and Writing	3
LAW 320 Litigation and Trial Evidence	3
LAW 330 Criminal Law for Paralegals	3
LAW 340 Family Law	3
LAW 350 Real Estate Law	3
LAW 360 Law, Business and the Workplace	3
LAW 370 Administrative Law	3
LAW 380 Estates and Trusts	3
LAW 400 Constitutional Law for Paralegals	3
LAW 410 Law and Ethics	3
B.A.-to-M.S. Accelerated Option Electives	12
LAW 600 Law and Public Policy	3
LAW 601 Law and Ethics	3
LAW 602 Law, Civil Liberties and the Constitution	3
LAW 603 Law and Legal Method	3
Free Electives*	25 or 26
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUR 310
- **Writing-Intensive Component Courses (2 courses required):** JUR 300 AND JUR 310
- **Laboratory Course (1 course required):** Any Laboratory Course

* The following LAW electives are recommended, though any upper-division course qualifies as an elective:

- **LAW 390** Bankruptcy (3 credits)

Accelerated Bachelor's-to-Master's Degree Programs

- **LAW 420** Law and Conflict Resolution (3 credits)
- **LAW 430** Elder Law (3 credits)
- **LAW 440** Immigration Law (3 credits)
- **LAW 450** Labor and Employment Law (3 credits)
- **LAW 460** School Law (3 credits)

Program Notes: 42 credits of the required 120 credits must include advanced-standing courses (defined as any course numbered 200 or above with at least one pre-requisite course). However, any course numbered 200-299 must have at least one pre-requisite course to be counted as upper division. Courses that are 300 level and above are counted automatically as upper division.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/jurisprudence/legal-studies/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/legal-studies/index.aspx>

B.A. in Mathematics to PSM in Applied Math

Program Description

The Bachelor of Arts in Mathematics degree hones students' analytical and problem-solving skills while building their understanding of mathematical theories and applications. Qualified undergraduate students in the math program may be eligible to participate in the accelerated B.A.-to-PSM program, which enables them to take graduate courses that apply to both their bachelor's degree in math and (thereafter) a master's degree in applied math.

The Professional Science Master's (PSM) in Applied Mathematics is designed to help develop skills in big data analysis and mathematics for a variety of STEM-related occupations for business, government and commercial applications.

Program Coordinators

Dr. Bismark Oduro and Dr. Olaniyi Iyiola

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.A.-to-PSM program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 215 Statistics OR MAT 225 Business Statistics (recommended)	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy	3
<i>Humanities</i> PHI 311 Formal Logic	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry I OR PHY 101 College Physics I	4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any General Education Course • MAT 303 Geometry • MAT 290 Technology for Math (recommended) 	12
Required Major Courses	30
MAT 272 Discrete Mathematics* OR MAT 331 Intro to Mathematical Proofs I	3
MAT 281 Calculus I	3
MAT 282 Calculus II	3
MAT 341 Linear Algebra I	3
MAT 351 Abstract Algebra I	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
MAT 381 Calculus III	3
MAT 382 Calculus IV	3
MAT 400 Mathematical Modeling	3
MAT 406 Differential Equations	3
MAT 461 Statistical Analysis I	3
Related Electives	12
<i>MAT Category I</i> (select one): <ul style="list-style-type: none"> • MAT 451 Abstract Algebra II • MAT 481 Real Analysis I • MAT 474 Complex Analysis 	3
<i>MAT Category II</i> (select two): <ul style="list-style-type: none"> • MAT 345 Cryptography I • MAT 441 Linear Algebra II • MAT 462 Statistical Analysis II • CSC 424 Numerical Analysis 	6
<i>MAT Category III</i> (select one): <ul style="list-style-type: none"> • MAT 419 Math Internship • PHY 341 Math Methods of Physics • MAT 304 History of Math • MAT 468 Field Experience in Math • CSC 475 Theory of Languages** • MAT 496 Senior Research Project 	3
Approved Minor	21
Free Electives	18
Undergraduate Electives	6
Graduate Credits from the PSM in Applied Math Program***	12
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any MAT Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** MAT 400 Mathematical Modeling AND MAT 461 Statistical Analysis I
- **Laboratory Course (1 course required):** CHE 101 General Chemistry I OR PHY 101 College Physics I

Accelerated Bachelor's-to-Master's Degree Programs

* MAT 195 may be substituted for MAT 272 if the student is completing a Computer Science minor.

** This course requires a pre-requisite of CSC 216 and is suggested if the student is completing a Computer Science minor.

*** Students who enter the B.A. in Math to PSM in Applied Math accelerated program must have completed at least 9 credits of Calculus, Linear Algebra I and Statistics prior to beginning PSM courses. The following PSM programs will be applied toward undergraduate credits:

- **PSA 611** Optimization and Operations Research I
- **PSM 645** Applied Cryptography OR PSM Elective
- **PSM 760** Leadership and Professional Development
- PSM Elective

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/mathematics/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/applied-mathematics/index.aspx>

B.A. in Sociology: Social Deviance to M.Ed. in School Counseling

Program Description

The Social Deviance concentration of Cal U's Bachelor of Arts in Sociology degree integrates concepts from various academic disciplines to examine and tackle the real-world issues of social deviance. Qualified undergraduate students in the social deviance concentration may be eligible to participate in the accelerated B.A.-to-M.Ed. program, which enables them to take graduate courses that apply to both their B.A. in Sociology: Social Deviance and (thereafter) a master's degree in school counseling.

The Master of Education in School Counseling fulfills the degree requirements for the National Counselor Examination (NCE), which is needed to become a National Certified Counselor and Licensed Professional Counselor.

Program Coordinator

Dr. Elizabeth Gruber

Accelerated Bachelor's-to-Master's Degree Programs

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.A.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any CDC Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Social Science Menu Course • Additional General Education Courses (two courses) 	12
Required Major Courses	12
SOC 100 Principles of Sociology	3
SOC 410 Social Theory and Society	3
SOC 415 Social Research Methods	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
SOC 429 Sociology Internship OR SOC 379 Special Problems in Sociology OR SOC 495 Seminar in Sociology	3
Related Electives	27
SOC 300 Sociology of Deviance	3
SOC 311 Sociology of Crime	3
SOC 318 Sociology of Addiction, Excess and Exploitation	3
SOC 319 Sociology of Technology	3
SOC 324 Child Abuse and Neglect: A Societal Perspective	3
SOC 380 Society and the Sociopath	3
SOC 395 Sociology of Elite Deviance	3
SOC 400 Structural and Institutional Violence	3
SOC 405 Re-socializing the Deviant and the Marginalized	3
Free Electives	40 or 41
Student-Selected Undergraduate Free Electives	28 to 41
Graduate-Level Courses from the School Counseling Master's Program*	Up to 12
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any One SOC Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any Two SOC Approved Writing-Intensive Menu Courses
- **Laboratory Course (1 course required):** Any Laboratory Menu Course

* **Accelerated Bachelor's-to-Master's Degree Option:** Qualifying students may apply to take up to four 3-credit graduate-level courses from the School Counseling master's program in place of free electives. The following graduate programs may be applied toward free electives:

- **CED 700** Foundations of School Counseling
- **CED 702** Counseling Theory
- **CED 705** Developmental Group Process
- **CED 720** Cross-Cultural Counseling

Accelerated Bachelor's-to-Master's Degree Programs

Program Notes: 42 credits (or 14 courses) of upper-division (any course numbered 200 or above with at least one pre-requisite course) courses are required. Undergraduate students must be at least of junior standing and have a minimum GPA of 3.0 to apply for the graduate program. They must have earned 90 credits to register for a graduate-level course. Students interested in participating in the accelerated program must see their adviser. Students may also apply for any of the 9-credit CED certificate programs.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

Undergraduate

- <https://www.calu.edu/academics/undergraduate/bachelors/sociology/deviance-campus.aspx>
- <https://www.calu.edu/academics/undergraduate/bachelors/sociology/online.aspx>

Graduate

- <https://www.calu.edu/academics/graduate/masters/education-campus/school-counseling/index.aspx>

B.A. in Sociology: Social Deviance to M.S. in Clinical Mental Health Counseling

Program Description

The Social Deviance concentration of Cal U's Bachelor of Arts in Sociology degree integrates concepts from various academic disciplines to examine and tackle the real-world issues of social deviance. Qualified undergraduate students in the Social Deviance concentration may be eligible to participate in the accelerated B.A.-to-M.S. program, which enables them to take graduate courses that apply to both their B.A. in Sociology: Social Deviance and (thereafter) a master's degree in clinical mental health counseling.

Cal U's Master of Science in Clinical Mental Health Counseling prepares students to work as professional counselors in a variety of behavioral health and social service settings.

Program Coordinator

Dr. Robert Mehalik

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.A.-to-M.S. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any CDC Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Social Science Menu Course • Additional General Education Courses (two courses) 	12
Required Major Courses	12
SOC 100 Principles of Sociology	3
SOC 410 Social Theory and Society	3
SOC 415 Social Research Methods	3
SOC 429 Sociology Internship OR SOC 379 Special Problems in Sociology OR SOC 495 Seminar in Sociology	3
Related Electives	27
SOC 300 Sociology of Deviance	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
SOC 311 Sociology of Crime	3
SOC 318 Sociology of Addiction, Excess and Exploitation	3
SOC 319 Sociology of Technology	3
SOC 324 Child Abuse and Neglect: A Societal Perspective	3
SOC 380 Society and the Sociopath	3
SOC 395 Sociology of Elite Deviance	3
SOC 400 Structural and Institutional Violence	3
SOC 405 Re-socializing the Deviant and the Marginalized	3
Free Electives	40 or 41
Student-Selected Undergraduate Free Electives	28 to 41
Graduate-Level Courses from the Clinical Mental Health Counseling Master's Program*	Up to 12
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any One SOC Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any Two SOC Approved Writing-Intensive Menu Courses
- **Laboratory Course (1 course required):** Any Laboratory Menu Course

* **Accelerated Bachelor's-to-Master's Degree Option:** Qualifying students may apply to take up to four 3-credit graduate-level courses from the clinical mental health counseling master's program in place of free electives. The following graduate programs may be applied toward free electives:

- **CED 702** Counseling Theory
- **CED 705** Developmental Group Process
- **CED 720** Cross-Cultural Counseling
- **CED 789** Introduction to Clinical Mental Health Counseling

Program Notes: 42 credits (or 14 courses) of upper-division (any course numbered 200 or above with at least one pre-requisite course) courses are required. Undergraduate students must be at least of junior standing and have a minimum GPA of 3.0 to apply for the graduate program. They must have earned 90 credits to register for a graduate-level course. Students interested in participating in the accelerated program must see their adviser. Students may also apply for any of the 9-credit CED certificate programs.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

Undergraduate

- <https://www.calu.edu/academics/undergraduate/bachelors/sociology/deviance-campus.aspx>
- <https://www.calu.edu/academics/undergraduate/bachelors/sociology/online.aspx>

Graduate

- <https://www.calu.edu/academics/graduate/masters/clinical-mental-health-counseling/index.aspx>

B.S. in Business Administration: Integrated Business to MBA

Program Description

The Integrated Business concentration of the B.S. in Business Administration degree prepares students for the 21st century global business environment.

Qualified undergraduate students in the business administration program may be eligible to participate in the accelerated B.S.-to-MBA program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) an MBA degree with a concentration in accounting, applied economics, healthcare management or management. (The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in one of these concentration areas.)

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> PHI 115 Logic and Language (other Humanities with adviser approval)	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing I OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Required Major Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MBA 710 Quantitative Analysis and Reasoning (replaces BUS 381)	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Concentration Courses	18
BUS 345 Business Ethics	3
ECO 460 Global Economic Perspectives	3
HRM 462 Global Workforce Management and Change	3
MGT 431 International Business Management	3
MGT 461 Integrated Supply Chain Management	3
MKT 401 Marketing Management	3
Required Minor/Certificate (select one option)*	12
<i>Option 1: Accounting Minor / MBA Accounting Concentration</i> <ul style="list-style-type: none"> • ACC 202 Accounting II • 9 credits of ACC courses, 500 level or above 	0 or 12
<i>Option 2: Economics Minor / MBA Applied Economics Concentration</i> <ul style="list-style-type: none"> • 3-credit ECO course, 300 to 499 level • 9 credits of ECO courses, 500 level or above 	0 or 12
<i>Option 3: Management Minor / MBA Management Concentration</i> <ul style="list-style-type: none"> • MGT 301 Organizational Behavior • 9 credits of MGT courses, 500 level or above 	0 or 12
<i>Option 4: Management Minor / MBA Healthcare Management Concentration</i> <ul style="list-style-type: none"> • MGT 301 Organizational Behavior • MGT 761 U.S. Health Care Policy • MGT 763 Health System Management • 3-credit MGT course, 500 level or above 	0 or 12
Undergraduate Free Electives	20

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ECO 460 Global Economic Perspectives
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT or MKT Writing-Intensive Course
- **Laboratory Course (1 course required):** Any Laboratory Course

* **Required Minor/Certificate:** Students select one of the following minors: Accounting, Economics or Management and can then work toward the MBA concentrations in Accounting, Applied Economics or Management, respectively. The Management minor can also be combined with the Healthcare Management MBA concentration.

These minors are 21 credits; however, 9 of these credits are required in the “Required Major Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Select 9 credits from the concentration options below as part of the required minor:

- Option 1: Accounting
 - **ACC 710** Financial Accounting – 3 credits
 - **ACC 715** Advanced Federal Income Tax – 3 credits
 - **ACC 720** Advanced Financial Accounting – 3 credits
 - **ACC 730** Advanced Auditing – 3 credits
 - Business Electives: ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses, 500 level or above, chosen in consultation with adviser - 6 credits
- Option 2: Economics
 - **ECO 710** Advanced Microeconomics – 3 credits
 - **ECO 720** Advanced Macroeconomics – 3 credits
 - **ECO 730** Applied Econometric Analysis – 3 credits
 - **BUS 740** Forecasting and Predictive Modelling – 3 credits
 - Business Electives: ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses, 500 level or above, chosen in consultation with adviser - 6 credits
- Option 3: Management
 - **MGT 710** Leadership Dynamics – 3 credits
 - **MGT 720** Leveraging Diversity – 3 credits
 - **MGT 730** Organizational Problem Solving – 3 credits
 - **MGT 740** Managing Projects – 3 credits
 - Business Electives: ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses, 500 level or above, chosen in consultation with adviser - 6 credits
- Option 4: Healthcare Management
 - **ECO 765** Health Economics and Policy
 - **MGT 761** U.S. Health Care Policy – 3 credits
 - **MGT 763** Health Systems Management – 3 credits
 - **MIS 766** Healthcare Informatics - 3 credits
 - Business Electives: ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses, 500 level or above, chosen in consultation with adviser - 6 credits

Program Notes: Students can apply for admission to the accelerated program after completing at least 60 credits.

Accelerated Bachelor's-to-Master's Degree Programs

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/integrated-global-business/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/mba/index.aspx>

B.S. in Business Administration: MIS to MBA

Program Description

Cal U's B.S. in Business Administration: MIS degree builds a core understanding of business and specialized knowledge of management information systems. Qualified undergraduate students in the business administration program may be eligible to participate in the accelerated B.S.-to-MBA program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) an MBA degree with a concentration in accounting, applied economics, business analytics, healthcare management or management. (The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in one of these concentration areas.)

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i>	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
MAT 181 College Algebra	
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Required Major Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MBA 710 Quantitative Analysis and Reasoning (replaces BUS 381)	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Concentration Courses	21
CIS 120 Application Programming I	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
CIS 299 Systems Analysis I	3
MIS 321 Accounting Info Systems	3
MIS 375 Information Tech Ethics	3
MIS 385 Health Information Systems	3
MIS 401 Business Driven MIS	3
MIS 421 Strategic Issues in MIS	3
Related Electives	9
MBA 700 Business Foundations	3
Select 6 credits from any ACC, BUS, ECO, ENP, FIN, HRM, MBA, MGT, MIS or MKT courses, 500 level or above*	6
Undergraduate Free Electives	19 or 20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT or MKT Writing-Intensive Course
- **Laboratory Course (1 course required):** Any Laboratory Course

* **Related Electives:** Select 6 credits (two courses) from the MBA courses below:

- MBA Required Courses
 - **MBA 720** Leading the Enterprise
 - **MBA 730** Managerial Decision Making
 - **MBA 740** Business, Government and Society
 - **MBA 750** MBA Capstone

Accelerated Bachelor's-to-Master's Degree Programs

- MBA Concentration Options
 - *Option 1: Accounting*
 - **ACC 710** Financial Accounting
 - **ACC 715** Advanced Federal Income Tax
 - **ACC 720** Advanced Financial Accounting
 - **ACC 730** Advanced Auditing
 - *Option 2: Applied Economics*
 - **ECO 710** Advanced Microeconomics
 - **ECO 720** Advanced Macroeconomics
 - **ECO 730** Applied Econometric Analysis
 - **BUS 740** Forecasting and Predictive Modelling
 - *Option 3: Business Analytics*
 - **BUS 710** Applied Data Analysis for Business
 - **MIS 720** Business Analytics for Big Data
 - **MIS 730** Decision Support Systems
 - **BUS 740** Forecasting and Predictive Modeling
 - *Option 4: Healthcare Management*
 - **ECO 765** Health Economics and Policy
 - **MGT 761** U.S. Health Care Policy
 - **MGT 763** Health Systems Management
 - **MIS 766** Healthcare Informatics
 - *Option 5: Management*
 - **MGT 710** Leadership Dynamics
 - **MGT 720** Leveraging Diversity
 - **MGT 730** Organizational Problem Solving
 - **MGT 740** Managing Projects
- MBA Business Electives
 - Two ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses, 500 level or above, chosen in consultation with adviser (6 credits)

Program Notes: No more than 6 credits of any internship course may be applied to satisfy the major requirements. Additional internship credits may be applied to free electives. Students can apply for admission to the accelerated program after completing at least 60 credits.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/business-administration/management-information-systems.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/mba/index.aspx>

B.S. in Commercial Music Technology to MBA

Program Description

The Bachelor of Science in Commercial Music Technology (CMT): Commercial Music Business degree delves into three distinct areas: music, technology and entrepreneurship, placing particular emphasis on business and entrepreneurship training. Qualified undergraduate students in this CMT program may be eligible to participate in the accelerated B.S.-to-MBA program, which enables them to take graduate courses that apply to both their bachelor's degree in CMT and (thereafter) an MBA. (The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in a concentration area.)

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 215 Statistics	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> DMT 180 Foundations of Digital Media	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> MUS 100 Intro to Music	3
<i>Natural Sciences</i> CMD 221 Speech Science	3
<i>Social Sciences</i> ECO 100 Elements of Economics OR ECO 201 Principles of Microeconomics	3
<i>Ethics and Multicultural Awareness Emphasis</i> MUS 300 Jazz: History, Form and Analysis	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<i>General Education Options</i> <ul style="list-style-type: none"> • THE 211 Lighting I • ENG 217 Scientific and Tech. Writing I • Student-Selected General Education Option Course 	9
Core Major Courses	18
MUS 211 Keyboard Class	3
MUS 215 Comprehensive Musicianship	3
MUS 275 Music and Recording Technology	3
MUS 314 The Music Industry: History, Form and Analysis	3
MUS 315 Comprehensive Musicianship II	3
MUS 375 Music and Recording II	3
Performance Ensemble Electives (select from list)	6
MUS 187 Guitar Ensemble	1
MUS 188 String Ensemble	1
MUS 191 Choir	1
MUS 192 California Singers	1
MUS 193 Gospel Choir	1
MUS 196 Jazz Ensemble	1
MUS 197 Pep Band	1
MUS 198 Marching Band	1
MUS 199 Concert Band	1
MUS 307 Special Music Project	1
Applied Instruction Electives (select from list)	8
Brass - MUS 109, 209, 309, 409	1 to 3
Piano - MUS 119, 219, 319, 419	1 to 3
Percussion - MUS 129, 229, 329, 429	1 to 3
Woodwind - MUS 149, 249, 349, 449	1 to 3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
Voice - MUS 159, 259, 359, 459	1 to 3
Guitar - MUS 170, 270, 370, 470	1 to 3
String - MUS 179, 279, 379, 479	1 to 3
Special Experience Electives (select from list)	6
MUS 485 Music Tech Practicum	1 to 3
MUS 488 Music Tech Internship	1 to 12
Required Business Courses	15
ACC 200 Financial Accounting	3
BUS 100 Introduction to Business	3
BUS 242 Business Law I	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Business Ethics (select one course)	3
BUS 342 Business, Society and Government	3
BUS 343 Corporate Social Responsibility	3
BUS 345 Business Ethics	3
Business Courses	9
Select 9 credits (three courses) from the following: <ul style="list-style-type: none"> • MBA 700 Business Foundations (3 credits)* • MBA 710 Quantitative Reasoning and Analysis (3 credits) • MBA 720 Leading the Enterprise (3 credits) • MBA 730 Managerial Decision Making (3 credits) • MBA 740 Business, Government and Society (3 credits) • ENP 701 Entrepreneurship (3 credit) • ENP 705 Entrepreneurial Finance (3 credit) 	9

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
Free Electives	15
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** MUS 488 Music Tech Internship
- **Writing-Intensive Component Courses (2 courses required):** MUS 375 Music and Recording Technology II AND any approved advanced writing course
- **Laboratory Course (1 course required):** DMT 180 Foundations of Digital Media

* Pre-requisite of MBA 720, 730 and 740.

Program Notes: All prescribed courses, including general education courses, may not be substituted except at the discretion of the music department. Developmental courses do not count toward the 120 credits necessary for graduation, but are calculated in your overall GPA. Completion of this program does not grant the student an MBA; however, the student will earn 9 credits toward their MBA.

Additional Requirements

Refer to the CMT program page of this catalog for additional requirements related to completing the bachelor's degree.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/music-business/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/mba/index.aspx>

B.S. in Criminal Justice to M.A. in Applied Criminology

Program Description

The Bachelor of Science in Criminal Justice degree explores broad concepts related to the field of criminal justice. Concentrations under this degree also allow students to focus study on:

- Criminology
- Cyber Forensics
- Forensic Science

Accelerated Bachelor's-to-Master's Degree Programs

- Homeland and International Security
- Law and Justice

Qualified undergraduate students in the criminal justice program and its concentrations may be eligible to participate in the accelerated B.S.-to-M.A. program, which enables them to take graduate courses that apply to both their bachelor's degree in criminal justice and (thereafter) an M.A. in Criminal Justice Studies: Applied Criminology.

The Applied Criminology concentration of the Master of Arts in Criminal Justice Studies presents advanced criminological theories and examines behavioral manifestations of violent offenders. It provides students with sophisticated techniques needed to apply an analytical framework to real-world situations.

Program Coordinator

Dr. Christopher Wydra

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-M.A. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course 	12

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<ul style="list-style-type: none"> • Any Technological Literacy Course • Any General Education Courses (two courses) 	
Required Major Courses	33
JUS 101 Intro to Criminal Justice Studies	3
JUS 102 Intro to Law Enforcement	3
JUS 103 Correctional Systems	3
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 495 Research Methods in Criminal Justice	3
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Concentration Courses	0 to 12*
Undergraduate Concentration Courses (refer to bachelor's degree concentration curriculum requirements)	0 to 12
Related Electives	9 to 21*
Undergraduate Related Electives (refer to bachelor's degree concentration curriculum requirements)	0 to 21
Graduate CRM Courses**	0 to 12
Additional Electives	25 or 26
Student-Selected Undergraduate Electives	13 to 26
Graduate CRM Courses**	0 to 12
Total	120

Accelerated Bachelor's-to-Master's Degree Programs

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUS 499 Seminar in Justice Studies
- **Writing-Intensive Component Courses (2 courses required):** Any two JUS approved Writing-Intensive Menu courses
- **Laboratory Course (1 course required):** Any Laboratory Course

* Varies by concentration; however, in each bachelor's degree option, "Concentration Courses" and "Related Electives" added together total 21 credits.

** The following graduate-level CRM courses, which are requirements of Cal U's Criminal Justice: Applied Criminology master's program, may be applied to "Related Electives" or "Additional Electives," regardless of bachelor's degree concentration:

- **CRM 710** Advanced Behavioral Crime Analysis Theory
- **CRM 810** Violent Crime Analysis
- **CRM 820** Ethics and Legal Aspects in Applied Criminology
- **CRM 830** Criminal Investigative Analysis

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are REQUIRED. The graduate credits may count toward criminal justice concentration requirements with approval of adviser.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/applied-criminology/index.aspx>

B.S. in Exercise Science to M.S. in Exercise Science and Health Promotion

Program Description

The Bachelor of Science in Exercise Science degree prepares students for careers in wellness and fitness. Qualified undergraduate students in the exercise science program may be eligible to participate in the accelerated B.S.-to-M.S. program, which enables them to take graduate courses that apply to both their bachelor's degree in Exercise Science and (thereafter) a master's degree in exercise science and health promotion.

Cal U's exercise science and health promotion master's program allows students to gain specialized skills and knowledge in a concentration area while also building leadership and entrepreneurship abilities.

Accelerated Bachelor's-to-Master's Degree Programs

Program Coordinator

Dr. Barry E. McGlumphy

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-M.S. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Oral Communication Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> HSC 115 Current Health Issues	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> FIT 115 Applied Anatomy and Physiology in Wellness and Fitness	4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • HSC 110 Human Anatomy and Physiology I (4 credits) • SPT 305 Ethics in Sport • Any General Education Options Courses (two courses) 	13
Required Major Courses	45
FIT 100 Intro to Fitness	3
FIT 125 Fundamentals of Speed Training	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
FIT 250 Current Topics and Strategies for Youth Fitness	3
FIT 300 Business Aspects of Fitness	3
FIT 305 Motivational Strategies in Wellness and Fitness	3
FIT 325 Integrated Personal Fitness Training	3
FIT 335 Integrated Personal Fitness Program Design	3
FIT 350 Fitness for Special Populations*	3
FIT 380 Wellness and Fitness for the Aging Population	3
FIT 401 Leadership Concepts and Actions in Wellness and Fitness*	3
FIT 405 Wellness Seminar I	3
FIT 410 Wellness Seminar II	3
FIT 420 Contemporary Issues in Fitness*	3
FIT 425 Evaluating Research in Fitness and Wellness	3
FIT 430 Application of Fitness and Wellness Research	3
Required Related Courses	15
SPT 300 Psychology of Sport	3
SPT 400 Legal Aspects of Sport	3
ATE 340 Sports Nutrition OR HSC 250 Nutrition for Wellness	3
HSC 275 Functional Kinesiology	3
HSC 325 Physiology of Exercise	3
Free Electives	19
Undergraduate Free Electives	7 to 19
Select up to four of the following: PRF 700, 701, 705, 715, 720, 760, 770**	Up to 12
Total	120

Accelerated Bachelor's-to-Master's Degree Programs

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** FIT 410 Wellness Seminar II
- **Writing-Intensive Component Courses (2 courses required):** FIT 425 Evaluation Research in Fitness and Wellness AND FIT 430 Application of Fitness and Wellness Research
- **Laboratory Course (1 course required):** HSC 110 Human Anatomy and Physiology I

* Students may elect to take FIT 499 (internship, 9 credits) in lieu of FIT 350, 401 and 420. If they wish to complete all courses in the didactic, they may also elect to complete an internship elective credit (SPT 499).

** Department of Exercise Science and Sport Studies undergraduate students enrolled in the Bachelor of Science program in Exercise Science at Cal U who meet eligibility criteria may take four 3-credit graduate courses during their undergraduate program and thereafter apply those 12 credits toward the M.S. in Exercise Science and Health Promotion. In order to do so, they must be undergraduate students who have junior standing and a minimum GPA of 3.0.

Any combination of the following graduate PRF courses apply: PRF 700, 701, 705, 715, 720, 760 and 770. These graduate courses cannot substitute for any undergraduate core courses and can be applied to all exercise science electives or additional electives, regardless of the graduate concentration. The undergraduate adviser or department chair must approve the student's request to take the graduate courses and will inform the graduate coordinator accordingly.

Additional Program Notes: Students must earn a cumulative GPA of 2.0 or higher to participate in internship and to be eligible for graduation. All General Education/Elective credits, all SPT, all HSC, and ATE courses can be completed on campus. All FIT and PRF prefix courses are completed online.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/exercise-science/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/exercise-science/index.aspx>

B.S. in Health Science: Pre-Athletic Training to M.S. in Athletic Training

Program Description

The pre-athletic training concentration of the Bachelor of Science (B.S.) in Health Science program prepares students for graduate-level study in athletic training. Qualified undergraduate students in this program may be eligible to participate in an accelerated B.S.-to-M.S. program, which enables them to take graduate courses that apply to both their bachelor's degree in health science and (thereafter) a master's degree in athletic training.

Accelerated Bachelor's-to-Master's Degree Programs

Cal U's Master of Science (M.S.) in Athletic Training prepares students for certification and a career in the fast-growing athletic training occupation while introducing them to special interest topics.

Note: Cal U is currently seeking accreditation for their new Athletic Training program and is not accredited by the Commission on Accreditation of Athletic Training Education (CAATE). The institution will be submitting a self-study to begin the accreditation process on July 1, 2023. Submission of the self-study and completion of a site visit does not guarantee that the program will become accredited. Students that graduate from the program prior to accreditation will not be eligible to sit for the credentialing examination for athletic trainers and will not be eligible for licensure in most states.

Program Coordinator

Dr. Shelly Fetchen DiCesaro

Curriculum

The following curriculum shows the requirements for completing the health science (pre-athletic training concentration) bachelor's degree under the accelerated B.S.-to-M.S. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> HSC 115 Current Health Issues	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> HSC 110 Anatomy and Physiology I	4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • GTY 200 Aging in American Society • PHI 307 Medical Ethics • HSC 315 First Aid and Personal Safety 	12

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
• ATE 340 Sports Nutrition	
Required Major Courses	58
ATE 150 Intro to Athletic Training	4
ATE 215 Evidence-Based Practice	3
ATE 460 Sports Medicine Research	3
BIO 117 Intro to Human Biology	3
CHE 101 General Chemistry I	4
ENG 102 Composition II	3
HSC 101 Foundations of Health Science	3
HSC 120 Anatomy and Physiology II	4
HSC 210 Culturally Competent Community Health	3
HSC 225 Medical Terminology	2
HSC 250 Nutrition for Health/Wellness	3
HSC 275 Functional Kinesiology	3
HSC 310 Special Populations and Pathology of Disease	3
HSC 325 Physiology of Exercise	3
HSC 360 Holistic Medicine and Healthcare	3
HSC 425 Health Science Capstone	4
MAT 205 Stats for Health and Social Science	3
PHY 121 General Physics I	4
Free Electives	3
Graduate-Level Coursework*	18
ATE 600 Cadaver Anatomy Dissection	3
ATE 603 Foundations of AT	1
ATE 610 Clinical Skills and Lab	1
ATE 615 Emergency Care and Lab	1
ATE 635 Examination of the Lower Extremity and Lab	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
ATE 650 Head and Spine Cadaver Dissection	2
ATE 655 Examination of the Head and Spine Lab	2
ATE 670 Clinical Practicum I	2
ATE 690 Therapeutic Interventions I and Lab	3
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** HSC 425 Health Science Capstone
- **Writing-Intensive Component Courses (2 courses required):** HSC 360 Holistic Medicine and Healthcare AND HSC 310 Special Populations and Pathology of Disease
- **Laboratory Course (1 course required):** HSC 120 Anatomy and Physiology II

* 20% (the first 18 credits of graduate coursework, as listed above) of the 56 graduate credits in the M.S. in Athletic Training program may be applied toward the bachelor's degree.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Graduate:** <https://www.calu.edu/academics/graduate/masters/athletic-training/index.aspx>

B.S. in Professional Studies in Education to M.Ed. in School Counseling

Program Description

The Bachelor of Science in Professional Studies in Education (PSE) degree is designed for students who are interested in education but who are not seeking Pennsylvania teaching certification. Qualified undergraduate students in the PSE program may be eligible to participate in the accelerated B.S.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree in PSE and (thereafter) a master's degree in school counseling.

The Master of Education (M.Ed.) in School Counseling fulfills the degree requirements needed for the National Counselor Examination (NCE), which is needed to become a National Certified Counselor and Licensed Professional Counselor.

Accelerated Bachelor's-to-Master's Degree Programs

Program Coordinator

Dr. Elizabeth Gruber

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar OR UNI 101 Intro to Univ. St.	1
<i>Composition</i> ENG 101 English Composition I (or any approved Comp menu course)	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners (or any approved Public Speaking menu course)	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I (or any approved Math and QL menu course)	3
<i>Health and Wellness</i> HSC 250 Health and Physical Education for PreK-4 (or any approved Health and Wellness menu course)	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning (or any approved Tech Lit menu course)	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration (or any approved Humanities menu course)	3
<i>Fine Arts</i> MUS/ART/THE 372 Creative Arts for PreK-Grade 4 (or any approved Fine Arts menu course)	3
<i>Natural Sciences</i> Select one of the following: <ul style="list-style-type: none"> • BIO 103 Contemporary Issues in Biology • EAS 100 Intro to Earth Science • ENS 101 Intro to Environmental Science • PHS 120 Basic Physical Science with Lab • Any approved Natural Sciences menu course with lab 	3 or 4

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<i>Social Sciences</i> GEO 102 Geographic Systems (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit) (or any approved Social Sciences menu course)	3
<i>Ethics and Multicultural Awareness Emphasis</i> CHD 350 Family and Community Collab. Part.	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Approved American/British Literature Course • MAT 130 Elementary Topics II (or any approved Math & QL menu course) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 (or any approved History menu course) 	9
Required Major Courses	33
PSE 200 Intro to Professional Studies in Education	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Instruction and Assessment in K-4	3
CHD 250 Health and Physical Education Methods for PreK-Grade 4	3
ELE 300 Emerging Literacy	3
ELE 310 Teaching PreK STEAM	3
CHD 400 Issues, Advocacy and Leadership	3
ELE 410 Field Experience PreK-4	3
CHD 412 Field Experience with Diverse Populations	3
CHD 322 Professional Education Internship (x2)	6
Minor Courses*	18 to 24
Free Electives	18 to 29
Student-Selected Undergraduate Free Electives (300/400 level)	3 to 14
ESP 311 Assessment and PBS	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
CED 700 Foundations of School Counseling (offered fall only)**	3
CED 702 Counseling Theory (offered fall, spring, every other summer)**	3
CED 705 Developmental Group Counseling (offered fall, spring, every other summer)**	3
CED 732 Current Issues in School Counseling: Evidence Based Practices and Inclusion**	3
Total	121

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** EDE 322 Internship
- **Writing-Intensive Component Courses (2 courses required):** CHD 350 Family and Community Collab. Partnerships AND EDE 322 Internship
- **Laboratory Course (1 course required):** Approved Natural Science Course with Lab

* In consultation with your adviser, choose one minor from the university approved minors list.

** Must have earned 90 credits, have a 3.0 GPA and have been admitted to the graduate school counseling program to register for courses.

Program Notes:

- The following courses need a grade of "C" or higher to pass: MAT 120, MAT 130, ENG 101, Am/ Brit Lit course and all ELE, CHD or ESP courses.
- PSE 200 requires a 2.0 GPA and current clearances. CHD/ELE 200 and ELE 220 require a 2.0 GPA and current clearances; all other ELE, CHD and ESP courses require current clearances and a minimum 2.5 GPA to register.
- 40% of courses (16 courses) must be 300 to 400 level.
- At least one minor must be selected.
- Internship application, training and guidelines must be completed a semester in advance of registration.
- Internship: must take at least two 3-credit internships. Can repeat up to 12 credits. Consult your dept. adviser.
- Approved American/British literature courses: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in

Accelerated Bachelor's-to-Master's Degree Programs

additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/professional-studies-education/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/education-campus/school-counseling/index.aspx>

B.S. in Professional Studies in Education to M.S. in Clinical Mental Health Counseling

Program Description

The Bachelor of Science in Professional Studies in Education (PSE) degree is designed for students who are interested in education but who are not seeking Pennsylvania teaching certification. Qualified undergraduate students in the PSE program may be eligible to participate in an accelerated B.S.-to-M.S. program, which enables them to take graduate courses that apply to both their bachelor's degree in PSE and (thereafter) a master's degree in clinical mental health counseling.

The Master of Science in Clinical Mental Health Counseling prepares students to work as professional counselors in a variety of behavioral health and social service settings.

Program Coordinator

Dr. Robert Mehalik

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.-to-M.S. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I (or any approved Comp menu course)	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners (or any approved Public Speaking menu course)	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I (or any approved Math and QL menu course)	3
<i>Health and Wellness</i>	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
HSC 250 Health and Physical Education for PreK-4 (or any approved Health and Wellness menu course)	
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning (or any approved Tech Lit menu course)	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration (or any approved Humanities menu course)	3
<i>Fine Arts</i> MUS/ART/THE 372 Creative Arts for PreK-Grade 4 (or any approved Fine Arts menu course)	3
<i>Natural Sciences</i> Select one of the following: <ul style="list-style-type: none"> • BIO 103 Contemporary Issues in Biology • EAS 100 Intro to Earth Science • ENS 101 Intro to Environmental Science • PHS 120 Basic Physical Science with Lab • Any approved Natural Sciences menu course with lab 	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit) (or any approved Social Sciences menu course)	3
<i>Ethics and Multicultural Awareness Emphasis</i> CHD 350 Family and Community Collab. Part.	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Approved American/British Literature Course • MAT 130 Elementary Topics II (or any approved Math and QL menu course) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 (or any approved History menu course) 	9
Required Major Courses	33
PSE 200 Intro to Professional Studies in Education	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Instruction and Assessment in K-4	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
CHD 250 Health and Physical Education Methods for PreK-Grade 4	3
ELE 300 Emerging Literacy	3
ELE 310 Teaching PreK STEAM	3
CHD 400 Issues, Advocacy and Leadership	3
ELE 410 Field Experience PreK-4	3
CHD 412 Field Experience with Diverse Populations	3
CHD 322 Professional Education Internship (x2)	6
Minor Courses*	18 to 24
Free Electives	18 to 29
Student-Selected Undergraduate Free Electives (300/400 level)	6 to 17
CED 789 Intro to Clinical Mental Health Counseling (offered fall only)**	3
CED 702 Counseling Theory (offered fall, spring, every other summer)**	3
CED 705 Developmental Group Counseling (offered fall, spring, every other summer)**	3
CED 720 Cross-cultural Counseling (offered fall, spring, every other summer)**	3
Total	121

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** EDE 322 Internship
- **Writing-Intensive Component Courses (2 courses required):** CHD 350 Family and Community Collab. Partnerships AND EDE 322 Internship
- **Laboratory Course (1 course required):** Approved Natural Science Course with Lab

* In consultation with your adviser, choose one minor from the university approved minors list.

** Must have earned 90 credits, have a 3.0 GPA and have been admitted to the graduate school counseling program to register for courses.

Program Notes:

Accelerated Bachelor's-to-Master's Degree Programs

- The following courses need a grade of “C” or higher to pass: MAT 120, MAT 130, ENG 101, Am/Brit Lit course and all ELE, CHD or ESP courses.
- PSE 200 requires a 2.0 GPA and current clearances. CHD/ELE 200 and ELE 220 require a 2.0 GPA and current clearances; all other ELE, CHD and ESP courses require current clearances and a minimum 2.5 GPA to register.
- 40% of courses (16 courses) must be 300 to 400 level.
- At least one minor must be selected.
- Internship application, training and guidelines must be completed a semester in advance of registration.
- Internship: must take at least two 3-credit internships. Can repeat up to 12 credits. Consult your dept. adviser.
- Approved American/British literature courses: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student’s responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor’s degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/professional-studies-education/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/clinical-mental-health-counseling/index.aspx>

B.S.B.A. in Accounting to M.Acc.

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Accounting degree prepares students to use modern accounting methods and information systems. Qualified undergraduate students in the accounting program may be eligible to participate in the accelerated B.S.B.A.-to-M.Acc. program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) an M.Acc.

Cal U's specialized Master of Accountancy (M.Acc.) degree program expands knowledge of accounting principles and practices and is designed for students who plan to become certified public accountants.

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Joshua Chicarelli

Accelerated Bachelor's-to-Master's Degree Programs

Curriculum

The following curriculum shows the requirements for completing the accounting bachelor's degree under the accelerated B.S.B.A.-to-M.Acc. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 331 Cost Accounting	3
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MBA 710 Quantitative Analysis and Reasoning (replaces BUS 381)	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	24
ACC 202 Accounting II	3
ACC 218 Federal Income Tax I	3
ACC 301 Intermediate Acc. I	3
ACC 318 Federal Income Tax II	3
ACC 341 Non-Profit Accounting	3
ACC 441 Auditing	3
ACC 710 Financial Accounting (replaces ACC 302)	3
ACC 720 Advanced Financial Accounting (replaces ACC 401)	3
Related Electives*	3
Select a course from the following: <ul style="list-style-type: none"> • ACC 715 Advanced Tax • ACC 725 Controllership • ACC 730 Advanced Auditing • ACC 735 Emerging Issues in Accounting • BUS 710 Applied Data Analysis for Business • BUS 740 Forecasting and Predictive Modeling • ECO 710 Advanced Microeconomics • ECO 730 Applied Econometrics Analysis • MBA 730 Managerial Decision Making • MIS 720 Business Analytics for Big Data • MIS 730 Decision Support Systems 	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
Required Minor/Certificate**	12
Free Electives	10 to 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT or MKT Writing-Intensive Course
- **Laboratory Course (1 course required):** Any Laboratory Course

* **Related Electives:** Select one graduate-level elective from courses required for the M.Acc. program in place of the "Related Electives" in the undergraduate program.

** **Required Minor/Certificate:** Students select one of the following minors or certificates: Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above."

Program Notes: Students who complete dual degrees or dual majors do not have to complete a minor or certificate. No more than 6 credits of any internship course may be applied to satisfy the major requirements. Additional internship credits may be applied to free electives. Students can apply for admission to the accelerated program after completing at least 60 credits.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/accounting-degree/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/macc-degree/index.aspx>

B.S.B.A. in Accounting to MBA

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Accounting degree prepares students to use modern accounting methods and information systems. Qualified undergraduate students in the accounting program may be eligible to participate in the accelerated B.S.B.A.-to-MBA program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) an MBA degree with a concentration in accounting, applied economics, business analytics, healthcare management or management.

The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in a concentration area.

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the accounting bachelor's degree under the accelerated B.S.B.A.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science	3
<i>Social Sciences</i> PSY 100 General Psychology	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 331 Cost Accounting	3
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MBA 710 Quantitative Analysis and Reasoning (replaces BUS 381)	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	24
ACC 202 Accounting II	3
ACC 218 Federal Income Tax I	3
ACC 301 Intermediate Acc. I	3
ACC 318 Federal Income Tax II	3
ACC 341 Non-Profit Accounting	3
ACC 441 Auditing	3
ACC 710 Financial Accounting (replaces ACC 302)	3
ACC 720 Advanced Financial Accounting (replaces ACC 401)	3
Related Electives	3
MBA 700 Business Foundations	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
Required Minor/Certificate*	12
Free Electives	10 to 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT or MKT Writing-Intensive Course
- **Laboratory Course (1 course required):** Any Laboratory Course

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above."

Program Notes: Students who complete dual degrees or dual majors do not have to complete a minor or certificate. No more than 6 credits of any internship course may be applied to satisfy the major requirements. Additional internship credits may be applied to free electives. Students can apply for admission to the accelerated program after completing at least 60 credits.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/accounting-degree/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/mba/index.aspx>

B.S.B.A. to MBA

Program Description

Cal U's B.S.B.A. degrees build specialized knowledge in a variety of areas of business. Qualified undergraduate students majoring in the following at Cal U may be eligible to participate in the accelerated B.S.B.A.-to-MBA program outlined on this catalog page:

- Economics
- Finance
- Interdisciplinary Studies in Business and Commerce (ISBC)
- Human Resource Management
- Management
- Marketing

(Accounting majors should refer to a separate catalog page in this section for information about an accelerated B.S.B.A.-to-MBA option specific to their needs. The accelerated option is not available to students in the ISBC: Corporate Communication concentration.)

The accelerated B.S.B.A.-to-MBA program enables qualified undergraduate students to take graduate courses that apply to both their bachelor's degree and (thereafter) an MBA with a concentration in accounting, applied economics, business analytics, healthcare management or management. The MBA program at Cal U hones decision-making and leadership abilities while also building specialized knowledge in one of these concentration areas.

Through the accelerated program, students can complete both degrees at Cal U with a total of 144 credits.

Program Coordinator

Dr. Stephanie Adam

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.B.A.-to-MBA program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science Course	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MBA 710 Quantitative Analysis and Reasoning (replaces BUS 381)	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses*	18
ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses 300 level or above not already included above; or ACC 491, BUS 492, ECO 492, FIN 491, MGT 492, MIS 492 or MKT 492	18
Related Electives**	9

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
MBA 700 Business Foundations	3
Select 6 credits from any ACC, BUS, ECO, ENP, FIN, HRM, MBA, MGT, MIS or MKT courses, 500 level or above	6
Required Minor/Certificate***	12
Free Electives	10 to 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT or MKT Writing-Intensive Course
- **Laboratory Course (1 course required):** Any Laboratory Course

* **Required Major Courses:** Students may replace "Required Major Courses" with those from those from the curriculum of a B.S.B.A. in Economics, Finance, Human Resource Management, Interdisciplinary Studies in Business and Commerce, Management or Marketing.

** **Related Electives:** Select 6 credits from below as part of the B.S.B.A. program "Related Electives":

- MBA Required Courses
 - **MBA 720** Leading the Enterprise
 - **MBA 730** Managerial Decision Making
 - **MBA 740** Business, Government and Society
 - **MBA 750** MBA Capstone

Accelerated Bachelor's-to-Master's Degree Programs

- MBA Concentration Courses
 - *Option 1: Accounting*
 - **ACC 710** Financial Accounting
 - **ACC 715** Advanced Federal Income Tax
 - **ACC 720** Advanced Financial Accounting
 - **ACC 730** Advanced Auditing
 - *Option 2: Applied Economics*
 - **ECO 710** Advanced Microeconomics
 - **ECO 720** Advanced Macroeconomics
 - **ECO 730** Applied Econometric Analysis
 - **BUS 740** Forecasting and Predictive Modelling
 - *Option 3: Business Analytics*
 - **BUS 710** Applied Data Analysis for Business
 - **MIS 720** Business Analytics for Big Data
 - **MIS 730** Decision Support Systems
 - **BUS 740** Forecasting and Predictive Modeling
 - Option 4: Healthcare Management
 - **ECO 765** Health Economics and Policy
 - **MGT 761** U.S. Health Care Policy
 - **MGT 763** Health Systems Management
 - **MIS 766** Healthcare Informatics
 - Option 5: Management
 - **MGT 710** Leadership Dynamics
 - **MGT 720** Leveraging Diversity
 - **MGT 730** Organizational Problem Solving
 - **MGT 740** Managing Projects
- MBA Business Electives
 - Two ACC, BUS, ECO, ENP, FIN, HRM, MGT, MIS or MKT courses, 500 level or above, chosen in consultation with adviser (6 credits)

*** **Required Minor/Certificate:** Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above."

Program Notes: Students who complete dual degrees or dual majors do not have to complete a minor or certificate. No more than 6 credits of any internship course may be applied to satisfy the major requirements. Additional internship credits may be applied to free electives. Students can apply for admission to the accelerated program after completing at least 60 credits.

Additional Requirements

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Accelerated Bachelor's-to-Master's Degree Programs

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

<https://www.calu.edu/academics/business/index.aspx>

B.S.Ed. in Grades Pre-K-4 Education to M.Ed. in Integrative STEM Education K-12

Program Description

The Bachelor of Science in Education in Grades Pre-K-4 Education degree prepares students to teach children at the pre-kindergarten to grade 4 levels. Pennsylvania certification in pre-K to grade 4 education is awarded upon graduation and completion of state certification requirements.

Qualified undergraduate students in the grades pre-K-4 education program may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) a master's degree in integrative STEM education K-12.

The Master of Education (M.Ed.) in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 139 credits.

Program Coordinator

Michael Ulderich

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<i>Health and Wellness</i> CHD 250 Health and Physical Education for PreK-Grade 4	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> MUS/ART/THE 372 Creative Arts for PreK-4	3
<i>Natural Sciences</i> Approved Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • Approved British/American Lit Course (see program notes) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	60
CHD 200 Intro to PreK-Grade 8 Education	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Instruction and Assessment in K-4	3
ELE 300 Emergent Literacy	3
ELE 301 Literacy Foundations I: Lang Arts*	3
ELE 302 Literacy Foundations II: Reading*	3
ELE 310 Teaching PreK STEAM	3
ELE 311 Teaching Math K-4*	3
CHD 312 Leadership and Advocacy in Childhood Ed	3
ELE 321 Teaching Science K-4*	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
ELE 331 Teaching Social Studies K-4*	3
EDE 750 Foundations of Integ. STEM Ed. K-12	3
ELE 410 PreK-4 Field Experience	3
ELE 411 K-4 Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Required Related Courses	12
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3
PSY 205 Child Psychology	3
PSY 208 Educational Psychology	3
Free Electives	9
EDE 701 Standards Aligned Curriculum, Instruction and Assessment	3
EDE 753 Integrative STEM Pedagogy and Instructional Design	3
EDE 754 Creating Innovative Measures of Learning for Integrative STEM Learning Communities	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELE 461 Student Teaching PreK-Grade 4
- **Writing-Intensive Component Courses (2 courses required):** ELE 410 PreK-4 Field Experience AND ELE 411 K-4 Field Experience
- **Laboratory Course (1 course required):** Approved Natural Sciences Course with Lab

* Pre-requisite for all courses marked with an asterisk is Admission to Teacher Education.

Program Notes:

- All courses required for certification must earn C or better.
- CHD 200 and ELE 220 require current clearances and minimum 2.0 GPA to register for courses.

Accelerated Bachelor's-to-Master's Degree Programs

- ALL other EDU, ELE, ESP and CHD courses require current clearances and minimum 2.5 GPA to register for courses.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisites for ELE 221 and all 300 level ELE and CHD courses are ELE 200 and ELE 220.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/grades-prek-4-education/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

B.S.Ed. in Grades Pre-K-4 Education to M.Ed. in Reading Specialist

Program Description

The Bachelor of Science in Education in Grades Pre-K-4 Education degree prepares students to teach children at the pre-kindergarten to grade 4 levels. Pennsylvania certification in pre-K to grade 4 education is awarded upon graduation and completion of state certification requirements.

Qualified undergraduate students in the grades pre-K-4 education program may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their bachelor's degree and (thereafter) a reading specialist master's degree.

The reading specialist Master of Education program at Cal U is designed for students who want to earn a Master of Education degree and reading specialist certification on their Pennsylvania teaching certificate.

Through the accelerated program, students can complete both degrees at Cal U with a total of 142 credits.

Accelerated Bachelor's-to-Master's Degree Programs

Program Coordinator

Michael Ulderich

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP). The reading specialist program is also nationally recognized by the International Literacy Association (ILA).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3
<i>Health and Wellness</i> CHD 250 Health and Physical Education for PreK-Grade 4	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> MUS/ART/THE 372 Creative Arts for PreK-4	3
<i>Natural Sciences</i> Approved Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	3
<i>Ethics and Multicultural Emphasis</i>	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
CHD 350 Family and Community Collaborations	
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • Approved British/American Lit Course (see program notes) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	60
CHD 200 Intro to PreK-Grade 8 Education	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Instruction and Assessment in K-4	3
ELE 300 Emergent Literacy	3
ELE 301 Literacy Foundations I: Lang Arts*	3
ELE 302 Literacy Foundations II: Reading*	3
ELE 310 Teaching PreK STEAM	3
ELE 311 Teaching Math K-4*	3
CHD 312 Leadership and Advocacy in Childhood Ed	3
ELE 321 Teaching Science K-4*	3
ELE 331 Teaching Social Studies K-4*	3
EDU 375 Introduction to Integrated STEM Education	3
ELE 410 PreK-4 Field Experience	3
ELE 411 K-4 Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Required Related Courses	12
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3
PSY 205 Child Psychology	3
PSY 208 Educational Psychology	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
Free Electives	9
RSP 700 Fundamentals of Literacy	3
RSP 707 Creating and Fostering Literate Environments	3
RSP 708 Literacy Dev. for ELL	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELE 461 Student Teaching PreK-Grade 4
- **Writing-Intensive Component Courses (2 courses required):** ELE 410 PreK-4 Field Experience AND ELE 411 K-4 Field Experience
- **Laboratory Course (1 course required):** Approved Natural Sciences Course with Lab

* Pre-requisite for all courses marked with an asterisk is Admission to Teacher Education.

Program Notes:

- All courses required for certification must earn C or better.
- CHD 200 and ELE 220 require current clearances and minimum 2.0 GPA to register for courses.
- ALL other EDU, ELE, ESP and CHD courses require current clearances and minimum 2.5 GPA to register for courses.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisites for ELE 221 and all 300 level ELE and CHD courses are ELE 200 and ELE 220.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Accelerated Bachelor's-to-Master's Degree Programs

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpage

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/grades-prek-4-education/index.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/education-campus/reading-specialist/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. in Integrative STEM Education K-12

Program Description

The language arts/reading concentration of the Bachelor of Science in Education (B.S.Ed.) in Middle Level Education degree prepares students to teach English language and reading to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their B.S.Ed. in Middle Level Education: Language Arts/Reading and (thereafter) a master's in integrative STEM education K-12.

The Master of Education (M.Ed.) in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 142 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i>	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
ENG 101 English Composition I	
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	45
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3
ELM 302 Language Arts Methods, Assessments and Interventions*	3
ELM 311 Math Methods, Assessments and Interventions*	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3
EDE 750 Foundations of Integ. STEM Ed K-12	3
ELM 415 Middle Level Education Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18
ENG 102 English Composition II	3
ENG 337 Survey of American Lit. I	3
ENG 338 Survey of American Lit. II	3
RES 800 Methods of Research	3
Select two courses from the following: <ul style="list-style-type: none"> • ENG 315 Survey of AM. Women Writers • ENG 345 English Grammar and Usage • ENG 347 Intro to Linguistics • ENG 425 Shakespeare 	6
Required Related Courses	15
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psychology (PSY 100 waived)	3
MAT 181 College Algebra	3
Free Electives	3
EDE 753 Int. STEM Ped. and Inst. Design	3
Total	121

Accelerated Bachelor's-to-Master's Degree Programs

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** Any Natural Sciences Course with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)
- Approved English Concentration Courses are: ENG 106, 107, 108, 125, 127, 148, 150, 155, 203, 376, 377, 378.

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/english.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading to M.Ed. in Reading Specialist

Program Description

The language arts/reading concentration of the Bachelor of Science in Education (B.S.Ed.) in Middle Level Education degree prepares students to teach English language and reading to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their B.S.Ed. in Middle Level Education: Language Arts/Reading and (thereafter) a reading specialist master's degree.

The reading specialist Master of Education (M.Ed.) program at Cal U is designed for students who want to earn an M.Ed. and reading specialist certification on their Pennsylvania teaching certificate.

Through the accelerated program, students can complete both degrees at Cal U with a total of 145 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP). The reading specialist program is also nationally recognized by the International Literacy Association (ILA).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	45
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3
ELM 302 Language Arts Methods, Assessments and Interventions*	3
ELM 311 Math Methods, Assessments and Interventions*	3
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3
EDU 375 Intro to Integrated STEM Education	3
ELM 415 Middle Level Education Field Experience*	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18
ENG 102 English Composition II	3
ENG 337 Survey of American Lit. I	3
ENG 338 Survey of American Lit. II	3
RES 800 Methods of Research	3
Select two courses from the following: <ul style="list-style-type: none"> • ENG 315 Survey of AM. Women Writers • ENG 345 English Grammar and Usage • ENG 347 Intro to Linguistics • ENG 425 Shakespeare 	6
Required Related Courses	15
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psychology (PSY 100 waived)	3
MAT 181 College Algebra	3
Free Electives	3
RSP 700 Fundamentals of Literacy	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** Any Natural Sciences Course with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Accelerated Bachelor's-to-Master's Degree Programs

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)
- Approved English Concentration Courses are: ENG 106, 107, 108, 125, 127, 148, 150, 155, 203, 376, 377, 378.

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/english.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/education-campus/reading-specialist/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Math to M.Ed. in Integrative STEM Education K-12

Program Description

The math concentration of the Bachelor of Science in Education (B.S.Ed.) in Middle Level Education degree prepares students to teach mathematics to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Accelerated Bachelor's-to-Master's Degree Programs

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their B.S.Ed. in Middle Level Education: Math and (thereafter) a master's in integrative STEM education K-12.

The Master of Education (M.Ed.) in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 142 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i>	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 215 Statistics • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	45
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3
ELM 302 Language Arts Methods, Assessments and Interventions*	3
ELM 311 Math Methods, Assessments and Interventions*	3
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3
EDE 750 Foundations of Integrative STEM Ed K-12	3
ELM 415 Middle Level Education Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18
MAT 191 College Trigonometry	3
MAT 272 Discrete Math	3
MAT 281 Calculus	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
MAT 303 Geometry	3
MAT 341 Linear Algebra	3
MAT 400 Mathematical Modeling	3
Required Related Courses	12
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psychology (PSY 100 waived)	3
Free Electives	6
EDE 701 Stand. Aligned Curr., Inst. and Asmt.	3
EDE 752 Mathematics as Problem Solving	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** Any Natural Sciences Course with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Accelerated Bachelor's-to-Master's Degree Programs

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/mathematics.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Science to M.Ed. in Integrative STEM Education K-12

Program Description

The science concentration of the Bachelor of Science in Education (B.S.Ed.) in Middle Level Education degree prepares students to teach science to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their B.S.Ed. in Middle Level Education: Science and (thereafter) a master's in integrative STEM education K-12.

The Master of Education (M.Ed.) in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 142 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Accelerated Bachelor's-to-Master's Degree Programs

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHS 120 Basic Physical Science with Lab	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	45

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3
ELM 302 Language Arts Methods, Assessments and Interventions*	3
ELM 311 Math Methods, Assessments and Interventions*	3
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3
EDE 751 Building Scientific Literacy and Understanding through Inquiry	3
ELM 415 Middle Level Education Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18
EDE 750 Foundations of Integrative STEM Ed. K-12	3
Select one Earth Science course from approved list, in consultation with adviser	4
Select one Physical Science course from approved list, in consultation with adviser	4
BIO 120 General Zoology OR BIO 125 General Botany	4
Select one science concentration course from approved list, in consultation with adviser	3
Required Related Courses	15
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3
PSY 206 Adolescent Psychology	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
PSY 208 Educational Psychology (PSY 100 waived)	3
MAT 215 Statistics	3
Free Electives	3
EDE 701 Standards Aligned Curriculum, Instruction and Assessment	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** PHS 120 Basic Physical Science with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)
- Please consult with your science education adviser before selecting from the following concentration courses: EAS 104, 105, 142, 163; ENS 101; GLG 150, 210; PHS 121, 122, 137, 145; CHE 101, 103.

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in

Accelerated Bachelor's-to-Master's Degree Programs

additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/science.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Integrative STEM Education K-12

Program Description

The social studies concentration of the Bachelor of Science in Education (B.S.Ed.) in Middle Level Education degree prepares students to teach social studies to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their B.S.Ed. in Middle Level Education: Social Studies and (thereafter) a master's degree in integrative STEM education K-12.

The Master of Education (M.Ed.) in Teacher Education: Integrative STEM Education K-12 focuses on best practices for developing rigorous, relevant, innovative and engaging integrative practices for incorporating STEM principles across disciplines.

Through the accelerated program, students can complete both degrees at Cal U with a total of 145 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i>	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
ENG 101 English Composition I	
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 100 Intro to Geography	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 	9
Required Major Courses	45
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3
ELM 302 Language Arts Methods, Assessments and Interventions*	3
ELM 311 Math Methods, Assessments and Interventions*	3
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
EDE 750 Foundations of Integ. STEM Ed. K-12	3
ELM 415 Middle Level Education Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18
HIS 102 History of the US since 1877	3
HIS 112 World History since 1500	3
HIS 200 History of Pennsylvania	3
POS 105 American Politics	3
ECO 100 Elements of Economics	3
Select one of the following courses: <ul style="list-style-type: none"> • ECO 200 Current Economics Issues • ECO 201 Principles of Microeconomics • ECO 202 Principles of Macroeconomics • GEO 105 Human Geography • GEO 217 Demographic Analysis • GEO 220 Geography of N. America and PA • POS 101 Contemporary Policy and Politics • POS 306 The Congress • POS 310 The Presidency 	3
Required Related Courses	15
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psychology (PSY 100 waived)	3
MAT 181 College Algebra	3
Free Electives	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
EDE 753 Integrative STEM Pedagogy and Instructional Design	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** Any Natural Sciences Course with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/social-studies.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/stem/index.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies to M.Ed. in Reading Specialist Program Description

The social studies concentration of the Bachelor of Science in Education (B.S.Ed.) in Middle Level Education degree prepares students to teach social studies to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Qualified undergraduate students in this concentration may be eligible to participate in the accelerated B.S.Ed.-to-M.Ed. program, which enables them to take graduate courses that apply to both their B.S.Ed. in Middle Level Education: Social Studies and (thereafter) a reading specialist master's degree.

The reading specialist Master of Education (M.Ed.) program at Cal U is designed for students who want to earn an M.Ed. degree and reading specialist certification on their Pennsylvania teaching certificate.

Through the accelerated program, students can complete both degrees at Cal U with a total of 148 credits.

Program Coordinator

Dr. Diane Fine

Accreditation

These programs are approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP). The reading specialist program is also nationally recognized by the International Literacy Association (ILA).

Curriculum

The following curriculum shows the requirements for completing the bachelor's degree under the accelerated B.S.Ed.-to-M.Ed. program. Additional graduate-level courses are required to complete the master's degree; refer to the graduate academic catalog for these requirements.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 100 Intro to Geography	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 	9
Required Major Courses	45
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3
ELM 302 Language Arts Methods, Assessments and Interventions*	3
ELM 311 Math Methods, Assessments and Interventions*	3
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3
EDU 375 Intro to Integrated STEM Education	3
ELM 415 Middle Level Education Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18

Accelerated Bachelor's-to-Master's Degree Programs

Course	Credits
HIS 102 History of the US since 1877	3
HIS 112 World History since 1500	3
HIS 200 History of Pennsylvania	3
POS 105 American Politics	3
ECO 100 Elements of Economics	3
Select one of the following courses: <ul style="list-style-type: none"> • ECO 200 Current Economics Issues • ECO 201 Principles of Microeconomics • ECO 202 Principles of Macroeconomics • GEO 105 Human Geography • GEO 217 Demographic Analysis • GEO 220 Geography of N. America and PA • POS 101 Contemporary Policy and Politics • POS 306 The Congress • POS 310 The Presidency 	3
Required Related Courses	15
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psychology (PSY 100 waived)	3
MAT 181 College Algebra	3
Free Electives	3
RSP 700 Fundamentals of Literacy	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** Any Natural Sciences Course with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Accelerated Bachelor's-to-Master's Degree Programs

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Undergraduate students must achieve at least junior standing to take graduate-level coursework.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Undergraduate students in the accelerated program may register for no more than 6 graduate credits in any one term, and in terms when a graduate course is registered, the student may not register for more than 18 total credits.

It is the student's responsibility to apply and meet the qualifications of the graduate program portion of the accelerated program. Failure to follow through with enrollment in the accelerated graduate program will result in additional undergraduate credits to complete the bachelor's degree, as outlined in the Undergraduate Credit for Graduate Courses policy.

Additional accelerated program requirements may be found at: https://www.calu.edu/inside/forms/_files/academic-affairs/accelerated-program-application.pdf

Program Webpages

- **Undergraduate:** <https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/social-studies.aspx>
- **Graduate:** <https://www.calu.edu/academics/graduate/masters/education-campus/reading-specialist/index.aspx>

Department of Biology, Geology and Environmental Sciences

Faculty

Dr. Louise Nicholson (chair) | Dr. David G. Argent | Dr. Summer Arrigo-Nelson | Dr. Carol Bocetti | Dr. Jesse Eiben | Dr. Kyle C. Fredrick | Dr. Chadwick Hanna | Dr. Daniel Harris | Dr. Cassandra L. Kuba | Dr. Sarah Meiss | Dr. Brian Paulson | Dr. Nancy Pugh | Dr. Mark Tebbitt | Dr. Robert S. Whyte

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Biology, Geology and Environmental Sciences includes undergraduate programs in anthropology, biology, environmental studies, fisheries and wildlife, geology, molecular biology and veterinary technology.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.S. in Veterinary Technology
- B.A. in Anthropology: Archaeology
- B.A. in Anthropology: Forensic Anthropology
- B.S. in Biology
- B.S. in Biology: Mortuary Science
- B.S. in Biology: Plant Biology
- B.S. in Biology: Pre-Chiropractic Medicine
- B.S. in Biology, with pre-professional concentrations in:
 - Pre-Dentistry
 - Pre-Medicine
 - Pre-Optometry
 - Pre-Osteopathic Medicine
 - Pre-Pharmacy
 - Pre-Podiatric Medicine
 - Pre-Veterinary Medicine
- B.S. in Environmental Studies: Conservation Ecology
- B.S. in Environmental Studies: Environmental Science
- B.S. in Fisheries and Wildlife Biology
- B.S. in Geology
- B.S. in Molecular Biology
- B.S. in Veterinary Technology

Note: Cal U also offers a B.S.Ed. in Biology: Secondary Education through its Department of Education.

Minors

Minors offered through this department include:

- Anthropology
- Biology
- Environmental Geosciences
- Environmental Science
- Fisheries and Wildlife
- Geology
- Hydrology

Facilities

The department is housed in a four-story building equipped with an array of scientific instruments. Specialized areas include the animal room, greenhouse, herbarium and vertebrate teaching museum. Facilities also include:

- Earth Materials Laboratory
- Geosciences Laboratory
- Peter J. Daley Geotechnology Institute
- Watershed Analysis Laboratory

The SAI Farm serves as a 94-acre outdoor lab, providing students with hands-on experiences.

Honor Societies

Beta Beta Beta is the national honor society for biological sciences. Students can earn membership if they maintain a GPA of 3.25 in the biological sciences and 3.00 overall after completing 45 credit-hours and are extended an invitation to join.

Anthropology majors are eligible for membership in the **Gamma Chapter of Lambda Alpha**, the national anthropology honor society.

The national earth science honor society, **Sigma Gamma Epsilon**, has a chapter (Zeta Alpha) on campus. Students recognized for their academic and professional achievements are elected to it.

Academic Societies and Department Clubs

The Cal U Chapter of the **American Fisheries Society (AFS)** is open to all environmental studies and fisheries and wildlife biology majors. The AFS promotes issues dealing with the management of North American game and non-game fish resources and their associated habitats. The professional society offers opportunities for public outreach and professional development. Members can elect to participate in various activities ranging from workshops to conferencing to hands-on field work.

Biology Club is open to all interested students. Members explore careers in biology through guest speakers and behind-the-scenes tours of research facilities, the zoo, botanical gardens and museums. Other activities include camping and whitewater rafting; fundraising events, such as races and bake sales to benefit cancer research and other charities; and judging science competitions of local K-12 students.

The **Geology Club** sponsors numerous activities for majors and non-majors. The club offers field trips and social outings and sponsors student travel to conferences. Cal U also has active chapters of the **Association for Environmental and Engineering Geologists** and the **American Association of Petroleum Geologists**.

Medical Interest Club offers guidance to undergraduates on the many requirements for application to medical graduate schools. This club enables members pursuing healthcare careers to explore career choices through speakers and touring medical education programs.

Cal U has a student chapter of the **Wildlife Society**, which was chartered in 1996. The mission of the Wildlife Society is to represent and serve the professional community of scientists, managers, educators, technicians, planners and others who work actively to study, manage and conserve wildlife and their habitats worldwide.

A.S. in Veterinary Technology

Program Description

The Associate of Science in Veterinary Technology degree prepares students to become veterinary technicians. This on-campus program includes classroom theory, hands-on training and clinical experience. Students work with live animals (including dogs, cats, rats and rabbits) in state-of-the-art facilities.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	24
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> BIO 226 Basic Microbiology	4
<i>Technological Literacy</i> VET 230 Digital Diagnostic Imaging	4
<i>Natural Sciences</i> CHE 101 General Chemistry OR CHE 103 Chemistry for the Everyday World	3 or 4
<i>Social Sciences or Humanities</i> Any Social Science or Humanities Course	3
Required Major Courses	36
BIO 210 Anatomy and Physiology of Domestic Animals I	4
BIO 220 Anatomy and Physiology of Domestic Animals II	4
VET 101 Introduction to Veterinary Technology	3
VET 160 Care and Management of Exotic and Laboratory Animals	3
VET 202 Small Animal Management and Clinical Procedures	4
VET 210 Veterinary Clinical Technology and Laboratory Procedures	4
VET 220 Large Animal Management and Clinical Procedures	4
VET 240 Veterinary Pharmacy and Pharmacology	3

Course	Credits
VET 250 Surgical Nursing, Anesthesia and Pain Management	4
VET 292 Clinical Experience	3
Total	60

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/veterinary-technology/index.aspx>

B.A. in Anthropology: Archaeology Concentration

Program Description

The archaeology concentration of the Bachelor of Arts in Anthropology degree deepens students' understanding of people and cultures. Students gain experience through archaeological digs, laboratory research, forensic casework and other opportunities.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any CDC General Education Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3

Department of Biology, Geology and Environmental Sciences

Course	Credits
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>Ethics and Multicultural Awareness Emphasis</i> Any JUS, SOC or WST Course on EMEL Menu	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Social Science Course • Additional General Education Courses (two courses) 	9
Required Major Courses	18
ANT 100 Intro to Anthropology	3
ANT 101 Archaeology Field School	3
ANT 290 Archaeology	3
ANT 421 Anthropological Thought	3
ANT 499 Senior Seminar in Anthropology	3
MAT 215 Statistics OR PSY 220 Descriptive Statistics	3
Required Related Courses	18
ANT 341 Research/Lab in Archaeology	3
ANT 355 Prehistoric American Indians	3
ANT 360 Historic Sites Archaeology	3
ANT 400 Fund. of Archaeological Theory	3
ANT 445 Advanced Methods in Archaeology	3
ANT 498 Seminar in Archaeology	3
Related Electives	3
Select from the following: <ul style="list-style-type: none"> • ANT 101 Archaeology Field School (extra) • ANT 200 Old World Prehistory • ANT 220 Aztecs, Mayas and Incas • ANT 231 Medical Anthropology • ANT/BIO 232 Biological Anthropology 	3

Department of Biology, Geology and Environmental Sciences

Course	Credits
<ul style="list-style-type: none"> • ANT 255 World Ethnology • ANT 280 Indians of North America • ANT 300 Cultural Views of Women • ANT 345 Cultural Politics Food and Eating • ANT 370 Forensic Archaeology • ANT 379 Special Problems in Anthropology • ANT 385 Primate Social Behavior • ANT 390 Human Origins • Adviser-Approved ANT Course 	
Free Electives	40 or 41
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ANT 499 Senior Seminar in Anthropology
- **Writing-Intensive Component Courses (2 courses required):** Any Two ANT Approved Writing-Intensive Menu Courses
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are required. Related electives other than those listed must be approved by academic adviser.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/archaeology/index.aspx>

B.A. in Anthropology: Forensic Concentration

Program Description

The forensic concentration of the Bachelor of Arts in Anthropology degree prepares students to employ archaeological search and recovery techniques as well as laboratory (skeletal analysis) skills. Students have opportunities for hands-on research through archaeological excavations, laboratory analysis of skeletal remains, forensic casework and other opportunities.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1

Department of Biology, Geology and Environmental Sciences

Course	Credits
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any CDC General Education Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>Ethics and Multicultural Awareness Emphasis</i> Any JUS, SOC or WST Course on EMEL Menu	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Social Science Course • Additional General Education Courses (two courses) 	9
Required Major Courses	18
ANT 100 Intro to Anthropology	3
ANT 101 Archaeology Field School	3
ANT 290 Archaeology	3
ANT 421 Anthropological Thought	3
ANT 499 Senior Seminar in Anthropology	3
MAT 215 Statistics OR PSY 220 Descriptive Statistics	3
Required Related Courses	18
ANT 245 Human Osteology	3

Department of Biology, Geology and Environmental Sciences

Course	Credits
ANT 254 Intro to Forensic Anthropology	3
ANT 340 Research/Lab in Physical Anthropology	3
ANT 370 Forensic Archaeology	3
ANT 446 Advanced Forensic Anthropology	3
ANT 497 Seminar in Physical Anthropology	3
Related Electives	3
Select from the following: <ul style="list-style-type: none"> • ANT 101 Archaeology Field School (extra) • ANT 200 Old World Prehistory • ANT 220 Aztecs, Mayas and Incas • ANT 231 Medical Anthropology • ANT/BIO 232 Biological Anthropology • ANT 255 World Ethnology • ANT 280 Indians of North America • ANT 300 Cultural Views of Women • ANT 345 Cultural Politics Food and Eating • ANT 379 Special Problems in Anthropology • ANT 385 Primate Social Behavior • ANT 390 Human Origins • Adviser-Approved ANT Course 	3
Free Electives	40 or 41
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ANT 499 Senior Seminar in Anthropology
- **Writing-Intensive Component Courses (2 courses required):** Any Two ANT Approved Writing-Intensive Menu Courses
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are required. Related electives other than those listed must be approved by academic adviser.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/forensic-anthropology/>

B.S. in Biology

Program Description

The Bachelor of Science in Biology degree builds foundational knowledge in biology as well as chemistry, physics and math through core required courses. Students then select additional biology electives that explore concepts related to their individual area of interest.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Oral Communication Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 273 Applied Calculus OR MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Tech Lit. Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 121 General Physics I	4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • MAT 215 Statistics • CHE 101 General Chemistry I 	13
Required Major Courses	47

Department of Biology, Geology and Environmental Sciences

Course	Credits
BIO 120 General Zoology	4
BIO 125 General Botany	4
BIO 215 Cellular and Molecular Biology	4
BIO 218 Genetics	4
BIO 248 General Ecology	4
BIO 300-level Anatomy Course	4
BIO 300- or 400-level Physiology Course	4
BIO 478 Evolution	3
ENS 495 Design and Analysis	4
PHY 122 General Physics II	4
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4
Related Electives	13
Any 300- or 400-level BIO or ENS course, CHE 415 or related College of Science and Technology 300- or 400-level course (with approval of your adviser)	13
Free Electives	18
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any two BIO or ENS Upper-Division Writing Component Courses
- **Laboratory Course (1 course required):** BIO 215 Cellular and Molecular Biology

Program Note: Chemistry minor (20 credits) recommended for those students intending to pursue graduate or professional school. (Must declare minor with chemistry chair.)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/biology/index.aspx>

B.S. in Biology: Mortuary Science

Program Description

The mortuary science concentration of the Bachelor of Science in Biology, through affiliation with the Pittsburgh Institute of Mortuary Science, is accredited through the American Board of Funeral Service Education, National Association of Colleges of Mortuary Science, National Conference of Funeral Service Examining Boards of the United States Inc. This program is designed for three years of approved study on campus and one year of study at the Pittsburgh Institute of Mortuary Science.

Delivery Mode

Traditional (on campus)

Curriculum

The curriculum requires 120 credits: 94 credits in required and elective Cal U courses and 26 credits for the institute year. Upon completion of the program, the student is granted a Bachelor of Science degree from Cal U and an associate degree in specialized technology from the Pittsburgh institute. Upon completion of a one-year resident intern period, the candidate applies for the state board examinations and licensure as a funeral director and embalmer.

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Tech Lit. Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry I	4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> The following courses are suggested electives of professional mortuary science interest. Please consult	12

Department of Biology, Geology and Environmental Sciences

Course	Credits
<p>your adviser for the most appropriate courses for you. At least one course must be an Ethics and Multicultural Awareness Emphasis (EMEL) Course.</p> <ul style="list-style-type: none"> • ENG 102 Composition II or Other English or Literature Course • CSC 101 Personal Productivity Software (TL) • CSC 201 Internet Concepts (TL) • PHI 200 World Religions (HUM, EMEL) • PHI 307 Medical Ethics (HUM, EMEL) • PSY 100 General Psychology (SS) • SOC 100 Principles of Sociology (SS) • PHI 308 Bioethics (HUM, EMEL) • ECO 100 Elements of Economics (SS) • ENG 211 Business Writing (Comp) • PHI 100 Perspectives in Philosophy (HUM) 	
Required Major Courses	32
BIO 120 General Zoology	4
BIO 125 General Botany	4
BIO 215 Cellular and Molecular Biology	4
BIO 306 Human Anatomy	4
BIO 326 General Microbiology	4
BIO 328 Human Physiology	4
BIO *** 300- or 400-level BIO/ENS Course (requires approval of adviser)	4
CHE 102 General Chemistry II	4
Pittsburgh School of Mortuary Science	26
Upper-level Major Courses (fourth year of program)	26
Free Electives	21
<p>Students are recommended to take courses leading to a minor in Business Administration, Psychology or another area of interest. The following courses are suggested choices:</p> <ul style="list-style-type: none"> • ACC 200 Financial Accounting • ART 388 Sculpture Studio • PSY 211 Social Psychology • BUS 100 Intro to Business (SS) 	21

Department of Biology, Geology and Environmental Sciences

Course	Credits
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any Upper-Division Writing Component Course
- **Laboratory Course (1 course required):** BIO 215 Cellular and Molecular Biology

Program Note: Student must complete 48 credits of 300- or 400-level courses. The curriculum includes 42 upper-level credits.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/biology/pre-professional/mortuary-science/index.aspx>

B.S. in Biology: Plant Biology Concentration

Program Description

The plant biology concentration of the Bachelor of Science in Biology degree deepens student knowledge of plant sciences. Students may choose to focus on plant ecology or biology in their upper-level courses.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	41 or 42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Oral Communication Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 273 Applied Calculus OR MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i>	3

Department of Biology, Geology and Environmental Sciences

Course	Credits
Any Fine Arts Course	
<i>Natural Sciences</i> EAS 142 Climatology (3 credits) OR GLG 150 Intro to Geology (4 credits)	3 or 4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • MAT 215 Statistics • PHY 121 Physics 	13
Required Major Courses	35
BIO 120 General Zoology	4
BIO 125 General Botany	4
BIO 215 Cellular and Molecular Biology	4
BIO 218 Genetics	4
BIO 248 General Ecology	4
BIO 307 Plant Anatomy	4
BIO 335 Plant Physiology	4
BIO 336 Plant Taxonomy	4
BIO 478 Evolution	3
Required Chemistry Electives	12
CHE 101 General Chemistry I	4
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4
Ecology or Biology Option (select one option)	12
<i>Ecology Option</i>	
Select at least two of the following: <ul style="list-style-type: none"> • BIO 407 Mycology • BIO 414 Plant Ecology 	8

Course	Credits
<ul style="list-style-type: none"> • BIO 442 Forest Ecology and Dendrology • ENS 475 Wetlands Ecology 	
Select any 300- or 400-level BIO or ENS course not used to fill another requirement (with adviser's approval)	4
<i>Biology Option</i>	
Select at least two of the following: <ul style="list-style-type: none"> • BIO 326 General Microbiology • BIO 480 Cell Biology • CHE 415 Biochemistry 	8
Select any 300- or 400-level BIO or ENS course(s) not used to fill another requirement (with adviser's approval)	4 or 5
Free Electives	20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any two BIO or ENS (or other department, with approval of adviser) Upper-Division Writing Component Courses
- **Laboratory Course (1 course required):** BIO 215 Cellular and Molecular Biology

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/plant-biology/index.aspx>

B.S. in Biology: Pre-Chiropractic Medicine Concentration

Program Description

The pre-chiropractic Medicine concentration of the Bachelor of Science in Biology prepares students for the advanced training offered by professional chiropractic schools. Students are advised to tailor their curriculum to those courses that will best prepare them for professional schools. Almost all courses include a laboratory component where students gain experience using various scientific instruments, study the practical application of scientific theories and apply course content.

Delivery Mode

Traditional

Articulated Agreements

Our department has articulated agreements with chiropractic colleges (e.g., Logan University College of Chiropractic, New York Chiropractic, Palmer Chiropractic) to facilitate students' transition post-graduation.

Curriculum

Course	Credits
General Education Courses	42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Oral Communication Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 273 Applied Calculus OR MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 121 General Physics I	4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course* • ENG 102 Composition II • CHE 101 General Chemistry I • Any Other Student-Selected Course 	13
Required Major Courses	44
BIO 120 General Zoology	4
BIO 125 General Botany	4
BIO 215 Cellular and Molecular Biology	4
BIO 218 Genetics	4

Department of Biology, Geology and Environmental Sciences

Course	Credits
BIO 306 Human Anatomy	4
BIO 326 General Microbiology	4
BIO 328 Human Physiology	4
BIO 480 Cell Biology	4
PHY 122 General Physics II	4
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4
Related Electives	16
Select from 300- or 400-level BIO/ENS courses and CHE 415	16
Free Electives	18
Total	120

* Ethics and Multicultural Awareness Emphasis Course: Recommended either PHI 307 (Medical Ethics) or PHI 308 (Bioethics).

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any two BIO or ENS Upper-Division Writing Component Courses
- **Laboratory Course (1 course required):** BIO 215 Cellular and Molecular Biology

Program Note: Chemistry minor (20 credits) recommended for those students intending to pursue graduate or professional school. (Must declare minor with chair of the Department of Mathematics and Physical Sciences.)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/biology/pre-professional/>

B.S. in Biology: Pre-Professional Concentrations

Program Description

The pre-professional concentrations of the Bachelor of Science in Biology include:

- Pre-Dentistry
- Pre-Medicine
- Pre-Optometry

Department of Biology, Geology and Environmental Sciences

- Pre-Osteopathic Medicine
- Pre-Pharmacy
- Pre-Podiatric Medicine
- Pre-Veterinary Medicine

These programs are designed to prepare students for further study at the graduate level.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Oral Communication Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 273 Applied Calculus OR MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Tech Lit. Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 121 General Physics I	4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course* • ENG 102 Composition II • MAT 215 Statistics • CHE 101 General Chemistry I 	13
Required Major Courses	44
BIO 120 General Zoology	4

Department of Biology, Geology and Environmental Sciences

Course	Credits
BIO 125 General Botany	4
BIO 215 Cellular and Molecular Biology	4
BIO 218 Genetics	4
BIO 306 Human Anatomy OR BIO 305 Comparative Vertebrate Anatomy	4
BIO 326 General Microbiology	4
BIO 328 Human Physiology OR BIO 486 Comparative Animal Physiology	4
BIO 480 Cell Biology	4
PHY 122 General Physics II	4
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4
Related Electives	16
Select from 300- or 400-level BIO/ENS courses and CHE 415	16
Free Electives	18
Total	120

* Ethics and Multicultural Awareness Emphasis Course: Recommended either PHI 307 (Medical Ethics) or PHI 308 (Bioethics).

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any two BIO or ENS Upper-Division Writing Component Courses
- **Laboratory Course (1 course required):** BIO 215 Cellular and Molecular Biology

Program Note: Chemistry minor (20 credits) recommended for those students intending to pursue graduate or professional school. (Must declare minor with chair of the Department of Mathematics and Physical Sciences.)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/biology/pre-professional/index.aspx>

B.S. in Environmental Studies: Conservation Ecology Concentration

Program Description

The conservation ecology concentration of the Bachelor of Science in Environmental Studies degree program explores fields of ecology and evolutionary biology with a focus on the presentation and management of natural resources and biodiversity. Students learn about the impact of humans on biodiversity as well as aspects of international law and policy as they affect our resources. The program builds skills and knowledge needed to effectively handle problems in the area of conservation and sustainable development. Students are able to add additional courses in botany or zoology that are content-specific, and they can opt to participate in a field experience or an internship to help strengthen their program of study.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra OR MAT 273 Applied Calculus OR MAT 281 Calculus I*	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> GIS 311 Geographic Information Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry I	4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II 	13

Department of Biology, Geology and Environmental Sciences

Course	Credits
<ul style="list-style-type: none"> • CHE 102 General Chemistry II • MAT 215 Statistics 	
Required Major Courses	45
PHY 121 General Physics	4
BIO 120 General Zoology	4
BIO 125 General Botany	4
BIO 215 Cellular and Molecular Biology	4
BIO 218 Genetics	4
BIO 248 General Ecology	4
BIO 478 Evolution	3
ENS 399 Conservation Biology	3
ENS 435 Natural Resource Law and Policy	3
ENS 495 Design and Analysis	4
Select two of the following: <ul style="list-style-type: none"> • ENS 475 Wetlands Ecology • BIO 414 Plant Ecology • BIO 442 Forest Ecology and Dendrology 	8
Related Electives	15
Select two of the following: <ul style="list-style-type: none"> • BIO 305 Comparative Vertebrate Anatomy • BIO 441 Ethology • ENS 492 Animal Population Dynamics 	8
Select from any 300- or 400-level BIO or ENS courses with approval of major adviser or department chair	7
Free Electives	18
Total	120

* MAT 273 or 281 recommended for graduate studies.

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any two BIO or ENS Upper-Division Writing Component Courses
- **Laboratory Course (1 course required):** BIO 215 Cellular and Molecular Biology

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/environmental-studies/conservation-ecology.aspx>

B.S. in Environmental Studies: Environmental Science Concentration

Program Description

The environmental science concentration of the Bachelor of Science in Environmental Studies degree is an interdisciplinary program that combines the biological and physical sciences with chemistry to provide solutions to today's environmental problems. Students gain a broad background in environmental pollution (including air, water and waste); environmental policy; and the technical skills required of today's professional environmental scientist.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 OR MAT 199 OR MAT 273 OR MAT 281*	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> GIS 311 Geographic Information Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> GLG 150 Introduction to Geology	4

Department of Biology, Geology and Environmental Sciences

Course	Credits
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • PHY 121 General Physics I • MAT 215 Statistics 	13
Required Major Courses	49 or 50
Select two courses from the following: <ul style="list-style-type: none"> • BIO 120 General Zoology • BIO 125 General Botany • BIO 215 Cellular and Molecular Biology 	8
BIO 248 General Ecology	4
BIO 488 Water Pollution Biology	4
ENS 435 Natural Resource Law and Policy	3
ENS 440 Environmental Pollution Control	4
ENS 475 Wetlands Ecology	4
ENS 495 Design and Analysis	4
GLG 303 Hydrology	3
CHE 101 General Chemistry I	4
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4
CHE 381 Environmental Chemistry OR GLG 333 Geochemistry	3 or 4
Related Electives	10 or 11
Select two upper-division BIO/ENS courses	
Select two courses from the following: <ul style="list-style-type: none"> • GLG 210 Intro to Soils • GLG 343 Geomorphology • GLG 402 Groundwater Hydrology • GLG 448 Watershed Evaluation • GIS 413 Environmental Applications in GIS 	

Department of Biology, Geology and Environmental Sciences

Course	Credits
Free Electives	18 or 19
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any two BIO or ENS Upper-Division Writing Component Courses
- **Laboratory Course (1 course required):** CHE 101 General Chemistry I

* MAT 273 or 281 recommended for graduate studies.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/environmental-studies/environmental-science.aspx>

B.S. in Fisheries and Wildlife Biology

Program Description

The Bachelor of Science in Fisheries and Wildlife Biology degree explores various techniques and philosophies of fisheries and wildlife management. The program emphasizes the management of North American species, with a focus on those found within Pennsylvania. Students learn about natural resources, conservation and current issues in the discipline.

Delivery Mode

Traditional (on campus)

Curriculum

The curriculum includes those courses identified by the Wildlife Society and the American Fisheries Society as critical for the graduate. Students have a chance to become certified by either society upon graduation. This program also incorporates many unique experiences that help students network with future employers and develop professional contacts.

Course	Credits
General Education Courses	40 or 42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Oral Communication Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra OR MAT 273 Applied Calculus OR MAT 281 Calculus I	3

Department of Biology, Geology and Environmental Sciences

Course	Credits
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> GIS 311 Geographic Information Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> GLG 150 Introduction to Geology OR GLG 303 Hydrology OR PHY 121 General Physics I	3 or 4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • PHS 137 Introduction to Environmental Chemistry OR CHE 102 General Chemistry II (3 or 4 credits) • Any General Education Course 	13
Required Major Courses	49
BIO 120 General Zoology	4
BIO 125 General Botany	4
BIO 215 Cellular and Molecular Biology	4
BIO 218 Genetics	4
BIO 248 General Ecology	4
BIO/ENS 300- or 400-level Botany Course	4
ENS 423 Wildlife Management Techniques OR ENS 424 Fisheries Management	4
ENS 492 Animal Population Dynamics	4
ENS 495 Design and Analysis	4
CHE 101 General Chemistry I	4
MAT 215 Statistics	3
Select two of the following: <ul style="list-style-type: none"> • ENS 399 Conservation Biology 	6

Department of Biology, Geology and Environmental Sciences

Course	Credits
<ul style="list-style-type: none"> • ENS 420 Principles of Wildlife Management • ENS 425 Principles of Aquaculture 	
Related Electives	11
Select two of the following: <ul style="list-style-type: none"> • BIO 337 Ornithology • BIO 400 Mammalogy • BIO 407 Mycology • BIO 433 Herpetology • BIO 435 Ichthyology • BIO 441 Ethology • BIO 445 Entomology • BIO 446 Freshwater Invertebrate Zoology • BIO 488 Water Pollution Biology 	8
Select one of the following: <ul style="list-style-type: none"> • ENS 435 Natural Resource Law and Policy • GIS 413 Environmental Applications in GIS • REC 362 Recreation Site Design and Management • REC 365 Recreation Resource Management 	3
Free Electives	18 or 20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any two BIO or ENS Upper-Division Writing Component Courses
- **Laboratory Course (1 course required):** BIO 215 Cellular and Molecular Biology

Program Note: See adviser for information regarding certification by the American Fisheries Society and the Wildlife Society.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/environmental-studies/fisheries-wildlife.aspx>

B.S. in Geology

Program Description

The Bachelor of Science in Geology degree prepares students to use common geological tools and lab and field techniques; analyze data; and develop as scientists. Students in this program have opportunities to study in the field as they explore geological concepts relevant to environmental protection, energy resource exploration and development, and land infrastructure engineering.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> GIS 311 Introduction to GIS	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> GLG 150 Introduction to Geology	4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 217 Science and Tech Writing OR ENG 102 Composition II • General Education Courses (two courses) 	12

Department of Biology, Geology and Environmental Sciences

Course	Credits
Required Major Courses	33
GLG 200 Historical Geology	4
GLG 230 Earth Resources	3
GLG 301 Professional Development for Geologists	1
GLG 303 Hydrology	3
GLG 331 Mineralogy	4
GLG 332 Petrology	4
GLG 343 Geomorphology	3
GLG 423 Sedimentology/Stratigraphy	4
GLG 425 Structural Geology	4
GLG 437 Field Methods in Geology	3
Required Related Courses	22
MAT 282 Calculus II	3
MAT 215 Statistics OR MAT 381 Calculus III	3
PHY 121 General Physics I OR PHY 101 College Physics I	4
PHY 122 General Physics II OR PHY 202 College Physics II	4
CHE 101 General Chemistry I	4
CHE 102 General Chemistry II	4
Recommended Free Electives	24-25
The following are recommended free electives to select from: <ul style="list-style-type: none"> • GLG 210 Intro to Soils • GLG 250 Volcanology • GLG 290 Planetary Geology • GLG 333 Geochemistry • GLG 355 Geophysics • GLG 402 Groundwater Hydrology • GLG 427 Tectonics • GLG 429 Petroleum Geology • GLG 438 Computer Apps. in EAS • GLG 441 Advanced Env Geology • GLG 448 Watershed Evaluation • GIS 350 Remote Sensing of Env 	24 or 25

Department of Biology, Geology and Environmental Sciences

Course	Credits
<ul style="list-style-type: none">• GIS 413 Env Applications in GIS• GEO 479 Internship (variable)• Other Adviser-Approved Courses	
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** GLG 391, 392, 393, 492 or GEO 479
- **Writing-Intensive Component Courses (2 courses required):** GLG 427, 438, 441, 448
- **Laboratory Course (1 course required):** GLG 150 Introduction to Geology

Program Note: 42 credits of advanced coursework at 300 or 400 level are required.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/geology/index.aspx>

B.S. in Molecular Biology

Program Description

The Bachelor of Science in Molecular Biology degree builds lab experience and skills as well as knowledge related to the structure and function of biological molecules.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Oral Communication Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 273 Applied Calculus OR MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3

Department of Biology, Geology and Environmental Sciences

Course	Credits
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 121 General Physics I	4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • MAT 215 Statistics • CHE 101 General Chemistry I 	13
Required Major Courses	50 or 51
BIO 120 General Zoology	4
BIO 125 General Botany	4
BIO 215 Cellular and Molecular Biology	4
BIO 218 Genetics	4
BIO 266 Cell Culture	3
BIO 320 Molecular Biology	4
BIO 326 General Microbiology	4
BIO 480 Cell Biology	4
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4
Select three from the following: <ul style="list-style-type: none"> • BIO 322 Methods in DNA Analysis (4 credits) • BIO 426 Clinical Microbiology (4 credits) • BIO 427 Cell. Microbial Physiology (4 credits) • BIO 455 Biology of Cancer (3 credits) 	11 or 12
Related Electives	9 or 10
Any 300- or 400-level BIO or ENS course with approval of adviser	9 or 10

Department of Biology, Geology and Environmental Sciences

Course	Credits
Free Electives	18
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course (BIO 418 Independent Research/BIO 492 Internship recommended)
- **Writing-Intensive Component Courses (2 courses required):** Any two BIO or ENS Upper-Division Writing Component Courses
- **Laboratory Course (1 course required):** BIO 215 Cellular and Molecular Biology

Program Note: Chemistry minor recommended.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/molecular-biology/index.aspx>

B.S. in Veterinary Technology

Program Description

The Bachelor of Science in Veterinary Technology includes classroom theory, hands-on training and clinical experience. The curriculum lays a foundation of core knowledge of topics related to animal care and builds on it, preparing students to fill positions in education and industries that require a bachelor's degree (including leadership roles). Students work with live animals (including dogs, cats, rats and rabbits) in state-of-the-art facilities.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra (or higher)	3
<i>Health and Wellness</i> BIO 226 Basic Microbiology	4
<i>Technological Literacy</i>	3

Department of Biology, Geology and Environmental Sciences

Course	Credits
VET 230 Digital Diagnostic Imaging	
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry I	4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 215 Statistics • ENG 102 Composition II (recommended) • Ethics and Multicultural Awareness Course (Recommended: PHI 307 Medical Ethics OR PHI 308 Bioethics) • General Education Course 	12
Required Major Courses	36
VET 101 Introduction to Veterinary Technology	3
VET 160 Care and Management of Exotic and Laboratory Animals	3
VET 202 Small Animal Management and Clinical Procedures	4
VET 210 Veterinary Clinical Technology and Laboratory Procedures	4
VET 220 Large Animal Management and Clinical Procedures	4
VET 240 Veterinary Pharmacy and Pharmacology	3
VET 250 Surgical Nursing, Anesthesia and Pain Management	4
VET 292 Clinical Experience	3
VET 301 Contemporary Issues in Veterinary Medicine	2
VET 450 Case Studies in Veterinary Medicine	3
VET 492 Specialty Clinical Experience	3
Required Related (Cognate) Courses	12

Department of Biology, Geology and Environmental Sciences

Course	Credits
BIO 120 General Zoology	4
BIO 230 Anatomy and Physiology I	4
BIO 260 Anatomy and Physiology II	4
Related Electives	12
300- to 400-level BIO, ENS or VET elective courses (Recommended: BIO 450 Immunology OR BIO 460 Pathophysiology)	12
Free Electives	18
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** VET 492 Specialty Clinical Experience
- **Writing-Intensive Component Courses (2 courses required):** VET 301 Contemporary Issues in Veterinary Medicine AND VET 492 Specialty Clinical Experience
- **Laboratory Course (1 course required):** CHE 101 General Chemistry I

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/veterinary-technology/index.aspx>

Minor in Anthropology Curriculum

Course	Credits
Required Courses	6
ANT 100 Introduction to Anthropology	3
ANT 290 Archaeology	3
Anthropology Electives	15
Select five additional ANT courses, with a minimum of three at the 300+ level	15
Total	21

Minor in Biology Curriculum

Course	Credits
Required Courses	12
BIO 120 General Zoology OR BIO 125 General Botany	4
BIO 215 Introduction to Cellular and Molecular Biology	4
BIO 218 Genetics	4
Elective Courses	9
Select any 300- or 400-level BIO or ENS course, with permission of minor adviser. Upper-level courses chosen to meet minor requirements <i>cannot</i> be required by (or duplicate) the student's major course of study.	9
Total	21

Minor in Environmental Geosciences Curriculum

Course	Credits
Required Courses	11
GLG 150 Introduction to Geology	4
GLG 200 Historical Geology	4
GLG 303 Hydrology	3
Electives	12
<i>Select two courses from the following:</i>	
GLG 210 Introduction to Soils	3
GLG 230 Earth Resources	3
GLG 333 Geochemistry	3
GLG 343 Geomorphology	3
GLG 423 Sedimentology/Stratigraphy	3

Department of Biology, Geology and Environmental Sciences

Course	Credits
GLG 425 Structural Geology	3
<i>Select two courses from the following:</i>	
GLG 402 Groundwater Hydrology	3
GLG 437 Geological Field Methods	3
GLG 438 Computer Applications in Earth and Environmental Sciences	3
GLG 441 Adv. Environmental Geology	3
ENS 448 Watershed Evaluation	3
Any Geological Field Course from: GLG 391, 392, 393, 492 or 496	3
Total	23

Minor in Environmental Science Curriculum

Course	Credits
Required Courses	12
BIO 120 General Zoology OR BIO 125 General Botany	4
BIO 215 Introduction to Cellular and Molecular Biology	4
BIO 248 General Ecology	4
Elective Courses*	8
Select one animal-related BIO or ENS course at the 300- or 400-level (with permission of minor adviser)	4
Select one plant-related BIO or ENS course at the 300- or 400-level (with permission of minor adviser)	4
Total	20

Note: Upper-level courses chosen to meet minor requirements *cannot* be required by (or duplicate) a student's major course of study.

Minor in Fisheries and Wildlife Curriculum

Course	Credits
Required Courses	12
BIO 120 General Zoology	4
BIO 125 General Botany	4
BIO 248 General Ecology	4
Electives	12
<i>Select one of the following:</i>	
ENS 423 Wildlife Management Techniques	4
ENS 424 Fisheries Management	4
<i>Select one of the following:</i>	
BIO 337 Ornithology	4
BIO 400 Mammology	4
BIO 433 Herpetology	4
BIO 435 Ichthyology	4
BIO 445 Entomology	4
BIO 446 Freshwater Invertebrate Zoology	4
<i>Select one of the following:</i>	
BIO 442 Forest Ecology and Dendrology	4
ENS 475 Wetlands Ecology	4
Total	24

Minor in Geology Curriculum

Course	Credits
Required Courses	11

Department of Biology, Geology and Environmental Sciences

Course	Credits
GLG 150 Introduction to Geology	4
GLG 200 Historical Geology	4
<i>Select only one of the following:</i>	
GLG 210 Introduction to Soils	3
GLG 230 Earth Resources	3
GLG 303 Hydrology	3
Electives	12
<i>Select two or three from the following:</i>	
GLG 331 Mineralogy	3
GLG 332 Petrology	3
GLG 333 Geochemistry	3
GLG 343 Geomorphology	3
GLG 423 Sedimentology/Stratigraphy	4
GLG 425 Structural Geology	3
GLG 427 Tectonics	3
<i>Select one or two from the following:</i>	
GLG 402 Groundwater Hydrology	3
GLG 437 Geological Field Methods	3
GLG 438 Computer Applications in EAS	3
GLG 441 Adv. Environmental Geology	3
GLG 448 Watershed Evaluation	3
Any Geological Field Course from: GLG 391, 392, 393, 492, 496	3
Total	23

Minor in Hydrology Curriculum

Course	Credits
Required Courses	10
GLG 150 Introduction to Geology	4
GLG 303 Hydrology	3
GLG 402 Groundwater Hydrology	3
Electives	12
<i>Select at least two from the following:</i>	
GLG 210 Introduction to Soils	3
EAS 245 Weather Analysis and Forecasting	3
GLG 343 Geomorphology	3
GLG 448 Watershed Evaluation	3
<i>Select at least two from the following:</i>	
GLG 333 Geochemistry	3
GLG 441 Advanced Environmental Geology	3
ENS 424 Fisheries Management	4
ENS 475 Wetlands Ecology	4
ENS 488 Water Pollution Biology	4
CHE 331 Organic Chemistry I	4
CHE 381 Environmental Chemistry	4
Total	22

Program Notes:

- At least 4 credits must be taken outside of the student's declared major program.
- At least 9 credits must be advanced courses (300 level or higher).
- Students must complete at least 12 credits at California University of Pennsylvania.

Department of Business, Economics and Enterprise Sciences

Faculty

Dr. Edmund Matecki (chair) | Dr. Stephanie Adam | Dr. Ahmet Akgun | Dr. Jacob Bethem | Dr. Adnan Chawdhry | Dr. Joshua Chicarelli | Dr. John Confer | Dr. Paul Hettler | Dr. Elizabeth Jones | Dr. Sarah Judge | Dr. Richard LaRosa | Dr. Mark Lennon | Dr. Nan Li | Dr. James Ola | Dr. Candice Riley | Dr. Susan Ryan | Dr. Joseph J. Schwerha

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Business, Economics and Enterprise Sciences includes undergraduate programs in accounting; business administration; economics; finance; human resource management; interdisciplinary studies in business and commerce; management; and marketing.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.S. in Accounting
- B.S. in Business Administration: Integrated Business
- B.S. in Business Administration: Management Information Systems
- B.S.B.A. in Accounting
- B.S.B.A. in Economics
- B.S.B.A. in Finance
- B.S.B.A. in Human Resource Management
- B.S.B.A. in Interdisciplinary Studies in Business and Commerce (ISBC)
- B.S.B.A. in ISBC: Corporate Communication
- B.S.B.A. in ISBC: Event Planning and Management
- B.S.B.A. in ISBC: Geo-Business
- B.S.B.A. in ISBC: Parks and Recreation Management
- B.S.B.A. in ISBC: Tourism and Hospitality Management
- B.S.B.A. in Management
- B.S.B.A. in Marketing

Certificates

The department also offers sub-baccalaureate certificate programs in:

- Forensic Accounting
- Innovation and Entrepreneurship

Minors

Minors available through this department include:

- Accounting
- Arts Administration
- Business
- Economics
- Event Planning and Management
- Finance
- Forensic Accounting
- Geo-Business

- Geographic Information Technology
- Human Resource Management
- Management
- Management Information Systems
- Marketing
- Parks and Recreation
- Tourism Studies

Accelerated Bachelor's-to-Master's Programs

Accelerated bachelor's-to-master's degree programs related to business are also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Honor Societies and Memberships

Honor students in geography are eligible for induction into Gamma Theta Upsilon.

Membership is also available to students of high scholastic attainment in Cal U's Kappa chapter of Rho Phi Lambda, the national honorary recreation, park and leisure services fraternity, chartered in 1985.

Achievement is recognized in several ways. Membership is open to qualified successful business students in:

- Omicron Delta Epsilon, the International Honor Society for Economics
- Phi Beta Lambda - Future Business Leaders
- Sigma Beta Delta, the International Honor Society for Business, Management and Administration
- Student Accounting Association
- Economics Club
- Finance Club
- Student Marketing Association

Awards

These awards are presented to graduating seniors yearly:

- Alfred Zeffiro Award for Excellence in the Study of Management
- Wall Street Journal Award for Excellence in the Study of Finance
- Pennsylvania Institute of Certified Public Accountants Award for Highest Achievement in the Study of Accounting
- Amy Lyne Marunyak Memorial Award for Excellence in the Study of Marketing

Accreditation

The bachelor's and master's programs in business and economics are accredited by the Accreditation Council for Business Schools and Programs (ACBSP).

ACBSP is a leading specialized accreditation body for business education supporting, celebrating and rewarding teaching excellence. The association embraces the virtues of teaching excellence and emphasizes to students that it is essential to learn.

A.S. in Accounting

Program Description

The Associate of Science in Accounting degree covers fundamental skills and knowledge needed by those seeking entry-level positions in the field of accounting.

Delivery Mode

- Traditional (on campus)
- Global Online (100% online delivery)

Curriculum

Course	Credits
General Education Courses	28 or 29
<i>Building a Sense of Community</i> UNI 100 OR UNI 101 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Technological Literacy</i> MIS 201 Management Information Systems	3
<i>Humanities/Fine Arts</i> Any Humanities or Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 225 Business Statistics OR BUS 281 Management Science I • ENG 211 Business Writing I OR ENG 102 Composition II 	6
Required Major Courses	18
ACC 200 Financial Accounting	3
ACC 202 Accounting II	3
ACC 301 Intermediate Accounting I	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
Required Related Courses	6

Course	Credits
Select six credits of Accounting (ACC) electives with adviser's approval	6
Related Electives	9
Select courses from ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT with adviser's approval	9
Total	61

B.S. in Business Administration: Integrated Business Concentration

Program Description

The integrated business concentration of the Bachelor of Science in Business Administration degree prepares students for the 21st century global business environment.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> PHI 115 Logic and Language OR Other Adviser-Approved Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
<i>Natural Sciences</i> Any Natural Science Course	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing I OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Required Major Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Concentration Courses	18
BUS 345 Business Ethics	3
ECO 460 Global Economic Perspectives	3
HRM 462 Global Workforce Management and Change	3
MGT 431 International Business Management	3
MGT 461 Integrated Supply Chain Management	3
MKT 401 Marketing Management	3
Required Minor/Certificate*	12

Course	Credits
Free Electives	20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ECO 460 Global Economic Perspectives
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT or MKT Writing-Intensive Course
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Economics, Forensic Accounting, Management, or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

These minors are 21 credits; however, 9 of these credits are required in the “Required Major Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/integrated-global-business/index.aspx>

B.S. in Business Administration: Management Information Systems Concentration

Program Description

The management information systems concentration of the Bachelor of Science in Business Administration degree allows students to build a core understanding of business while also developing in-depth knowledge of management information systems.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
<i>Public Speaking</i> CDC 101 Public Speaking OR COM 250 Oral Communication: Management	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science Course	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Required Major Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
Concentration Courses	21
CIS 120 Application Programming I	3
CIS 299 Systems Analysis I	3
MIS 321 Accounting Info Systems	3
MIS 375 Information Tech Ethics	3
MIS 385 Health Information Systems	3
MIS 401 Business Driven MIS	3
MIS 421 Strategic Issues in MIS	3
Related Electives	9
ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already included in the "Required Major Courses" or "Concentration Courses" above or MIS 301. No more than 6 credits can be MIS 492.	9
Free Electives	19 or 20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any two ECO, MGT or MKT Upper-Division Writing-Intensive Courses
- **Laboratory Course (1 course required):** BUS 381 Management Science II

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/business-administration/management-information-systems.aspx>

B.S.B.A. in Accounting

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Accounting degree prepares students to use modern accounting methods and information systems.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 331 Cost Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	24
ACC 202 Accounting II	3
ACC 218 Federal Income Tax I	3
ACC 301 Intermediate Acc. I	3
ACC 302 Intermediate Acc. II	3
ACC 318 Federal Income Tax II	3
ACC 341 Non-Profit Accounting	3
ACC 401 Advanced Financial Acc.	3
ACC 441 Auditing	3
Related Electives	3
Select three credits from the following: <ul style="list-style-type: none"> • ACC 491 Accounting Internship • BUS 345 Business Ethics • ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already included in the "Business Core Courses" or "Required Major Courses" above 	3
Required Minor/Certificate*	12
Free Electives	10 to 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MKT or MGT Writing-Intensive Course

Department of Business, Economics and Enterprise Sciences

- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems, or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above."

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/accounting-degree/index.aspx>

B.S.B.A. in Economics

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Economics degree prepares students to apply economic theory and related concepts to real-world problems in business and other sectors.

Delivery Mode

- Traditional (on campus)
- Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
<i>Natural Sciences</i> Any Natural Science Course	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	18
ECO 301 Intermediate Micro	3
ECO 302 Intermediate Macro	3
ECO 421 Applied Econometrics	3
Any 300-level or above ECO courses, excluding ECO 492	9
Related Electives	9
ECO 492 Economics Internship	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already included in the "Business Core Courses" or "Required Major Courses" above	6
Required Minor/Certificate*	12
Free Electives	10 to 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO Writing-Intensive Course
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Accounting, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems, or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of Related Electives may be fulfilled with courses required for the minor.

These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/economics/index.aspx>

B.S.B.A. in Finance

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Finance degree builds financial management skills.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science Course	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	18
FIN 302 Adv. Financial Management	3
FIN 304 Personal Money Management	3
FIN 305 Investment Management	3
FIN 311 Financial Markets and Institutions	3
FIN 331 International Finance	3
FIN 335 Risk Management	3
Related Electives	9
Select 9 credits from the following: <ul style="list-style-type: none"> • FIN 341 Entrepreneurial Finance • FIN 420 SIE Exam Prep (also a Special Experience Course) • FIN 421 Series 7 Exam Prep • ECO 421 Applied Econometrics • FIN 492 Internship (also a Special Experience Course) • ACC, ECO, FIN, MIS courses, 300-level or above not already required or included in the "Business Core Courses" or "Required Major Courses" above 	9
Required Minor/Certificate*	12
Free Electives	10 to 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course

Department of Business, Economics and Enterprise Sciences

- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MKT or MGT Writing-Intensive Course
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Accounting, Economics, Forensic Accounting, Human Resource Management, Management, Management Information Systems, or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above."

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/finance-degree/index.aspx>

B.S.B.A. in Human Resource Management

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Human Resource Management degree builds skills and knowledge related to organizational behavior, labor relations and compensation management.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i>	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
Any Fine Arts Course	
<i>Natural Sciences</i> Any Natural Science	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	18
BUS 342 Business, Government and Society OR BUS 345 Business Ethics	3
HRM 300 Principles of Human Resource Mgt.	3
HRM 310 Compensation Mgt.	3
HRM 330 Labor Relations	3
MIS/HRM 322 Human Resource Information Systems	3
HRM 400 Human Resources Strategy and Planning	3

Course	Credits
Related Electives	9
HRM 492 HRM Internship	3
ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already included in the "Business Core Courses" or "Required Major Courses" above	6
Required Minor/Certificate*	12
Free Electives	10 to 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT or MKT Writing-Intensive Course
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Management, Management Information Systems, or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of "Related Electives" may be fulfilled with courses required for the minor.

These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above."

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/human-resource-management/index.aspx>

B.S.B.A. in ISBC: Corporate Communication Concentration

Program Description

The corporate communication concentration of the Bachelor of Science in Business Administration (B.S.B.A.) in Interdisciplinary Studies in Business and Commerce is designed for students interested in public relations and corporate communication. The degree provides a solid foundation of business knowledge while also building communication skills.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> PHI 115 Logic and Language	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science Course	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	27
BUS 345 Business Ethics OR BUS 343 Corporate Social Responsibility OR CDC 465 Media Ethics	3
CDC 100 Communication Perspectives	3
CDC 201 Argumentation and Advocacy	3
CDC 230 Strategic Professional Communication	3
CDC 302 Persuasion	3
CDC 303 Organizational Communication	3
CDC 330 Intro to Public Relations	3
CDC 331 Public Relations Applications	3
CDC 450 Media, Society and Culture	3
Required Minor/Certificate*	12
Free Electives	10 to 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any CDC, ECO, MGT or MKT Upper-Division Writing-Intensive Course
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems, or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.”

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/corporate-communications/index.aspx>

B.S.B.A. in ISBC: Event Planning and Management Concentration

Program Description

The event planning and management concentration of the Bachelor of Science in Business Administration (B.S.B.A.) in Interdisciplinary Studies in Business and Commerce explores all aspects of event management, including design, risk management, finance, sustainability, marketing, logistics and evaluation. Students in this program are prepared to plan and manage a wide variety of events.

Delivery Mode

100% Online or Hybrid

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> REC 165 Introduction to Recreation and Leisure	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> PHI 115 Logic and Language (or other humanities with adviser approval)	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i>	3 or 4

Department of Business, Economics and Enterprise Sciences

Course	Credits
Any Natural Sciences Course	
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis Course</i> GEO 100 Intro to Geography	3
<i>General Education Options</i> <ul style="list-style-type: none"> • ENG 211 Business Writing I OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	9
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Event Planning and Management Concentration Courses	18
TOU 102 Hospitality Industry and Operations	3
REC 235 Special Event Management in Recreation Settings	3
TOU 330 Meet Expo Event and Convention Operations	3
TOU 350 Hotels, Resorts and Lodging	3
REC 412 Program Planning and Evaluation	3
GEO 479 Internship OR BUS 492 Internship	3 (min.)

Department of Business, Economics and Enterprise Sciences

Course	Credits
Related Event Planning and Management Electives	9
Select three courses from the following (not all are available online): <ul style="list-style-type: none"> • TOU 101 Introduction to Tourism Studies • TOU 277 Casinos and Gaming Entertainment • CDC 330 Introduction to Public Relations • MKT 311 E-Marketing • MKT 341 Non-profit Marketing • Any 300-level or above BUS, GEO, MGT, MKT, REC or TOU courses not already required or included above 	9
Required Minor/Certificate*	12
Students must select a minor or certificate. Additional information is listed below.	12 (min.)
Free Electives	10 or 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ECO 460 Global Economic Perspectives
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT, MKT or TOU Upper-Division Writing-Intensive Course
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students cannot have more than 9 credits in the major also count toward their minor. Students must select from one of the following minors: Management, Business, or Tourism Studies. Students may select a different minor or a certificate, with the approval of their adviser. "Free Electives" may be fulfilled with courses required for the minor.

The management and business minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The tourism studies minor is 18 credits; however, 6 credits are completed in the "Event Planning and Management Concentration Courses" and 3 credits are available in the "Event Planning and Management Electives."

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/event-planning/index.aspx>

B.S.B.A. in ISBC: Geo-Business Concentration

Program Description

The geo-business concentration of the Bachelor of Science in Business Administration (B.S.B.A.) in Interdisciplinary Studies in Business and Commerce develops students' knowledge of business and geographic information technology. The program prepares students to employ geospatial applications in business settings.

Delivery Mode

100% Online or Hybrid

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> REC 165 Introduction to Recreation and Leisure OR REC 195 Leisure and Wellness	3
<i>Technological Literacy</i> GIS 350 Remote Sensing	3
<i>Humanities</i> PHI 115 Logic and Language (or other humanities with adviser approval)	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology OR REC 361 Parks and Rec for Diverse Pop.	3
<i>Ethics and Multicultural Awareness Emphasis Course</i> GEO 100 Intro to Geography	3
<i>General Education Options</i> <ul style="list-style-type: none"> • ENG 211 Business Writing I OR ENG 102 Composition II • MAT 225 Business Statistics 	9

Department of Business, Economics and Enterprise Sciences

Course	Credits
• BUS 281 Management Science I	
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Geo-Business Concentration Courses	18
GEO 100 Introduction to Geography	3
GEO 217 Demographic Analysis	3
GIS 222 Geo-Business	3
GIS 311 GIS	3
GIS 413 Environmental Applications of GIS	3
GEO 479 Internship OR BUS 492 Internship	3 (or 120 hours)
Related Geo-Business Electives	9
Select three courses from the following (not all are available online): <ul style="list-style-type: none"> • GIS 303 Crime Mapping and Spatial Analysis • TOU 358 Comprehensive Tourism Planning • GEO 479 Internship OR BUS 492 Internship (additional 3 credits) • BUS 345 Business Ethics • Any 300-level or above BUS, MGT, MKT, REC, GIS or GEO not already required or included above 	9

Course	Credits
Required Minor/Certificate*	12
Students must select a minor or certificate. Additional information is listed below. Some minors may require more than 12 credits to complete.	12 (min.)
Free Electives	10 or 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ECO 460 Global Economic Perspectives OR GEO 360 Emergency Management
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT or MKT Upper-Division Writing-Intensive Course
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students cannot have more than 9 credits in the major also count toward their minor. Students must select from one of the following minors or certificates: Minor in Economics; Minor in Management; Minor in Design and Entertainment Technology; Minor in Event Planning and Management; Minor in Parks and Recreation Management; Certificate in Innovation & Entrepreneurship; or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

The management and economics minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

B.S.B.A. in ISBC: Parks and Recreation Management Concentration

Program Description

The parks and recreation management concentration of the Bachelor of Science in Business Administration (B.S.B.A.) in Interdisciplinary Studies in Business and Commerce provides a solid foundation of business knowledge while also building parks and recreation management skills.

Delivery Mode

Traditional (on campus)

Curriculum

Department of Business, Economics and Enterprise Sciences

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> REC 165 Introduction to Recreation and Leisure	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> PHI 115 Logic and Language (or other humanities with adviser approval)	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis Course</i> REC 361 Parks and Recreation for Diverse Populations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • ENG 211 Business Writing I OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	9
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Concentration Courses	33
REC 362 Recreation Site Design and Management	3
REC 365 Recreation Resource Management	3
REC 374 Commercial Recreation Management	3
REC 378 Recreation Management and Leadership	3
REC 412 Recreation Program Planning and Evaluation	3
GEO 474 Developing the Master Plan	3
TOU 450 Research Methods for Tourism Studies	3
REC 478 Professional Development in Recreation	3
GEO 479 Internship	9
Related Electives	6
Select two courses from the following: <ul style="list-style-type: none"> • REC 195 Leisure and Wellness Recreation • REC 220 Youth Competitive Recreation Activities • REC 225 Recreation and Youth Development • REC230 Youth Camp Counseling and Administration • REC 235 Special Event Management in Recreation Settings • REC 240 Human Ecology • REC 246 Scenic Areas of U.S. • REC 250 Non-Profit and Community Recreation • REC 255 Water-Based Rec Management • REC 270 Interpretative Methods in Parks and Recreation • REC 275 Sustainable Recreation and Green Parks 	6

Course	Credits
<ul style="list-style-type: none"> • REC 280 Adventure and Outdoor Recreation Outfitting • TOU 400 Impacts and Sustainability of Tourism • REC 415 Challenges & Trends in Parks and Recreation 	
Free Electives	10 or 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** GEO 479 Internship
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND REC 412 Recreation Program Planning and Evaluation
- **Laboratory Course (1 course required):** BUS 381 Management Science II

B.S.B.A. in ISBC: Tourism and Hospitality Management Concentration

Program Description

The tourism and hospitality management concentration of the Bachelor of Science in Business Administration (B.S.B.A.) in Interdisciplinary Studies in Business and Commerce prepares students for positions in the tourism and hospitality management industry. The degree provides a solid foundation of business knowledge while also building industry-specific skills.

Delivery Mode

100% Online or Hybrid

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
<i>Health and Wellness</i> REC 165 Introduction to Recreation and Leisure OR REC 195 Leisure and Wellness Recreation	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> PHI 115 Logic and Language (or other humanities with adviser approval)	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis Course</i> GEO 100 Intro to Geography	3
<i>General Education Options</i> <ul style="list-style-type: none"> • ENG 211 Business Writing I OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	9
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science I	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Tourism and Hospitality Management Concentration Courses	18

Department of Business, Economics and Enterprise Sciences

Course	Credits
TOU 101 Introduction to Tourism Studies	3
TOU 102 Hospitality Industry and Operations	3
TOU 330 Meeting Expos, Events and Conv. Operations	3
TOU 350 Hotels, Resorts and Lodging	3
TOU 400 Impacts and Sustainability of Tourism	3
TOU 460 Comprehensive Tourism Planning	3
Related Tourism and Hospitality Management Electives	9
Select three courses from the following (not all are available online): <ul style="list-style-type: none"> • TOU 205 World Cities/Geography of Tourism • TOU 277 Casinos and Gaming Entertainment • REC 374 Commercial Recreation Management • TOU 385 Dark Tourism and Extreme Topics • TOU 450 Research Methods for Tourism Studies • Any 300-level or above BUS, GEO, MGT, MKT, REC or TOU courses not already required or included above 	9
Required Minor/Certificate*	12
Students must select a minor or certificate. Additional information is listed below.	12 (min.)
Free Electives	10 or 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ECO 460 Global Economic Perspectives OR TOU 380 Dark Tourism
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND TOU 460 Comprehensive Tourism Planning
- **Laboratory Course (1 course required):** BUS 381 Management Science II

Department of Business, Economics and Enterprise Sciences

* **Required Minor/Certificate:** Students cannot have more than 9 credits in the major also count toward their minor. Students must select from one of the following minors: Management; Economics; Event Planning and Management; Geo-Business; or another business minor. Students may select a different minor or a certificate, with the approval of their adviser. "Free Electives" may be fulfilled with courses required for the minor.

The management, economics and other business minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The tourism studies minor is 18 credits; however, 6 credits are completed in the "Tourism and Hospitality Management Concentration Courses" and 3 credits are available in the "Tourism and Hospitality Management Electives."

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/tourism-studies/index.aspx>

B.S.B.A. in Interdisciplinary Studies in Business and Commerce

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Interdisciplinary Studies in Business and Commerce degree is a flexible program of study that allows students to select upper-level business courses that align with their career goals and interests.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking OR COM 250 Oral Communication: Management	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science Course	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	18
With approval of their adviser, students choose ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already included in the "Required Major Courses" above or ACC 491, BUS 492, ECO 492, FIN 491, HRM 492, MGT 492, MIS 492 or MKT 492	18
Required Minor/Certificate*	12

Department of Business, Economics and Enterprise Sciences

Course	Credits
Free Electives	19 to 20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND Any ECO, MGT or MKT Upper-Division Writing-Intensive Course
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Human Resource Management, Management, Management Information Systems, or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser.

These minors are 21 credits; however, 9 of these credits are required in the “Business Core Courses” above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/business-administration/index.aspx>

B.S.B.A. in Management

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Management degree is designed for students interested in taking on management roles in the business world.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i>	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
MAT 181 College Algebra	
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science Course	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	18
BUS 345 Business Ethics	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
HRM 300 Principles of Human Resource Management	3
MGT 301 Organizational Behavior	3
MGT 320 Teamwork and Leadership	3
MGT 431 International Business Mgt.	3
MGT 450 Management Research	3
Related Electives	9
MGT 492 Management Internship	3
ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already included in the "Business Core Courses" or "Required Major Courses" above	6
Required Minor/Certificate*	12
Free Electives	10 to 11
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 Integrated Strategic Capstone AND MGT 450 Management Research
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Human Resource Management, Management Information Systems, or Marketing or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of "Related Electives" may be fulfilled with courses required for the minor.

These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above."

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/management/index.aspx>

B.S.B.A. in Marketing

Program Description

The Bachelor of Science in Business Administration (B.S.B.A.) in Marketing degree builds skills that help organizations succeed in a competitive business environment. The program covers knowledge and skills needed by marketing professionals.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> MIS 201 Management Info Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Science Course	3
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 211 Business Writing OR ENG 102 Composition II • MAT 225 Business Statistics • BUS 281 Management Science I 	12
Business Core Courses	30

Department of Business, Economics and Enterprise Sciences

Course	Credits
ACC 200 Financial Accounting	3
ACC 321 Managerial Accounting	3
BUS 242 Business Law I	3
BUS 381 Management Science II	3
BUS 499 Integrated Strategic Capstone	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
FIN 301 Financial Management	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Required Major Courses	18
MKT 320 Principles of Selling	3
MKT 341 Non-profit Marketing	3
MKT 351 Advertising Mgt	3
MKT 401 Marketing Mgt	3
MKT 421 Consumer Behavior	3
MKT 431 Marketing Research	3
Related Electives	9
MKT 492 Marketing Internship	3
ACC, BUS, ECO, FIN, HRM, MGT, MIS or MKT courses, 300-level or above not already included in the "Business Core Courses" or "Required Major Courses" above	6
Required Minor/Certificate*	12
Free Electives	10 to 11
Total	120

Department of Business, Economics and Enterprise Sciences

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** BUS 499 and MKT 431 Marketing Research
- **Laboratory Course (1 course required):** BUS 381 Management Science II

* **Required Minor/Certificate:** Students select one of the following minors or certificates: Accounting, Economics, Finance, Forensic Accounting, Human Resource Management, Management, or Management Information Systems, or the Certificate in Innovation & Entrepreneurship or Certificate in Spanish for Business. Students may select a different minor or certificate, with the approval of their adviser, in which case the 9 credits of "Related Electives" may be fulfilled with courses required for the minor.

These minors are 21 credits; however, 9 of these credits are required in the "Business Core Courses" above. The Innovation & Entrepreneurship Certificate requires 15 credits; however, 3 credits are included in the major courses above.

Program Note: Students who complete dual degrees or dual majors do not have to complete a minor or certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/marketing/index.aspx>

Certificate in Forensic Accounting

Program Description

The forensic accounting sub-baccalaureate certificate is a stand-alone credential. The program builds skills and knowledge related to identifying, preventing, detecting and correcting fraud.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
ACC 200 Financial Accounting	3
ACC 301 Intermediate Accounting I*	3
ACC 441 Auditing*	3
ACC 450 Introduction to Accounting Fraud Investigation*	3
ACC 451 Advanced Accounting Fraud Investigation*	3
BUS 345 Business Ethics*	3
MGT 376 Cyberlaw and E-Privacy Issues for Business*	3
Total	21

* These courses have pre-requisites.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/forensic-accounting-minor/index.aspx>

Certificate in Innovation and Entrepreneurship

Program Description

The innovation and entrepreneurship sub-baccalaureate certificate covers key principles related to small business management and growth.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
Required Courses	9
MGT 303 Entrepreneurship I: Small-Business Fundamentals	3
MGT 305 Entrepreneurship II: Small-Business Management	3
MGT 403 Innovation Management	3
Select two courses from the following:	6
FIN 341 Entrepreneurial Finance	3
FIN 371 Introduction to Fintech	3
MGT 377 E-Business Management*	3
MKT 311 E-Marketing*	3
Any 300+ ACC, BUS, ECO, FIN, MGT, MIS or MKT course, with adviser approval	3
Total	15

* Course has pre-requisites not included in the certificate.

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/innovation-and-entrepreneurship/index.aspx>

Minor in Accounting Curriculum

Course	Credits
Required Courses	9
ACC 200 Financial Accounting	3
BUS 100 Intro to Business*	3
ECO 100 Elem. of Econ. OR ECO 201 Principles of Micro OR ECO 202 Principles of Macro	3
Advanced-Standing Accounting (ACC) Courses**	12 (minimum)
ACC 202 Accounting II	3
ACC 310 Intermediate Accounting I	3
Select two courses from upper-level ACC courses and FIN 420	6
Total	21

* BUS 100 may be substituted by an upper-level business elective or MIS 201.

** These courses should not have been used to meet requirements of major/concentration. No more than 3 credits may be internship (ACC 492). Advanced-standing accounting courses include ACC 202, ACC 218 and any ACC course at the 300 or 400 level. In addition, FIN 420 may be counted to satisfy an advanced-standing course.

Note: ACC 202 and ACC 218 are considered advanced-standing courses to the pre-requisites established for those classes.

Minor in Arts Administration Curriculum

Course	Credits
**Select 6 credits from the following:	6
ACC 200 Financial Accounting	3
BUS 100 Introduction to Business	3
BUS 242 Business Law I	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
**Select 12 credits from the following:	12
ACC 341 Non-profit Accounting*	3
FIN 301 Financial Management*	3
FIN 304 Personal Finance	3
MGT 303 Entrepreneurship I: Small Business Fundamentals	3
MGT 305 Entrepreneurship II: Small Business Management	3
MKT 311 eMarketing*	3
MKT 341 Marketing for Non-profit Organizations*	3
MKT 361 Entrepreneurial Marketing*	3
Select at least 3 credits from the following:	3
ART 329 Art Internship	3 to 6
BUS 479 Field Studies in Business	3 to 6
BUS 492 Internship	3 to 6
GCM 495 Graphics Communication Internship	3 to 6
MUS 488 Music Tech Internship	3 to 6
Total	21 to 24

* These courses have pre-requisites.

** No more than 9 credits in the minor from these areas may be applied to satisfy requirements in the student's major. (Internship not included in this restriction.)

Program Notes: This minor is available only to students enrolled in the following majors: Art (B.F.A.); Commercial Music Technology; Digital Media Technology; Graphic Design; and Theater. (Students who change their major may change their minor to the "Business" minor.)

Minor in Business Curriculum

Course	Credits
Required Courses	9
ACC 200 Financial Accounting	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
BUS 100 Intro to Business*	3
ECO 100 Elem. of Econ. OR ECO 201 Principles of Micro OR ECO 202 Principles of Macro	3
300- or 400-Level Business Courses**	12
MGT 300 Principles of Management	3
Select three upper-level (300 and above) ACC, BUS, FIN, HRM, MGT, MIS or MKT courses	9
Total	21

* May be substituted by an upper-level Business (ACC, BUS, FIN, MGT, MKT) elective.

** No more than one course from each discipline. These courses should not have been used to meet the requirements of major/concentration. No more than 3 credits can be internship courses (ACC 491, BUS 492, ECO 492, FIN 492, MGT 492, MIS 492, MKT 492).

Program Note: Business Administration majors are not allowed to minor in business.

Minor in Economics Curriculum

Course	Credits
Required Courses	9
BUS 100 Intro to Business*	3
ECO 201 Principles of Microeconomics	3
ECO 202 Principles of Macroeconomics	3
300- or 400-Level Economics Electives	12
Select four upper-level (300 and above) ECO courses (no more than 3 credits can be ECO 492 Internship)	12
Total	21

* BUS 100 may be substituted by an upper-level business elective.

Note: 12 credits of 300- or 400-level economics electives should not be used to meet requirements of major/concentration.

Minor in Event Planning and Management Curriculum

Course	Credits
Required Courses	12
TOU 102 Hospitality Industry and Operations	3
TOU 330 Meetings, Expositions, Events and Convention Operations	3
REC 235 Special Event Management in Recreation Settings	3
REC 412 Program Planning and Evaluation	3
Electives (select two)	6
CDC 330 Introduction to Public Relations	3
TOU 101 Introduction to Tourism Studies	3
TOU 277 Casinos and Gaming Entertainment	3
TOU 350 Hotels, Resorts and Lodging	3
GEO 479 Internship	3 (max)
PGM 350 Food and Beverage Management (PGM majors only)	3
REC 165 Introduction to Recreation and Leisure	3
REC 374 Commercial Recreation Management	3
SPT 315 Facility and Event Management	3
THE 327 Stage Management	3
Total	18

NOTE: Students may declare multiple minors.

Minor in Finance Curriculum

Course	Credits
Required Courses	9
ACC 200 Financial Accounting	3
BUS 100 Intro to Business	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
FIN 301 Financial Management	3
Additional 300- or 400-Level Finance Courses*	12
FIN 304 Personal Finance	3
Select three upper-level (300 or 400) FIN courses	9
Total	21

* These courses should not have been used to meet requirements of major/concentration. No more than 3 credits can be internship course (FIN 492).

Minor in Forensic Accounting Curriculum

Course	Credits
ACC 200 Financial Accounting	3
ACC 301 Intermediate Accounting I*	3
ACC 441 Auditing*	3
ACC 450 Introduction to Accounting Fraud Investigation*	3
ACC 451 Advanced Accounting Fraud Investigation*	3
BUS 345 Business Ethics*	3
MGT 376 Cyberlaw and E-Privacy Issues for Business*	3
Total	21

* These courses have pre-requisites.

Program Note: No more than 9 credits in the minor may be applied to satisfy requirements in the student's major. (Internship not included in this restriction.)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/forensic-accounting-minor/index.aspx>

Minor in Geo-Business Curriculum

Course	Credits
Required Course	15
GEO 100 Intro to Geography	3
GEO 217 Demographic Analysis	3
GIS 222 Geo Business	3
GIS 311 Geographic Information Systems	3
GIS 413 ENV Apps of GIS	3
Electives (select two)	6
BUS 345 Business Ethics	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Total	21

Minor in Geographic Information Technology Curriculum

Course	Credits
GEO 100 Introduction to Geography	3
GEO 360 Emergency Management	3
GIS 222 Geo-Business	3
GIS 311 Geog Info Systems	3
GIS 350 Remote Sensing of Environment	3
GIS 413 Env Apps of GIS	3
GIS 314 Spatial Land Data OR GIS 303 Crime Mapping	3
Total	21

Minor in Human Resource Management Curriculum

Course	Credits
Required Courses	15
BUS 100 Intro to Business*	3
ECO 100 Elem. of Economics OR ECO 201 Principles of Microeconomics OR ECO 202 Principles of Macroeconomics	3
HRM 300 Principles of Human Resource Management	3
HRM 400 HR Strategy and Planning	3
PSY 100 General Psychology	3
Select two of the following:	6
HRM 310 Compensation Management	3
MIS/HRM 322 Human Resource Information Systems	3
HRM 330 Labor Relations	3
Total	21

* May be replaced by any 300+ course in ACC, BUS, ECO, FIN, HRM, MIS, MGT or MKT as long as it is not otherwise listed as a minor requirement.

Note: No more than 9 credits may be used to satisfy requirements of the student's major or concentration.

Minor in Management Curriculum

Course	Credits
Required Courses	15
BUS 100 Intro to Business*	3
ECO 100 Elem. of Economics OR ECO 201 Principles of Microeconomics OR ECO202 Principles of Macroeconomics	3
MGT 300 Principles of Management	3
MGT 301 Organizational Behavior	3
MGT 320 Teamwork and Leadership	3

Course	Credits
300- or 400-Level Management (MGT) Electives**	6
Select two upper-level (300 and above) HRM/MGT courses	6
Total	21

* BUS 100 may be substituted by any business course 300+ (ACC, BUS, ECO, ENP, FIN, HRM, MGT, MKT, MIS).

** Elective courses should not have been used to meet requirements of major/concentration. No more than 3 credits may be internship courses (MGT 492 or BUS 492).

Minor in Management Information Systems Curriculum

Course	Credits
BUS 100 Introduction to Business*	3
ECO 100 Elements of Economics OR ECO 201 Principles of Microeconomics OR ECO 202 Principles of Macroeconomics	3
CIS 120 Introduction to Programming	3
MIS 201 Management Information Systems	3
MIS 321 Accounting Information Systems	3
MIS 375 Information Technology Ethics	3
MIS 401 Business Driven Management Info Systems	3
Total	21

* May be replaced by any 300+ course in ACC, BUS, ECO, FIN, MIS, MGT or MKT.

Note: No more than 9 credits in the minor from these areas may be applied to satisfy requirements in the student's major.

Minor in Marketing Curriculum

Course	Credits
Required Courses	9
BUS 100 Intro to Business*	3

Course	Credits
ECO 100 Elem. of Economics OR ECO 201 Principles of Microeconomics OR ECO 202 Principles of Macroeconomics	3
MKT 300 Principles of Marketing	3
300- or 400-Level Marketing Electives	12
Select four upper-level (300 and above) MKT courses (no more than 3 credits can be MKT 492 Internship)	12
Total	21

* BUS 100 may be substituted by an upper-level business elective.

Note: 12 credits of marketing electives should not be used to satisfy the major or concentration.

Minor in Parks and Recreation Curriculum

Course	Credits
Required Course	3
REC 165 Introduction to Recreation and Leisure*	3
Electives**	15
<i>Group 1 Courses: 300-Level REC</i>	<i>6 to 12</i>
REC 361 Recreation for Diverse Populations	3
REC 362 Recreation Facility Design and Management	3
REC 365 Recreation Resource Management	3
REC 374 Recreation Management and Leadership	3
REC 378 Commercial Recreation	3
<i>Group 2 Courses: 400-Level REC/GEO</i>	<i>3 to 9</i>
REC 412 Recreation Program Design and Evaluation	3
REC 478 Professional Development in Parks and Recreation	3
GEO 474 Developing the Master Plan	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
<i>Group 3 Courses: Other Parks and Recreation Management Courses</i>	<i>0 to 6</i>
REC 225 Recreation and Youth Development	3
REC 235 Special Event Management in Recreation Settings	3
REC 240 Human Ecology	3
REC 246 Scenic Areas of U.S.	3
REC 270 Interpretative Methods in Recreation	3
REC 280 Adventure/Outdoor Recreation Outfitting	3
GEO 479A Internship in Parks & Recreation	3 only
Any Other Future REC Courses	3
Total	18

* REC 165 is a pre-requisite/co-requisite for ALL 300- and 400-level REC courses.

** Use the following guidance when selecting electives:

- Choose two courses from Group 1 (6 credits).
- Choose one course from Group 2 (3 credits).
- Choose two additional courses from groups 1, 2 or 3 (6 credits).

Minor in Tourism Studies Curriculum

Course	Credits
Required Courses	9
TOU 101 Introduction to Tourism Studies	3
TOU 102 Hospitality Industry and Operations	3
TOU 400 Impacts and Sustainability of Tourism	3
Electives	9
GEO 100 Introduction to Geography	3
TOU 205 World Cities/Geography of Tourism	3
GEO 220 Geography of NA/PA	3

Department of Business, Economics and Enterprise Sciences

Course	Credits
TOU 277 Casinos and Gaming Entertainment	3
TOU 330 Meetings, Expositions, Events and Convention Operations	3
TOU 450 Research Methods for Tourism Studies	3
TOU 350 Hotels, Resorts and Lodging	3
TOU 460 Comprehensive Tourism Planning	3
TOU 385 Dark Tourism and Extreme Topics	3
GEO 479 Internship	3
<i>Maximum of 3 credits:</i>	
GIS 311 Geographic Information Systems	3
REC 165 Introduction to Recreation and Leisure	3
REC 374 Commercial Recreation	3
Total	18

Department of Computer Science, Information Systems and Engineering Technology

Faculty

Joseph G. Schickel (chair) | Dr. Ghassan Al-Sinbol | Dr. Gina Boff | Dr. Vamsi Borra | Dr. Mark E. Bronakowski | Dr. Weifeng Chen | Dr. Fanourios Halkiadakis | Dr. Larry D. Horath | Dr. Lisa Kovalchick | Dr. Pratibha Menon | Nader Mohamed | Aleksandra Prokic | Dr. Anthony S. Pyzdrowski | Paul Sible | Jeffrey S. Sumeay | Dr. John M. Thompson | Susan E. Urbine | Dr. Brenton Wilburn | Dr. Jennifer Wilburn

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Computer Science, Information Systems and Engineering Technology includes undergraduate programs in computer engineering technology, computer information systems, computer science, digital media technology, electrical engineering technology, industrial technology, mechatronics engineering technology, robotics engineering technology and unmanned aerial systems/drone technology.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.S. in Computer Engineering Technology
- A.S. in Digital Media Technology
- A.A.S. in Electrical Engineering Technology
- A.S. in Technical Studies
- A.S. in Technical Studies: Robotics Engineering Technology
- A.S. in Technical Studies: Unmanned Aerial Systems/Drone Technology
- B.S. in Computer Engineering Technology
- B.S. in Computer Information Systems
- B.S. in Computer Science
- B.S. in Digital Media Technology
- B.S. in Electrical Engineering Technology
- B.S. in Industrial Technology Management
- B.S. in Mechatronics Engineering Technology

Note: Cal U also offers a B.S.Ed. in Technology Education through its Department of Education.

Minors

Minors available through this department include:

- Computer Information Systems
- Computer Science
- Digital Media Technology
- Electrical Engineering Technology
- Robotics Engineering Technology

Facilities

Courses are taught in three buildings on campus.

- The **Eberly Science and Technology Center** houses the EET Analog Lab, the Digital/Embedded Systems Lab and the California Manufacturing Assistance Center, which includes labs for CADD, materials testing, metrology, computer numerical control and automation/robotics.

- **Helsel Hall** has labs for CADD/drafting, digital prepress, electronics, foundry, graphics/printing, machine tools, manufacturing technology, multimedia technology, photography darkroom and photography studio.
- **Coover Hall** has labs for bio-related technologies, elementary school technology, screen printing, flexography, engineering materials and physical technologies.

Student Clubs

Digital Media Technology: Students may join the Screen Printing Student Associate, which performs printing and design services, conducts industrial tours and attends conferences. Active club participants gain beneficial hands-on experience beyond required class and lab time.

A.A.S. in Electrical Engineering Technology

Program Description

The Associate of Applied Science in Electrical Engineering Technology (EET) degree prepares students to install, test, maintain, calibrate and repair electrical and electronic systems.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	26
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra*	3
<i>Technological Literacy</i> GET 130 Intro to Engineering Technology	3
<i>Natural Sciences</i> PHY 121 General Physics I**	4
<i>General Education Options</i> <ul style="list-style-type: none"> • CSC 120 Problem Solving and Prog. Constr. • ENG 217 Scientific and Technical Writing • MAT 191 College Trigonometry* 	9
Professional Technical Core Courses	26
CET 235 Digital Electronic Design	4

Course	Credits
CET 270 Intro to Microprocessor Design	4
CSC 124 Computer Programming I	3
EET 110 Electric Circuits I	4
EET 160 Electric Circuits II	4
EET 210 Linear Electronics I	4
MTR 325 Fund. of Programmable Logic Controllers	3
Technical Elective	3
Select a course from the following: <ul style="list-style-type: none"> • EET 325 Introduction to Electric Power (4 credits) • ITE 305 OSHA General Industrial Safety • RET 110 Agile Robotics I • MTR 335 Advanced PLCs 	3 or 4
Free Electives	6
Total	60

* Students may take MAT 199 (Pre-Calculus) in lieu of MAT 181 and MAT 191 followed by MAT 281 (Calculus I) for a more rigorous math tract.

** Students planning to continue to the B.S. in Electrical Engineering Technology program should take Calculus I and PHY 101 (College Physics) instead.

Program Note: Students must have a minimum 2.0 GPA to qualify for graduation.

Continuing Education

Associate degree graduates may transfer credits earned in this program to the bachelor's degree in Electrical Engineering Technology at Cal U with no loss of time or credits when proper advising is followed.

A.S. in Computer Engineering Technology

Program Description

The Associate of Science in Computer Engineering Technology (CET) degree provides education and skill development in hardware configuration, software development, programming applications and the interfacing of hardware and software systems. Students receive hands-on training on various computer systems, test equipment and software products.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	26
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra*	3
<i>Technological Literacy</i> GET 130 Intro to Engineering Technology	3
<i>Natural Sciences</i> PHY 121 General Physics**	4
<i>General Education Options</i> <ul style="list-style-type: none"> • CSC 120 Problem Solving and Prog. Constr. • ENG 217 Scientific and Technical Writing • MAT 191 College Trigonometry* 	9
Professional Technical Core Courses	31
CET 235 Digital Electronic Design	4
CET 270 Intro to Microprocessor Design	4
CSC 124 Computer Programming I	3
CSC 265 Object-Oriented Programming	3
CSC 328 Data Structures	3
EET 110 Electric Circuits I	4
EET 160 Electric Circuits II	4
EET 215 Intro to Instrumentation	3
MAT 195 Discrete Math Structures	3
Free Electives	3
Total	60

Department of Computer Science, Information Systems and Engineering Technology

* Students may take MAT 199 (Pre-Calculus) in lieu of MAT 181 and MAT 191 followed by MAT 281 (Calculus I) for a more rigorous math tract.

** Students planning to continue to the B.S. in Computer Engineering Technology program should take Calculus I and PHY 101 (College Physics) instead.

Program Note: Students must have a minimum 2.0 GPA to qualify for graduation.

Continuing Education

Graduates of the A.S.-CET program are eligible to enroll in the B.S.-CET program. All credits earned toward the A.S.-CET degree count toward the B.S.-CET degree. Students considering completion of a bachelor's degree in CET should select General Education credits that apply. Consult your adviser.

A.S. in Digital Media Technology

Program Description

The Associate of Science in Digital Media Technology (DMT) degree prepares students to design, create and deliver content using digital media technologies.

Delivery Mode

Traditional (on campus)

Accreditation

The program has national accreditation from the Accrediting Council for Collegiate Graphic Communication (ACCGC).

Curriculum

Course	Credits
General Education Courses	25 or 26
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Technological Literacy</i> DMT 100 Foundations of Print Media	3
<i>Natural Sciences</i> Any Natural Science Course	3 or 4
<i>Fine Arts</i> DMT 101 Time-Based Media	3
<i>General Education Options</i> • BUS 100 Intro to Business	6

Course	Credits
• General Education Course	
Required Major Courses	21
DMT 180 Foundations of Digital Media	3
DMT 200 Print Media Production Processes	3
DMT 220 Digital Photography	3
DMT 225 Digital Page Layout	3
DMT 240 Vector Based Graphics	3
DMT 250 Digital Imaging	3
DMT 320 Digital Video	3
Technical Electives	9
DMT Elective Courses	9
Electives (student selected)	6
Total	61

* Required courses. If these courses are not completed as part of the student's general education, they should be completed within the elective category.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/graphics/index.aspx>

A.S. in Technical Studies

Program Description

The Associate of Science in Technical Studies degree addresses the rapidly expanding technician-level employment opportunities available in the new economy by providing customized technical concentrations that meet the ever-changing needs of business and industry. The recommended framework for completing this program is flexible and customized to meet specific workforce needs.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	25 to 27
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>General Education Options</i> Any General Education Options (three courses)	9 or 10
Professional Technical Core	33 to 35
Certificate programs, apprenticeship equivalencies, workforce training equivalencies, minors, regular, coursework, internships, on-the-job work experience, etc.	33 to 35
Related Technical Electives (Cal U)	Variable
As an option and if needed, "Related Technical Electives" can be taken at California University of Pennsylvania as part of the professional technical core credits.	Variable
Total	60

Program Notes: Developmental courses do not count toward graduation. Students must have a minimum overall 2.0 GPA to qualify for graduation.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/technical-studies/index.aspx>

A.S. in Technical Studies: Robotics Engineering Technology

Program Description

The Associate of Science in Technical Studies: Robotics Engineering Technology degree provides an introduction to mechatronic systems with a special emphasis on agile robots (that is, robots with free-ranging mobility). Students gain a fundamental understanding of computer, electronics and mechanical engineering technology principles through this program.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	29
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Technological Literacy</i> CSC 120 Problem Solving and Programming Constructs	3
<i>Natural Sciences</i> PHY 121 General Physics I	4
<i>General Education Options</i> <ul style="list-style-type: none"> • CSC 124 C Programming • ENG 217 Scientific and Technical Writing I • ECO 201 Intro to Microeconomics • MAT 191 College Trigonometry • Student-selected General Education Option 	15
Required Major Courses	32
EET 110 Electrical Circuits I	4
EET 160 Electrical Circuits II	4
GET 130 Intro to Engineering Technology	3
MTR 300 Manufacturing Processes	3

Course	Credits
MTR 325 Fundamentals of Programmable Logic Controllers	3
RET 110 Agile Robotics I	3
RET 120 CADD Concepts	3
RET 160 Agile Robotics II	3
RET 210 Robotic Teaming	3
RET 260 Robotic Systems Project	3
Total	61

Pre-requisite Requirements:

- RET 110 > RET 160 > RET 210 > RET 260
- MAT 181 > CET 235 and EET 110
- CSC 120 > CSC 124

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/robotics-engineering-technology/index.aspx>

A.S. in Technology Studies: UAS Technology

Program Description

The Associate of Science in Technology Studies: UAS Technology (Unmanned Aerial Systems/Drone Technology) prepares students to design, construct and deploy commercial-grade civilian drones.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	27
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> COM 250 Oral Communication: Management	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Technological Literacy</i>	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
GET 130 Intro to Engineering Technology	
<i>Natural Sciences</i> PHY 121 General Physics I*	4
<i>General Education Options</i> <ul style="list-style-type: none"> • EAS 104 Intro to Meteorology (4 credits) • ENG 217 Scientific and Technical Writing (3 credits) • Any General Education Course (3 credits) 	10
Professional Technical Core	28
UAS 110 Intro to Unmanned Aerial Vehicles	3
UAS 120 Principles of Aviation	3
UAS 160 UAS Design and Construction	3
UAS 220 UAV Operations	3
UAS 270 Avionic Systems	3
UAS 310 UAS Sensing and Analysis	3
GIS 350 Remote Sensing of Environment	3
MAT 191 College Trigonometry	3
PHY 122 General Physics II*	4
Technical Electives	5
Select at least five credits from the following: <ul style="list-style-type: none"> • ENS 101 Intro to Environmental Science (3 credits) • GIS 314 Spatial Land Data in the Oil and Gas Industry (3 credits) • ITE 101 Intro to Industrial Safety (3 credits) • RET 110 Agile Robotics I (3 credits) • RET 160 Agile Robotics II (3 credits) • UAS 250 UAS Certification Prep (1 credit) • Other courses per adviser approval 	5
Total	60

* Students may substitute calculus-based College Physics for more rigorous coverage.

Program Note: Students must have a minimum 2.0 GPA to qualify for graduation.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/drone-technology/index.aspx>

B.S. in Computer Engineering Technology

Program Description

The Bachelor of Science in Computer Engineering Technology (CET) degree prepares students for technically oriented careers involving both computer system hardware and software, with an emphasis on embedded systems design. Students gain a broad understanding of fundamental engineering knowledge and technical skills as well as in-depth knowledge in areas of computer science, computer engineering technology, digital electronics, mathematics and physical sciences.

Delivery Mode

Traditional (on campus)

Accreditation

The CET bachelor's degree program is accredited by the Engineering Technology Accreditation Commission (ETAC), www.abet.org. All graduates from the B.S. in CET program will receive accredited degrees. Seniors and graduates of the programs are eligible to sit for a precicensing Fundamentals of Engineering (FE) exam.

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 199 Pre-Calculus	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> GET 130 Introduction to Engineering Technology	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 101 College Physics I	4
<i>Social Sciences</i>	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
ECO 100 Elements of Economics	
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • CSC 120 Problem Solving and Programming Constructs • ENG 217 Scientific and Technical Writing I • MAT 281 Calculus I 	12
Required Major Course	68
CET 235 Digital Electronics Design	4
CET 270 Introduction to Microprocessor Design	4
CET 335 Microprocessor Interfacing	4
CET 350 Technical Computing using JAVA	3
CET 360 Microprocessor Engineering	4
CET 440 Computer Networking	4
CET 490 Senior Project I	3
CET 492 Senior Project II	3
CSC 124 Computer Programming I	3
CSC 265 Object-Oriented Programming	3
CSC 328 Data Structures	3
CSC 378 Computer Architecture	3
CSC 400 Operating Systems	3
EET 110 Electrical Circuits I	4
EET 160 Electrical Circuits II	4
EET 215 Introduction to Instrumentation	3
MAT 195 Discrete Mathematical Structures for Computer Science	3
MAT 282 Calculus II	3
MAT 341 Linear Algebra I	3
PHY 202 College Physics II	4
Related Electives*	11

Course	Credits
Total	120

* Select related electives from the following:

- **CET 485** Special Topics in CET (var)
- **CET 495** CET Internship (single instance, 4 credits max)
- **CSC 306** Fortran
- **CSC 308** Python
- **CSC 323** Assembly Language
- **CSC 360** Analysis of Algorithms
- **CSC 420** Artificial Intelligence
- **CSC 455** Structures of Programming Languages
- **CSC 460** Language Translation
- **CSC 475** Theory of Languages
- **CSC 485** Special Topics in Comp. Sci.
- **MAT 381** Calculus III
- **MAT 382** Calculus IV

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** CSC 492 Senior Project II
- **Writing-Intensive Component Courses (2 courses required):** CET 360 Microprocessor Engineering AND CSC 492 Senior Project II
- **Laboratory Course (1 course required):** EET 110 Electrical Circuits I

Program Note: College Algebra (3 credits) and College Trigonometry (3 credits) may be substituted for Pre-Calculus, if math placement score does not permit direct entry into Pre-Calculus or if the student desires a less intense math coverage.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/computer-engineering-technology/index.aspx>

B.S. in Computer Information Systems

Program Description

The Bachelor of Science in Computer Information Systems degree combines knowledge of leading-edge information technologies and systems methodologies with an understanding of the ever-changing needs of today's dynamic business environment.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

(The online format is designed as an upper-division program primarily for students who have already earned an associate degree or at least 50 credits.)

Accreditation

This program is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering Technology (ABET), www.abet.org.

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar OR HON 100 Honors and University Orientation	1
<i>Composition</i> ENG 101 English Composition I OR HON 150 Honors Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I OR MAT 273 Applied Calculus	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> CIS 110 Introduction to Information Systems	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> BUS 100 Introduction to Business	3
<i>General Education Options</i> <ul style="list-style-type: none"> • CIS 352 Global, Economic and Social Ethical Issues in Computing • CIS 120 Application Programming I • ENG 217 Scientific and Technical Writing OR ENG 211 Business Writing OR ENG 250 Honors Composition II • PSY 100 General Psychology 	12
Required Major Courses	31
CIS 220 Application Programming II	3
CIS 299 Systems Analysis I	3
CIS 321 Database Design and Data Modeling	3
CIS 322 Database Application Programming	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
CIS 330 Web Programming I	3
CIS 332 Web Programming II	3
CIS 341 CISCO CCNA 1	4
CIS 354 Systems Project Management	3
CIS 490 Senior Project Capstone I	3
CIS 492 Senior Project Capstone II	3
CIS Elective Courses (select 12 credits)*	12
<i>Networking</i> <ul style="list-style-type: none"> • CIS 342 CISCO CCNA 2 • CIS 343 CISCO CCNA 3** <i>Programming</i> <ul style="list-style-type: none"> • CIS 302 Visual Programming • CIS 304 COBOL • CIS 308 Python • CIS 325 Decision Support Systems • CIS 401 Concepts in Enterprise Resource <i>Others</i> <ul style="list-style-type: none"> • CIS 419 Internship*** • CIS 474 Special Topics in Information Systems 	12
Required Related Courses****	15
<i>Business</i> <ul style="list-style-type: none"> • MTK Course • MGT Course • ACC Course • ECO Course • FIN or BUS Course (200 level or above) <i>Geographic Information Systems</i> <ul style="list-style-type: none"> • GIS 222 Geo-Business • GIS 303 Crime Mapping and Spatial Analysis • GIS 311 Geographic Information Systems • GIS 350 Remote Sensing of the Environment • GIS 413 Environmental Applications of GIS 	15

Course	Credits
Coursework Related to the Major	6
MAT 215 Statistics OR MAT 225 Business Statistics	3
MAT 195 Discrete Mathematical Structures	3
Free Electives	15 or 16
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** CIS 492 Senior Project Capstone II
- **Writing-Intensive Component Courses (2 courses required):** CIS 490 Senior Project Capstone I AND CIS 492 Senior Project Capstone II
- **Laboratory Course (1 course required):** Any Laboratory Course

* Students may choose any course listed; however, selecting all courses from a grouping offers a specialization in a CIS area.

** Upon completion of CIS 343, student will be prepared to take certification exam.

*** A maximum of four credits can be used for internship toward the program.

**** Students will select to take 15 credits from either the Business or GIS grouping. At least three credits must be 300-level or higher.

Program Webpages

<https://www.calu.edu/academics/undergraduate/bachelors/computer-information-systems/index.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/computer-information-systems/online.aspx>

B.S. in Computer Science

Program Description

The Bachelor of Science in Computer Science degree builds students' understanding and expertise in computer hardware, operating systems and programming languages.

Delivery Mode

Traditional (on campus)

Accreditation

This program is accredited by ABET, www.abet.org.

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar OR HON 100 Honors and University Orientation	1
<i>Composition</i> ENG 101 English Composition I OR HON 150 Honors Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> CSC 120 Problem Solving and Programming Constructs	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Select from BIO 120, BIO 125, BIO 215, CHE 101, CHE 102, EAS 104, GLG 150, PHY 101, PHY 202	4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • CSC 352 Global, Economic and Social Ethical Issues in Computing • ENG 217 Science and Technology Writing OR HON 250 Honors Composition II • CSC 124 Computer Programming I • MAT 282 Calculus II 	12
Required Major Courses	43
CSC 216 Logic and Switching Theory	3
CSC 265 Object-Oriented Programming	3
CSC 323 Assembly Language Prog.	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
CSC 328 Data Structures	3
CSC 360 Analysis of Algorithms	3
CSC 378 Computer Architecture	3
CSC 400 Operating Systems	3
CSC 455 Structures of Prog. Languages	3
CSC 460 Language Translations	3
CSC 475 Theory of Languages	3
CSC 490 Senior Project I	3
CSC 492 Senior Project II	3
CET 350 Technical Computing Using Java	3
CET 440 Computer Networking	4
Required Related Courses	9
MAT 195 Discrete Mathematics	3
MAT 341 Linear Algebra I	3
MAT 215 Statistics	3
Computer Science Electives	8
Select one course from the following: <ul style="list-style-type: none"> • CSC 322 Data Base Application Development • CSC 420 Artificial Intelligence • CSC 424 Numerical Analysis • CSC 485 Special Topics in Computer Science 	3
Select two from the following: <ul style="list-style-type: none"> • CSC 304 COBOL • CSC 306 FORTRAN • CSC 308 Python • CSC 419 Internship 	5
Coursework Related to Major	4
Select a second laboratory-based course	4
Free Electives	15

Course	Credits
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** CSC 492 Senior Project II
- **Writing-Intensive Component Courses (2 courses required):** CSC 490 Senior Project I AND CSC 492 Senior Project II
- **Laboratory Course (1 course required):** Natural Sciences choice satisfies this

Program Notes: A maximum of three credits can be used from Internship toward the program. Students going to graduate school should complete MAT 381 (Calculus III) and MAT 382 (Calculus IV) as free electives.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/computer-science/index.aspx>

B.S. in Digital Media Technology

Program Description

This Bachelor of Science in Digital Media Technology degree prepares students to design, create and deliver content using print and digital media technologies. The program includes a core curriculum of technical, hands-on laboratory courses that explore relevant concepts. Once students have completed core courses, they select an area of concentration: print or multimedia.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> DMT 100 Foundations of Print Media	3
<i>Humanities</i>	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
Any Humanities Course	
<i>Fine Arts</i> DMT 101 Time-Based Media	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>Ethics and Multicultural Awareness</i> Any Ethics and Multicultural Awareness Emphasis Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • BUS 100 Introduction to Business • Any Other General Education Options Courses 	9
Required Major Courses	60
DMT 180 Foundations of Digital Media	3
DMT 200 Print Media Production Processes	3
DMT 220 Digital Photography	3
DMT 225 Digital Page Layout	3
DMT 240 Vector Based Graphics	3
DMT 250 Digital Imaging	3
DMT 302 Commercial Print Techniques	3
DMT 312 Specialty Graphics Print Techniques	3
DMT 320 Digital Video	3
DMT 330 Package Printing Processes	3
DMT 331 Web Publishing	3
DMT 340 3D Computer	3
DMT 342 Cost Analysis for Digital Media	3
DMT 350 Motion Graphics	3
DMT 406 Digital Workflow and Print Technology	3
DMT 445 Digital Media Project Planning	3
DMT 485 Senior Seminar	3
DMT 495 Internship	3

Course	Credits
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Free Electives	20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** DMT 495 GCM Internship
- **Writing-Intensive Component Courses (2 courses required):** DMT 445 Digital Media Project Planning AND DMT 485 Senior Seminar
- **Laboratory Course (1 course required):** DMT 180 Foundations of Digital Media

Program Notes: Required Courses: If the courses are not completed as part of the student's general education, they must be completed within the electives category.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/digital-media-technology/index.aspx>

B.S. in Electrical Engineering Technology

Program Description

The Bachelor of Science in Electrical Engineering Technology (EET) degree provides students with the knowledge required to design, develop, modify, maintain and repair sophisticated electrical and electronic systems.

Delivery Mode

Traditional (on campus)

Accreditation

The B.S. in EET degree program is accredited by the Engineering Technology Accreditation Commission (ETAC), www.abet.org. All graduates of this program receive accredited degrees. Seniors and graduates of the programs are eligible to sit for a pre-licensing Fundamentals of Engineering (FE) exam.

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i>	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
Any Public Speaking Course	
<i>Mathematics and Quantitative Literacy</i> MAT 199 Pre-Calculus	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> CSC 120 Problem Solving and Programming Constructs	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry I	4
<i>Social Sciences</i> ECO 100 Elements of Economics	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • CSC 124 Computer Programming I • ENG 217 Scientific and Technical Writing • MAT 281 Calculus I 	12
Required Major Courses	73
GET 130 Intro to Engineering Technology	3
CET 235 Digital Electronics Design	4
CET 270 Introduction to Microprocessor Design	4
CET 335 Microprocessor Interfacing	4
CET 360 Microprocessor Engineering	4
EET 110 Electric Circuits I	4
EET 160 Electric Circuits II	4
EET 210 Linear Electronics I	4
EET 310 Methods in Engineering Analysis	3
EET 320 Network Analysis	4
EET 325 Introduction to Electric Power	4

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
EET 365 Linear Electronics II	4
EET 370 Instrumentation Design I	4
EET 400 Senior Project Proposal	1
EET 410 Automatic Control Systems	4
EET 430 RF Communications	4
EET 450 Senior Project	3
MAT 282 Calculus II	3
PHY 101 College Physics I	4
PHY 202 College Physics II	4
Technical Elective	4
Select from the following: <ul style="list-style-type: none"> • CET 440 Computer Networking • EET 420 Instrumentation Design II • EET 460 Digital Signal Processing • EET 485 Special Topics in EET • EET 495 EET Internship (single instance, 4 cr. max) 	4
Related Electives	3
Select from the following: <ul style="list-style-type: none"> • Any EET technical elective • Any ITE course • MTR 325 or above • CHE 102 General Chemistry II • CSC 202 or above • MAT 195 Discrete Math Structures • MAT 300 or above • PHY 221 or above 	3
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** EET 450 Senior Project
- **Writing-Intensive Component Courses (2 courses required):** CET 360 Microprocessor Engineering AND EET 450 Senior Project
- **Laboratory Course (1 course required):** EET 110 Electric Circuits I

Program Notes: College Algebra (3 credits) and College Trigonometry (3 credits) may be substituted for Pre-Calculus, if math placement test score does not permit direct entry into Pre-Calculus or if the student desires a less intense math coverage.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/electrical-engineering-technology/index.aspx>

B.S. in Industrial Technology Management

Program Description

The Bachelor of Science in Industrial Technology Management degree focuses on operations management, industrial cost analysis, operations research, project management, computer-integrated manufacturing, and production and inventory control.

Delivery Mode

Global Online (100% online)

Associate Degree Requirement

Students in this program need to (1) have completed an associate degree in an industrial technology-related area or approved equivalent (60 credits minimum) or (2) complete such a degree at Cal U while earning this bachelor's degree.

Of the 60 associate degree credits, 30 will be applied to the Cal U requirements in General Education, and 30 credits will be applied to the major requirements. Associate of Applied Science degree programs qualify for admission to this program, provided students have completed algebra, trigonometry and physics. Students who have not taken Statistical Quality Control should do so as a technical elective.

Curriculum

Course	Credits
General Education Courses	42
<i>Building a Sense of Community</i> From Associate Degree	1
<i>Composition</i> From Associate Degree	3
<i>Public Speaking</i> From Associate Degree	3
<i>Mathematics and Quantitative Literacy</i> From Associate Degree	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> From Associate Degree	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i>	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
Any Fine Arts Course	
<i>Natural Sciences</i> From Associate Degree	4
<i>Social Sciences</i> ECO 201 Principles of Microeconomics	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • 10 credits from Associate Degree 	13
Required Major Courses	60
From Associate Degree	27
ITE 305 OSHA General Industrial Safety	3
ITE 342 Quality Planning and Analysis	3
ITE 375 Principles of Production	3
ITE 376 Technical Supervision	3
ITE 385 Industrial Cost Estimating	3
ITE 420 Production Analysis	3
ITE 461 Supply Chain Fundamentals	3
ITE 471 Project Management	3
ITE 481 Concepts and Issues in Technology Management	3
ITE 495 Internship OR ITE 499 Research Project	6
Free Electives	18
From Associate Degree	6
Student-Selected Courses	12
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ITE 471 Project Management
- **Writing-Intensive Component Courses (2 courses required):** ITE 420 Production Analysis AND ITE 481 Concepts and Issues in Technology Management
- **Laboratory Course (1 course required):** From Associate Degree

Program Notes:

- At least 42 credits of advanced coursework (defined as any course numbered 200 or above with at least one pre-requisite course) are required.
- Admission to the industrial technology management program requires an associate degree in a related area (60 credits maximum); 27 of those credits will be applied to "General Education," 27 credits will be applied to "Required Major Courses" and 6 credits will be applied to "Free Electives."
- Graduates of other associate degree programs qualify for admission if they have completed six credits of math (algebra and statistics preferred), a quality control course and a lab-based physics. Any of these courses not completed at the prior level may be completed at the bachelor's degree level as electives or extra courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/industrial-technology-management/index.aspx>

B.S. in Mechatronics Engineering Technology

Program Description

The Bachelor of Science in Mechatronics Engineering Technology degree prepares students to apply mathematical and scientific principles to the design, development and operational evaluation of automated systems (computer-controlled with embedded electronics, sensors and actuators).

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> CSC 120 Problem Solving and Programming Constructs	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
<i>Natural Sciences</i> PHY 121 General Physics I	4
<i>Social Sciences</i> ECO 201 Introduction to Microeconomics	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ITE 305 OSHA General and Industrial Safety • MAT 199 Pre-Calculus (see program notes) • ENG 217 Scientific and Technical Writing 	12
Required Major Courses	56
EET110 Electric Circuits I	4
EET 160 Electric Circuits II	4
EET 215 Introduction to Instrumentation	3
CET 235 Digital Electronics Design	4
MAT 282 Calculus II	3
MTR 300 Manufacturing Processes	3
MTR 310 Principles of Automatic Control	3
MTR 320 Statics	3
MTR 325 Fundamentals of Programmable Logic Controllers	3
MTR 330 Dynamics	3
MTR 335 Advanced PLCs and Integration	3
MTR 340 Fluid Power	3
MTR 370 Properties and Strength of Materials	4
MTR 400 Machine Design Elements and Kinematics	3
MTR 410 Process Control	3
MTR 420 Computer-Integrated Manufacturing	3
MTR 445 Senior Project Proposal	1
MTR 450 Senior Project	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
Required Related (Cognate Area of Study) Courses	20
PHY 122 General Physics II	4
CSC 124 Computer Programming I	3
GET 130 Introduction to Engineering Technology	3
EET 325 Introduction to Electric Power	4
ITE 375 Principles of Production	3
ITE 215 CAD I	3
Related (Technical) Electives	3
Select a course from the following: <ul style="list-style-type: none"> • MTR 495 Mechatronics Internship (4 credits) • ITE 460 Principles of Manufacturing (3 credits) • ITE 385 Industrial Cost Estimating (3 credits) • CIS 341 CISCO CCNA 1 (4 credits) • CET 335 Microprocessor Interfacing (4 credits) • CET 270 Introduction to Microprocessor Design (4 credits) • RET 260 Robotics Systems Project (3 credits) • RET 210 Robotic Teaming (3 credits) • CIS 354 Systems Project Management (3 credits) • Other course approved by adviser 	3
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** MTR 400 Machine Design Elements and Kinematics
- **Writing-Intensive Component Courses (2 courses required):** MTR 420 Computer Integrated Manufacturing AND MTR 445 Senior Proposal / MTR 450 Senior Project
- **Laboratory Course (1 course required):** MTR 410 Process Control

Program Notes

- "Required Related (Cognate Area of Study) Courses" are required to meet ETAC of ABET criteria 1, 2, 3 and 5.
- MAT 181 (College Algebra, 3 credits) and MAT 191 (College Trigonometry, 3 credits) may be substituted for MAT 199, if math placement test does not permit direct entry into Pre-Calculus or if student desires a less intense math coverage.

- Students must complete 42 credits in upper-division coursework (300- and 400-level courses).

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/mechatronics-engineering-technology/index.aspx>

Minor in Computer Information Systems Curriculum

Course	Credits
Required Courses	19
CIS 110 Introduction to Information Systems	3
CIS 120 Application Programming I	3
CIS 220 Application Programming II	3
CIS 299 Systems Analysis I	3
CIS 321 Database Design and Data Modeling	3
CIS 341 CISCO CCNA 1	4
Electives <i>(Select one course from the following)</i>	3
CIS 330 Web Programming I	3
CIS 302 Visual Programming	3
CIS 322 Database Application Programming	3
CIS 419 Internship (variable credit, maximum of 3)	3
MAT 195 Discrete Mathematical Structures	3
Total	22

Minor in Computer Science Curriculum

Course	Credits
Required Courses	18
CSC 120 Problem Solving and Programming Constructs	3
CSC 124 Computer Programming I	3
CSC 216 Logic and Switching Theory	3

Course	Credits
CSC 265 Object-Oriented Programming	3
CSC 328 Data Structures	3
MAT 195 Discrete Mathematical Structures	3
Electives (select one)	3
CSC 304 COBOL	3
CSC 306 FORTRAN	3
CSC 308 Python	3
Total	21

Note: No more than one course substitution will be permitted for the minor (could occur in required or elective area).

Minor in Digital Media Technology Curriculum

Course	Credits
Required Courses	15
DMT 100 Foundations of Print Media	3
DMT 180 Foundations of Digital Media	3
DMT 220 Digital Photography	3
DMT 240 Vector Based Graphics	3
DMT 250 Digital Imaging	3
Elective Courses <i>(Select any two of the following, maintaining pre-requisite requirements)</i>	6
DMT 101 Time Based Media	3
DMT 200 Print Media Production Processes	3
DMT 225 Digital Page Layout	3
DMT 302 Commercial Print Technologies	3
DMT 312 Specialty Graphics Print Techniques	3
DMT 320 Digital Video	3

Department of Computer Science, Information Systems and Engineering Technology

Course	Credits
DMT 330 Package Printing Processes	3
DMT 331 Web Publishing	3
DMT 340 3D Computer Animation	3
DMT 342 Cost Analysis for Digital Media	3
DMT 350 Motion Graphics	3
DMT 360 Game Development	3
DMT 365 Color Imaging	3
DMT 402 Advanced Print Techniques	3
DMT 406 Digital Workflow and Print Technology	3
DMT 420 Technical Studies in Digital Media Technology	3
DMT 431 Advanced Web Development	3
DMT 445 Project Management	3
DMT 485 Senior Seminar	3
Total	21

Minor in Electrical Engineering Technology Curriculum

Course	Credits
Required Courses	16
EET 110 Electric Circuits*	4
CET 235 Digital Electronic Design	4
CET 270 Introduction to Microprocessor Design	4
CET 335 Microprocessor Interfacing	4
Elective Courses <i>(select any two of the following, maintaining prerequisite requirements)</i>	7
EET 160 Electric Circuits II**	4
EET 215 Intro to Instrumentation	3
EET 325 Introduction to Electric Power	4

Course	Credits
CET 360 Microprocessor Engineering	4
CET 440 Computer Networking	4
Total	23

* Requires College Algebra or Tech Math I

** Requires College Trig or Tech Math II

Pre-requisite Requirements:

- EET 110 > EET 160 > EET 215, EET 325
- CET 235 > CET 270 > CET 335 > CET 360

Minor in Robotics Engineering Technology Curriculum

Course	Credits
CET 235 Digital Electronics Design	3
CSC 120 Problem Solving and Prog. Const.	3
CSC 124 C Programming	3
RET 110 Agile Robotics I	3
RET 160 Agile Robotics II	3
RET 210 Robotics Teaming	3
RET 260 Robotics Systems Project	3
Total	21

Program Notes: Students may wish to take the following additional courses to enhance the RET minor:

- **CET 270** Intro to Microprocessors (4 credits)
- **EET 110** Electrical Circuits I (4 credits)

Pre-requisite Requirements:

- RET 110 > RET 160 > RET 210 > RET 260
- MAT 181* > CET 235 > CET 270
- CSC 120 > CSC 124

(Certain courses may be taken concurrently.)

* MAT 181 is also a pre-requisite for EET 110.

Department of Criminal Justice and Psychology Faculty

Dr. Justin Hackett (chair) | Dr. Aref M. Alkhattar | Michael Baranski | Dr. Angela Bloomquist | Dr. Rueben Brock | Dr. John R. Cencich | Dr. Carrie Elkin | Dr. Raymond J. Hsieh | Dr. Michael Hummel | Dr. Dana Keener | Dr. Tamare Piersaint | Dr. Rebecca Regeth | Dr. Nikolas Roberts | Dr. Beverly Ross | Dr. Kristen Schaffner | Dr. Mathilda Spencer | Dr. Darla Timbo | Dr. Julie Warnick | Dr. Christopher Wydra

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Criminal Justice and Psychology includes undergraduate programs in criminal justice and psychology.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.S. in Technical Studies: Applied Policing and Technology
- B.S. in Criminal Justice
- B.S. in Criminal Justice: Criminology
- B.S. in Criminal Justice: Cyber Forensics
- B.S. in Criminal Justice: Forensic Investigation
- B.S. in Criminal Justice: Homeland and International Security
- B.S. in Criminal Justice: Law and Justice
- B.S. in Psychology

Certificates

The department also offers sub-baccalaureate certificate programs in:

- Diversity and Multicultural Competence
- Mental Health Technician

Minors

Minors available through this department include:

- Criminal Justice
- Forensic Investigation / Cyber Forensics
- Leadership
- Psychology

Honor Societies

The criminal justice programs participate in the National Criminal Justice Honor Society (**Alpha Phi Sigma**) and **Pi Gamma Mu**, a social science honorary society.

Qualified psychology majors can join **Psi Chi**, the national honor society.

Activities

Criminal justice studies faculty and students involve themselves in numerous activities beyond the normal academic experience. The program is an active participant in myriad justice-related activities at the regional, national and international levels. There are opportunities for student internships and study abroad. Students can compete with the Mock Trial Team. Membership and leadership opportunities exist in the Law and Justice Society, Forensic Science Club and Criminal Justice Club.

Department of Criminal Justice and Psychology

The department also sponsors a Psychology Club that hosts guest speakers, organizes trips to conferences of professional interest, and provides career and employment information.

A.S. in Technical Studies: Applied Policing and Technology Concentration

Program Description

The applied policing and technology concentration of the Associate of Science in Technical Studies degree is designed for aspiring police officers and builds knowledge of high-tech tools used in modern police work.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	24
<i>Composition</i> ENG 101 Composition I or higher	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> JUS 220 High Tech Criminal Investigation	3
<i>Humanities</i> Any Humanities Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> PSY 100 Intro to Psychology	3
Required Major Courses	24
JUS 101 Intro to Criminal Justice*	3
JUS 102 Intro to Law Enforcement*	3
JUS 103 Correctional Systems*	3
JUS 105 Intro to Forensic Science*	3

Department of Criminal Justice and Psychology

Course	Credits
JUS 201 Criminal Investigation*	3
JUS 331 Juvenile Justice System	3
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
Related Electives	12
Complete 12 credits from the following: <ul style="list-style-type: none">• WFD 199 (6 credits) MPOETC• JUS 211 Organized Crime• JUS 405 Cyber Security• JUS 487 Computer Forensics• JUS 488 Cyber Crime Investigation• Other JUS courses with prior approval of adviser	12
Total	60

Program Notes: If students have already completed these courses, then credits as workforce development (WFD) may be applied up to a total of 15 credits.

Fifteen of the last 30 credits must be taken at Cal U.

* After successful completion of the Police Academy, the student will be awarded 15 credits toward the degree.

Police Academy

Graduates of the Pennsylvania Police Academy who earn the Pennsylvania Act 120 MPOETC certification, or its equivalent, can be awarded up to 15 credits, which will be applicable to the associate degree in Applied Policing and Technology. Act 120 MPOETC police academy training and certification is offered at the University. Graduates of the Academy are awarded 15 credits, typically in the additional electives category.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/policing-and-technology/index.aspx>

B.S. in Criminal Justice

Program Description

The Bachelor of Science in Criminal Justice degree explores broad concepts related to the field of criminal justice and allows students to select criminal justice electives that are tailored to their specific career goals and interests.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Technological Literacy Course • Any General Education Courses (two courses) 	12
Required Major Courses	33
JUS 101 Intro to Criminal Justice Studies	3
JUS 102 Intro to Law Enforcement	3
JUS 103 Correctional Systems	3
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3

Department of Criminal Justice and Psychology

Course	Credits
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 495 Research Methods in Criminal Justice	3
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Related Electives	21
Select seven JUS courses	21
Additional Electives	25 or 26
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUS 499 Seminar in Justice Studies
- **Writing-Intensive Component Courses (2 courses required):** Any two JUS approved Writing-Intensive Menu courses
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are REQUIRED. Any related electives not listed must be approved by adviser.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/index.aspx>

B.S. in Criminal Justice: Criminology Concentration

Program Description

The criminology concentration of the Bachelor of Science in Criminal Justice degree explores classical, psychological, sociological, economic, biological and political theories of crime.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Technological Literacy Course • Any General Education Courses (two courses) 	12
Required Major Courses	33
JUS 101 Intro to Criminal Justice Studies	3
JUS 102 Intro to Law Enforcement	3
JUS 103 Correctional Systems	3
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3

Department of Criminal Justice and Psychology

Course	Credits
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 495 Research Methods in Criminal Justice	3
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Concentration Courses	6
JUS 215 Victimology	3
JUS 459 Behavioral Analysis of Violent Crime	3
Related Electives	15
Select 15 credits from the following: <ul style="list-style-type: none"> • JUS 201 Criminal Investigation (3 credits) • JUS 211 Organized Crime (3 credits) • JUS 309 White Collar Crime (3 credits) • JUS 385 Violence and the Media (3 credits) • JUS 395 Death Penalty (3 credits) • JUS 399 Selected Topics (Criminology) (3 credits) • JUS 429 Terrorism (3 credits) • JUS 430 Criminal Intelligence Analysis (3 credits) • GIS 303 Crime Mapping (3 credits) • JUS 460 Sex Crimes and Predators (3 credits) • JUS 470 Crimes Against Children (3 credits) • JUS 498 Criminology Internship (3-12 credits) 	15
Additional Electives	25 or 26
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUS 499 Seminar in Justice Studies
- **Writing-Intensive Component Courses (2 courses required):** Any two JUS approved Writing-Intensive Menu courses
- **Laboratory Course (1 course required):** Any Laboratory Course

Department of Criminal Justice and Psychology

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are REQUIRED. Any related electives not listed must be approved by adviser.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/criminology.aspx>

B.S. in Criminal Justice: Cyber Forensics Concentration

Program Description

The cyber forensics concentration of the Bachelor of Science in Criminal Justice degree explores techniques, tools and concepts relevant to identifying, collecting, preserving, analyzing and presenting digital forensic evidence.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4

Department of Criminal Justice and Psychology

Course	Credits
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Technological Literacy Course • Any General Education Courses (two courses) 	12
Required Major Courses	33
JUS 101 Intro to Criminal Justice Studies	3
JUS 102 Intro to Law Enforcement	3
JUS 103 Correctional Systems	3
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 495 Research Methods in Criminal Justice	3
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Concentration Courses	12
JUS 105 Introduction to Forensic Science	3
JUS 397 Law and Evidence	3
JUS 487 Computer Forensics	3
JUS 488 Cyber Crime Investigation	3
Related Electives	9
Select nine credits from the following: <ul style="list-style-type: none"> • JUS 201 Criminal Investigation (3 credits) • JUS 220 High Tech Crime Investigation (3 credits) • JUS 380 Crime Scene Imaging (3 credits) 	9

Department of Criminal Justice and Psychology

Course	Credits
<ul style="list-style-type: none">• JUS 399 Selected Topics (3 credits)• JUS 405 Cyber Security (3 credits)• JUS 425 Advanced Criminal Investigation and Law (3 credits)• JUS 485 Forensic Law (3 credits)• JUS 498 Internship (3 to 9 credits)	
Additional Electives	25 or 26
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUS 499 Seminar in Justice Studies
- **Writing-Intensive Component Courses (2 courses required):** Any two JUS approved Writing-Intensive Menu courses
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are REQUIRED. Any related electives not listed must be approved by adviser.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/cyber-forensics.aspx>

B.S. in Criminal Justice: Forensic Investigation Concentration

Program Description

The forensic investigation concentration of the Bachelor of Science in Criminal Justice degree builds skills and knowledge related to collecting, categorizing, evaluating and interpreting evidence from crime scenes.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1

Department of Criminal Justice and Psychology

Course	Credits
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Technological Literacy Course • Any General Education Courses (two courses) 	12
Required Major Courses	33
JUS 101 Intro to Criminal Justice Studies	3
JUS 102 Intro to Law Enforcement	3
JUS 103 Correctional Systems	3
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 495 Research Methods in Criminal Justice	3
JUS 496 Criminological Theory	3

Department of Criminal Justice and Psychology

Course	Credits
JUS 499 Seminar in Criminal Justice Studies	3
Concentration Courses	12
JUS 105 Introduction to Forensic Science	3
JUS 201 Criminal Investigation	3
JUS 397 Law and Evidence	3
JUS 485 Forensic Law	3
Related Electives	9
Select nine credits from the following: <ul style="list-style-type: none"> • JUS 220 High Tech Crime Investigation (3 credits) • JUS 380 Crime Scene Imaging (3 credits) • JUS 399 Selected Topics (3 credits) • JUS 405 Cyber Security (3 credits) • JUS 425 Advanced Criminal Investigation and Law (3 credits) • JUS 487 Computer Forensics (3 credits) • JUS 488 Cyber Crime Investigation (3 credits) • JUS 498 Internship (3 to 9 credits) 	9
Additional Electives	25 or 26
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUS 499 Seminar in Justice Studies
- **Writing-Intensive Component Courses (2 courses required):** Any two JUS approved Writing-Intensive Menu courses
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are REQUIRED. Any related electives not listed must be approved by adviser.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/forensic-investigation.aspx>

B.S. in Criminal Justice: Homeland and International Security Concentration

Program Description

The homeland and international security concentration of the Bachelor of Science in Criminal Justice degree builds skills and knowledge related to establishing and organizing national security efforts and defending against foreign and domestic terrorism.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

On Campus

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course 	12

Department of Criminal Justice and Psychology

Course	Credits
<ul style="list-style-type: none"> • Any Technological Literacy Course • Any General Education Courses (two courses) 	
Required Major Courses	33
JUS 101 Intro to Criminal Justice Studies	3
JUS 102 Intro to Law Enforcement	3
JUS 103 Correctional Systems	3
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 495 Research Methods in Criminal Justice	3
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Concentration Courses	6
JUS 104 Introduction to Security	3
JUS 205 Principles of Homeland Security	3
Related Electives	15
Select 15 credits from the following: <ul style="list-style-type: none"> • JUS 305 International Criminal Justice (3 credits) • JUS 335 Corporate Security Law (3 credits) • JUS 338 Executive Protection (3 credits) • JUS 399 Selected Topics (repeatable) (3 credits) • JUS 405 Cyber Security (3 credits) • JUS 410 International Security (3 credits) • JUS 415 Multiculturalism in Criminal Justice (3 credits) • JUS 429 Terrorism (3 credits) 	15

Department of Criminal Justice and Psychology

Course	Credits
<ul style="list-style-type: none"> • JUS 430 Criminal intelligence Analysis (3 credits) • JUS 435 Countering Terrorism (3 credits) • JUS 498 Criminal Justice Internship (3 to 12 credits) 	
Additional Electives	25 or 26
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUS 499 Seminar in Justice Studies
- **Writing-Intensive Component Courses (2 courses required):** Any two JUS approved Writing-Intensive Menu courses
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are REQUIRED. Any related electives not listed must be approved by adviser.

Online

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4

Department of Criminal Justice and Psychology

Course	Credits
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Technological Literacy Course • Any General Education Courses (two courses) 	12
Required Major Courses	33
JUS 101 Intro to Criminal Justice Studies	3
JUS 102 Intro to Law Enforcement	3
JUS 103 Correctional Systems	3
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 495 Research Methods in Criminal Justice	3
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Concentration Courses	9
JUS 104 Introduction to Security	3
JUS 205 Principles of Homeland Security	3
JUS 440 Military Criminal Justice	3
Related Electives	12
Select 12 credits from the following: <ul style="list-style-type: none"> • JUS 305 International Criminal Justice (3 credits) • JUS 335 Corporate Security Law (3 credits) • JUS 338 Executive Protection (3 credits) 	12

Department of Criminal Justice and Psychology

Course	Credits
<ul style="list-style-type: none">• JUS 399 Selected Topics (repeatable) (3 credits)• JUS 405 Cyber Security (3 credits)• JUS 410 International Security (3 credits)• JUS 415 Multiculturalism in Criminal Justice (3 credits)• JUS 429 Terrorism (3 credits)• JUS 430 Criminal intelligence Analysis (3 credits)• JUS 435 Countering Terrorism (3 credits)• JUS 498 Criminal Justice Internship (3 to 12 credits)	
Additional Electives	25 or 26
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUS 499 Seminar in Justice Studies
- **Writing-Intensive Component Courses (2 courses required):** Any two JUS approved Writing-Intensive Menu courses
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are REQUIRED. Any related electives not listed must be approved by adviser.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpages

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/homeland-security.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/homeland-security-online.aspx>

B.S. in Criminal Justice: Law and Justice Concentration

Program Description

The law and justice concentration of the Bachelor of Science in Criminal Justice degree equips students with a solid understanding of law and the criminal justice system. The concentration is designed to be particularly useful for students who plan to go on to law school or pursue law enforcement careers in local, state or federal employment.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Science Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Technological Literacy Course • Any General Education Courses (two courses) 	12
Required Major Courses	33
JUS 101 Intro to Criminal Justice Studies	3
JUS 102 Intro to Law Enforcement	3
JUS 103 Correctional Systems	3
JUS 331 Juvenile Justice	3
JUS 361 Court Systems	3

Department of Criminal Justice and Psychology

Course	Credits
JUS 375 Criminal Law	3
JUS 376 Criminal Procedure	3
JUS 466 Leadership and Ethics in Criminal Justice	3
JUS 495 Research Methods in Criminal Justice	3
JUS 496 Criminological Theory	3
JUS 499 Seminar in Criminal Justice Studies	3
Concentration Courses	9
JUS 265 Report Writing for Criminal Justice Professionals	3
JUS 365 Mock Trial Concepts	3
JUS 397 Law and Evidence	3
Related Electives	12
Select 12 credits from the following: <ul style="list-style-type: none"> • JUS 105 Introduction to Forensic Science (3 credits) • JUS 201 Criminal Investigation (3 credits) • JUS 220 High Tech Crimes (3 credits) • JUS 305 International Criminal Justice (3 credits) • JUS 309 White Collar Crime (3 credits) • JUS 345 Probation and Parole (3 credits) • JUS 394 Problems in Policing (3 credits) • JUS 399 Selected Topics (3 credits) • JUS 465 Applied Mock Trial (3 credits) • JUS 485 Forensic Law (3 credits) • JUS 498 Criminal Justice Internship (Law) (3 credits) 	12
Additional Electives	25 or 26
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUS 499 Seminar in Justice Studies

Department of Criminal Justice and Psychology

- **Writing-Intensive Component Courses (2 courses required):** Any two JUS approved Writing-Intensive Menu courses
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: In the "Related Electives" category, students are free to choose any of the related electives to obtain the 12 credits required. Students are recommended to choose related electives that most closely align with career goals. 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are REQUIRED. Developmental courses do not count toward the 120 credits necessary to graduate, but are calculated in your overall GPA.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Criminal Justice to M.A. in Criminal Justice: Applied Criminology) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/criminal-justice/law-justice.aspx>

B.S. in Psychology

Program Description

The Bachelor of Science in Psychology degree is designed to provide students with a scientific foundation of psychology as well as in a variety of applied areas.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i>	3

Department of Criminal Justice and Psychology

Course	Credits
Any Fine Arts Course	
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • Any Gen Ed BIO/CHE • Any Gen Ed PHL/ML/CMD350/WST 	12
Required Major Courses	18
PSY 100 General Psychology	3
PSY 220 Descriptive Statistics in Psych.	3
PSY 331 Inferential Statistics in Psychology	3
PSY 345 History and Systems in Psychology	3
PSY 365 Research Methods in Psychology	3
PSY 460 Senior Seminar: Special Topics	3
Research Competency	12
Select 12 credits from the following: <ul style="list-style-type: none"> • PSY 301 Sensation and Perception Lab • PSY 306 Cognitive Psychology Lab • PSY 335 Advanced Learning Lab • PSY 340 Psychological Measurement Lab • PSY 350 Principles of Behavior Modification • PSY 415 Childhood Trauma: Theory, Research, Practice • PSY 420 Social Psychology Lab • PSY 430 Physiological Psychology • PSY 425 Senior Project Senior Project • PSY 469 Internship (3 to 6 credits) 	12
Psychology Electives	15
Select PSY courses NOT used to complete the above requirements	15

Department of Criminal Justice and Psychology

Course	Credits
Free Electives	34 or 35
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** PSY 345 History and Systems of Psychology AND PSY 365 Research Methods in Psychology
- **Laboratory Course (1 course required):** Any Lab Course

Program Notes: A minimum overall and psychology GPA 2.0 is required. 42 credits of upper-level courses are required. Minors are strongly encouraged (see adviser). Developmental courses (ENG 100, DMA 092) do NOT count toward the 120 credits needed for graduation, but are used in calculating GPA.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/psychology/index.aspx>

Certificate in Diversity and Multicultural Competence Curriculum

Course	Credits
PSY 100 General Psychology	3
PSY 211 Social Psychology	3
PSY 303 Cross Cultural Psychology	3
PSY 311 Psychology of Gender Roles	3
PSY 320 Black Psychology	3
Total	15

Certificate in Mental Health Technician Curriculum

Course	Credits
PSY 305 Theories of Personality	3

Department of Criminal Justice and Psychology

Course	Credits
PSY 375 Psychopathological Disorders of Childhood OR PSY 400 Psychopathological Disorders of Adulthood	3
PSY 410 Clinical Child Psychology OR PSY 422 Clinical Skills in Psychology	3
PSY 421 Theories of Psychotherapy	3
Total	12

Minor in Criminal Justice Curriculum

Course	Credits
Required Courses	6
JUS 101 Introduction to Criminal Justice Studies	3
JUS 375 Criminal Law	3
Criminal Justice Electives (select five)	15
Students may select any Justice course offered as part of the core required courses or related electives of any of the concentrations. A minimum of 6 credits must be at the 300 level or above.	15
Total	21

Minor in Forensic Investigation / Cyber Forensics Curriculum

Course	Credits
Required Courses	12
JUS 105 Introduction to Forensic Science	3
JUS 220 High Tech Crime Investigation	3
JUS 375 Criminal Law	3
JUS 485 Forensic Law	3

Department of Criminal Justice and Psychology

Course	Credits
Electives (select three)	9
JUS 201 Criminal Investigation	3
JUS 380 Crime Scene Imaging	3
JUS 397 Law and Evidence	3
JUS 405 Cyber Security	3
JUS 425 Advanced Criminal Investigation and Law	3
JUS 487 Computer Forensics	3
JUS 488 Cyber Crime Investigation	3
Total	21

Program Notes: Students should select electives based on their interest in forensic investigation and/or cyber forensics.

Minor in Leadership

Program Description

The leadership minor builds an understanding of, and an ability to demonstrate, leadership skills. It enhances and deepens an individual's ability to make sense of local, national and world events and the decisions made by individuals and groups with control over resources, and provides another set of conceptual tools for being a critical and responsible citizen of the world.

Curriculum

Course	Credits
Required Courses	12
LEA 100 Introduction to Leadership	3
LEA 397 Internship*	3 or 6
LEA 399 Selected Topics in Leadership	3
LEA 400 Capstone: Seminar in Leadership	3
Leadership Electives	9
Students must select one course from each of the designated areas below, with at least two courses at the 300- or 400-level. Two of the three courses below must be outside the student's major.	

Department of Criminal Justice and Psychology

Course	Credits
<i>Theory and Institutions Area</i>	
BUS 342 Business/Society/Government	3
CDC 303 Organizational Com	3
CDC 330 Intro Public Relations	3
ECO 304 Money and Banking	3
FIN 311 Financial Markets and Institutions	3
GEO 360 Emergency Management	3
HIS 320 History of a Dictator	3
HON 201 Quant Problem Solving	3
HON 320 Topics in Culture and Soc	3
JUS 101 Intro to Criminal Justice	3
JUS 361 Court Systems	3
JUS 496 Criminological Theories	3
MGT 300 Principles of Management	3
MGT 301 Organizational Behavior	3
MGT 311 Organizational Theory/Design	3
POS 300 Public Policy	3
POS 306 Congress	3
POS 310 The American Presidency	3
POS 355 Public Administration	3
SOC 240 Social Institutions	3
SOC 410 Social Theory/Policy	3
WST 100 Intro to Women's Studies	3
<i>Applied Area</i>	
ARB 101/102 Elementary Arabic	3
ARB 203/204 Intermediate Arabic	3
CDC 201 Argument and Advocacy	3
CDC 230 Strategic and Prof Comm	3

Department of Criminal Justice and Psychology

Course	Credits
CDC 320 International Comm	3
CSC 150 Intro to Database Comm	3
ECO 322 Managerial Economics	3
ECO 360 International Economics	3
FIN 301 Financial Management	3
FIN 302 Advanced Financial Management	3
TOU 330 Meetings, Expositions and Conventions Operations	3
GEO 474 Developing Master Plan	3
GMS 201 General Military Science	3
JUS 305 International Criminal Justice	3
JUS 335 Corporate Security Law	3
JUS 365 Mock Trial Concepts	3
POS 318 Parties/Groups	3
POS 319 Campaign Management	3
PSY 208 Educational Psychology	3
PSY 211 Social Psychology	3
PSY 305 Psychology of Personality	3
REC 378 Recreation/Industry Management	3
SOC 378 Charismatic Leaders	3
SOC 400 Structural and Inst Violence	3
SPN 101/102 Elementary Spanish	3
SPN 203/204 Intermediate Spanish	3
<i>Ethics Area</i>	
BUS 343 Corporate Social Resp	3
EDU 310 Teaching Multicultural Society	3
ENG 306 Press Law and Media Ethics	3
HIS 379 Special Problems in History	3
JUS 394 Problems in Policing	3
JUS 415 Multiculturalism in CRJ	3

Department of Criminal Justice and Psychology

Course	Credits
JUS 466 Leadership and Ethics	3
JUS 470 Crimes Against Children	3
PHI 220 Ethics	3
PHI 307 Medical Ethics	3
PHI 320 Ethical Theory	3
PSY 340 Psychological Measurements	3
SOC 315 Social Minorities	3
SPT 305 Ethics in Sport	3
WST 340 Violence Against Women	3
Total	21

* If 6 credits of internship are completed, the student need not take LEA 399.

Program Notes: The leadership minor requires 21 credit hours, including an internship. Students must obtain permission prior to enrolling in the internship. The chair of the Department of Criminal Justice and Psychology must approve course substitutions and internships.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/leadership/index.aspx>

Minor in Psychology

Curriculum

Course	Credits
Required Courses	6
PSY 100 General Psychology	3
PSY 220 Descriptive Statistics in Psychology	3
Electives	6
<i>Select one from:</i>	
PSY 150 Lifespan Developmental Psychology	3
PSY 205 Developmental Psychology: Childhood	3
PSY 206 Developmental Psychology: Adolescence	3
PSY 207 Developmental Psychology: Adulthood	3

Department of Criminal Justice and Psychology

Course	Credits
<i>Select one from:</i>	
PSY 208 Educational Psychology	3
PSY 209 Industrial Psychology	3
PSY 211 Social Psychology	3
PSY 222 Stress Management	3
Advanced Electives	9
Select three 300- or 400-level psychology content courses	9
Total	21

Department of Culture, Media, and Performance

Faculty

Dr. Joel Press (chair) | Dr. M.G. Aune | Dr. Anthony (Todd) Carlisle | Greg Davis | Dr. Sarah Downey | Dr. Christina L. Fisanick | Dr. Sylvia Foil | Dr. Craig Fox | Jan Fung | Dr. Debbie Goh | Ralph Guzzi | Greg Harrison | Dr. Brent House | Sabrina Hykes-Davis | Curtis Johnson | Ken Karsh | Lisa Brovey Kovach | Nancy Lonich | Dr. Karen McCullough | Dr. Patricia Milford | Dr. Keat Murray | Spencer Norman | Dr. Michele A. Pagen | Dr. Cindy Persinger | Margaret Schottman | Dr. Nancy J. Shaffer | Dr. Greg Spicer | Brian Stahurski | Dr. John Paul Staszal | Dr. Frank Stetar | Josh Taylor | Dr. Yana Tyulkova | Dr. Kimberly Vanderlaan | Brandon VanSickle | Joseph Weaver

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Culture, Media, and Performance includes undergraduate programs in art history, communication studies, English, graphic design, music, philosophy and theatre.

Bachelor's Degree Programs

Degrees offered through this department include:

- B.S. in Commercial Music Technology
- B.S. in Commercial Music Technology: Music Business Concentration
- B.A. in Communication Studies
- B.A. in English: Creative Writing
- B.A. in English: Journalism
- B.A. in English: Literature
- B.S. in Graphic Design
- B.A. in Theatre
- B.A. in Theatre: Design and Entertainment Technology
- B.A. in Theatre: Musical Theatre

Note: Cal U also offers B.S.Ed. secondary education degrees in English and Communications as well as a Language Arts/Reading concentration in middle level education through its Department of Education. An accelerated B.S. in Commercial Music Technology: Music Business to MBA track is also available.

Minors

Minors offered through this department include:

- Acting
- Art History
- Communication Studies
- Creative Writing
- Dance
- Design and Entertainment Technology (Theatre)
- Graphic Design
- Journalism
- Literature
- Music
- Musical Theatre Performance
- Philosophy
- Theatre
- Theatre History and Literature
- Writing

Honor Societies

Alpha Psi Omega (ΑΨΩ) is a national theatre honor society for participants in collegiate theatre.

Lambda Pi Eta is the national communication honor society that recognizes outstanding achievement by undergraduates majoring in communication studies.

Kappa Kappa Psi is the national honors band fraternity, which recognizes student musicians' service and leadership and promotes musicianship through the university.

Pi Kappa Delta is the honor society for intercollegiate debaters, individual events competitors and teachers of communication. The department has a long and storied history with successful competition in speech and debate.

Sigma Tau Delta is the national English honor society. The Cal U chapter, Delta Theta, was chartered in 1959 and is the oldest chapter in Pennsylvania's State System of Higher Education.

Activities

The Cal U chapter of the **Society of Professional Journalists** helps prepare students for careers in the media, offering professional and social ties.

The department hosts a chapter of the **Public Relations Student Society of America**. This student organization offers students the opportunity to develop leadership skills and provides professional development opportunities.

University Players is a student club that sponsors the theatre productions, student attendance to national conferences and job fairs, and various theatre-related events.

The department also hosts topical lectures and forums.

B.A. in Communication Studies

Program Description

The Bachelor of Arts in Communication Studies explores human communication and its influence on our personal, professional, social and cultural lives. The curriculum develops skills and dispositions needed to succeed in a variety of professional contexts and to become leaders in democratic society.

Students work closely with faculty advisers to develop a tailored experience that aligns with their personal interests, talents and career goals. They are able to design their own specific areas of emphasis through project-based, experiential learning. These areas could include: media studies/film; applied fields (e.g., public relations, consulting, branding, media writing); advocacy/political communication; art history and visual culture; communication ethics; rhetoric (e.g., pre-law); and academic preparation for graduate school.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar OR UNI 101 Introduction to University Studies OR HON 100 Honors and University Orientation	1

Department of Culture, Media, and Performance

Course	Credits
<i>Composition</i> ENG 101 English Composition I OR HON 150 Honors Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics or Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>Ethics and Multicultural Awareness</i> PHI 220 Ethics	3
<p><i>General Education Options</i> Select one of the following courses related to reasoning:</p> <ul style="list-style-type: none"> • CDC 201 Argumentation and Advocacy • PHI 115 Logic and Language • PHI 311 Formal Logic I <p>Select one of the following courses related to aesthetic appreciation:</p> <ul style="list-style-type: none"> • CCDC 252 The Art of Film • PHI 335 Aesthetic Theory • ART 270 Art History Today <p>Select one of the following courses related to written expression:</p> <ul style="list-style-type: none"> • ENG 102 English Composition II • ENG 211 Business and Professional Writing • ENG 217 Sci and Tech Writing • HON 250 Honors Comp II 	9
Core Major Courses	30

Department of Culture, Media, and Performance

Course	Credits
CDC 100 Communication Perspectives	3
CDC 120 Visual Communication I	3
CDC 150 Imagine, Design, Create	3
CDC 151 Producing Media Messages I	3
CDC 200 Truth and Representation	3
CDC 220 Visual Culture	3
CDC 230 Strategic Professional Communication	3
CDC 304 Communication Research OR PHI 335 Aesthetic Theory	3
CDC 490 Theorizing Human Communication OR ART 422 After Modernism	3
CDC 498 Senior Project in Communication, Design and Culture OR CDC 499 Career Design Strategies	3
Advanced-Standing Courses (select four courses)	12
<p><i>Conversations/Seminars</i> Select at least one course from the following:</p> <ul style="list-style-type: none"> • CDC 310 Seminar in CDC • CDC 350 Image, Sound, Text • CDC 431 PR Cases and Problems • CDC 461 Communication and Social Meaning • CDC 465 Media Ethics • CDC 490 Theorizing Human Communication 	3 or 6
<p><i>Experiential Learning</i> Select at least one course from the following:</p> <ul style="list-style-type: none"> • CDC 301 Advanced Performance • CDC 311 Special Experience Lab in CDC • CDC 331 Public Relations Applications • CDC 351 Media Production II • CDC 430 PR and Integrated Communication Practicum • CDC 432 Public Relations Campaign Management • CDC 451 Producing Media Messages III • CDC 455 Media Writing III • CDC 497 Internship in CDC 	3 or 6
<i>Area Studies</i>	3 or 6

Department of Culture, Media, and Performance

Course	Credits
Select at least one course from the following: <ul style="list-style-type: none"> • ART 422 After Modernism • CDC 210 Special Topics in CDC • CDC 302 Persuasion • CDC 303 Organizational Communications • CDC 304 Communication Research • CDC 305 Sports Com and Media Relations • CDC 312 Area Studies in CDC • CDC 330 Intro to Public Relations • CDC 355 Media Writing I • CDC 356 Media Writing II • CDC 357 Media Management • CDC 370 Challenges in Communicating Science • CDC 431 PR Cases and Problems • CDC 450 Media, Society, Culture • CDC 460 Phil of Art, His, Theory and Criticism • CDC 498 Senior Project in CDC • CDC 499 Career Design Strategies • PHI 335 Aesthetic Theory 	
Free Electives	38
This category includes courses of interest to students, courses toward a minor and internships.	38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** CDC 498 Senior Project in CDC OR CDC 499 Career Design Strategies
- **Writing-Intensive Component Courses (2 courses required):** (1) Select from: CDC 304 OR PHI 335 AND (2) Select from: CDC 490 OR ART 422
- **Laboratory Course (1 course required):** Any Lab Course

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/communication-studies/index.aspx>

B.A. in English: Creative Writing Concentration

Program Description

The creative writing concentration of the Bachelor of Arts in English degree allows students to hone their craft as they study contemporary literature and apply what they've learned to their own works of poetry, fiction, nonfiction and drama.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • Any 300- or 400-level Humanities Course • General Education Course 	12
Creative Writing Core Courses	18
Select six courses from the following: <ul style="list-style-type: none"> • ENG 351 Publish the Mag • ENG 375 Advanced Writing • ENG 376 Cr Writing: Fiction • ENG 377 Cr Writing: Poetry • ENG 378 Cr Writing: Drama 	18

Department of Culture, Media, and Performance

Course	Credits
<ul style="list-style-type: none"> • ENG 410 Adv Study Creative Writing (repeatable) 	
Literature Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 301 Brit Literature I • ENG 302 Brit Literature II • ENG 315 Survey of American Woman Writers • ENG 325 World Lit to 1600 • ENG 326 World Lit from 1600 • ENG 337 Survey of American Literature I • ENG 338 Survey of American Literature II • ENG 355 Survey of African American Literature • ENG 425 Shakespeare 	3
Language and Linguistics Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 345 Grammar and Usage • ENG 346 History of English Language • ENG 347 Introduction to Linguistics 	3
Composition and Literacy Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 308 Research for Writers • ENG 375 Advanced Writing • ENG 590 Summer Institute for Teachers and Writers 	3
Journalism Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 306 Press Law and Ethics • ENG 320 Multimedia Journalism • ENG 367 News Writing and Editing • ENG 369 Beat Reporting and Feature Writing 	3
Special Topics	9
Select three courses from the following:	9

Department of Culture, Media, and Performance

Course	Credits
<ul style="list-style-type: none">• ENG 320 Multimedia Journalism• ENG 351 Publish the Mag• ENG 419 Internship• ENG 450 Adv Study Journalism• ENG 452 Adv Study Composition and Rhetoric• ENG 406 Adv Study Literature• ENG 478 Adv Study Film	
Special Experience	3
ENG 499 English Capstone Class	3
Free Electives	38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ENG 499 English Capstone Class
- **Writing-Intensive Component Courses (2 courses required):** Select two from: ENG 337, 406, 410, 450, 452, 478, 499
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/english/creative-writing.aspx>

B.A. in English: Journalism Concentration

Program Description

The journalism concentration of the Bachelor of Arts degree in English prepares students to cultivate sources, find accurate information and report news in an ethical manner and using digital platforms.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3

Department of Culture, Media, and Performance

Course	Credits
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • Any 300- or 400-level Humanities Course • General Education Course 	12
Journalism Core Courses	12
Select four courses from the following: <ul style="list-style-type: none"> • ENG 306 Press Law and Ethics • ENG 320 Multimedia Journalism • ENG 367 News Writing and Editing • ENG 369 Beat Reporting and Feature Writing • ENG 450 Advanced Study Journalism (repeatable) 	12
Creative Writing Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 376 Cr Writing: Fiction • ENG 377 Cr Writing: Poetry • ENG 378 Cr Writing: Drama • ENG 590 Summer Institute for Teachers and Writers 	3

Department of Culture, Media, and Performance

Course	Credits
Literature Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 301 Brit Literature I • ENG 302 Brit Literature II • ENG 315 Survey of American Woman Writers • ENG 325 World Lit to 1600 • ENG 326 World Lit from 1600 • ENG 337 Survey of American Literature I • ENG 338 Survey of American Literature II • ENG 355 Survey of African American Literature • ENG 425 Shakespeare 	3
Language and Linguistics Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 345 Grammar and Usage • ENG 346 History of English Language • ENG 347 Introduction to Linguistics 	3
Composition and Literacy Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 308 Research for Writers • ENG 375 Advanced Writing • ENG 590 Summer Institute for Teachers and Writers 	3
Special Topics	9
Select three courses from the following: <ul style="list-style-type: none"> • ENG 320 Multimedia Journalism • ENG 406 Adv Study Literature • ENG 410 Adv Study Creative Writing • ENG 419 Internship • ENG 452 Adv Study Composition and Rhetoric • ENG 478 Adv Study Film 	9
Special Experience	3
ENG 499 English Capstone Class	3

Department of Culture, Media, and Performance

Course	Credits
Journalism Electives	6
Select two courses from the following: <ul style="list-style-type: none">• ENG 351 Publish the Mag• ENG 419 Internship• CDC 151 Producing Media Messages• CDC 305 Sports Communication and Media Relations	6
Free Electives	38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ENG 499 English Capstone Class
- **Writing-Intensive Component Courses (2 courses required):** Select two from: ENG 337, 406, 410, 450, 452, 478, 499
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/english/journalism.aspx>

B.A. in English: Literature Concentration

Program Description

The literature concentration of the Bachelor of Arts in English degree builds critical analysis, interpretative and communication skills through the study of works by American, British and world authors.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3

Department of Culture, Media, and Performance

Course	Credits
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • Any 300- or 400-level Humanities Course • General Education Course 	12
Literature Core	18
Select six courses from the following: <ul style="list-style-type: none"> • ENG 301 Brit Literature I • ENG 302 Brit Literature II • ENG 315 Survey of American Woman Writers • ENG 325 World Lit to 1600 • ENG 326 World Lit from 1600 • ENG 337 Survey of American Literature I • ENG 338 Survey of American Literature II • ENG 355 Survey of African American Literature • ENG 425 Shakespeare 	18
Creative Writing Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 376 Cr Writing: Fiction • ENG 377 Cr Writing: Poetry • ENG 378 Cr Writing: Drama • ENG 495 Cr Writing Seminar • ENG 590 Summer Institute for Teachers and Writers 	3

Department of Culture, Media, and Performance

Course	Credits
Language and Linguistics Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 345 Grammar and Usage • ENG 346 History of English Language • ENG 347 Introduction to Linguistics 	3
Composition and Literacy Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 308 Research for Writers • ENG 375 Advanced Writing • ENG 590 Summer Institute for Teachers and Writers 	3
Journalism Core	3
Select one course from the following: <ul style="list-style-type: none"> • ENG 306 Press Law and Ethics • ENG 320 Multimedia Journalism • ENG 367 News Writing and Editing • ENG 369 Beat Reporting and Feature Writing 	3
Special Topics	9
Select three courses from the following: <ul style="list-style-type: none"> • ENG 351 Publish the Mag • ENG 406 Adv Study Lit (repeatable) • ENG 410 Adv Study Journalism • ENG 419 Internship • ENG 450 Adv Study Creative Writing • ENG 452 Adv Study Composition and Rhetoric • ENG 478 Adv Study Film • CDC 350 Image, Sound, Text • CDC 450 Media, Society, Culture 	9
Special Experience	3
ENG 499 English Capstone Class	3
Free Electives	38

Department of Culture, Media, and Performance

Course	Credits
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ENG 499 English Capstone Class
- **Writing-Intensive Component Courses (2 courses required):** Select two from: ENG 337, 406, 410, 450, 452, 478, 499
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/english/literature.aspx>

B.A. in Theatre

Program Description

The Bachelor of Arts in Theatre degree is a flexible program that combines academic and production work. Students explore and hone skills related to text analysis, production conceptualization, design, construction, acting, voice, dance, management and directing.

Delivery Mode

Traditional (on campus)

Accreditation and Affiliation

This program is accredited the National Association of Schools of Theatre. It has also earned Educational Affiliate status with Estill Voice International®. Students can elect to pursue their Certificate of Proficiency in EVT prior to graduation.

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics or Quantitative Literacy Course	3
<i>Health and Wellness</i> HSC 315 First Aid and Personal Safety (recommended) OR Any Course on Menu	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i>	3

Department of Culture, Media, and Performance

Course	Credits
Any Humanities Course	
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • General Education Options Courses (three courses) 	12
Required Core Courses	27
THE 131 Fundamentals of Acting	3
THE 141 Stagecraft I	3
THE 150 Introduction to Theatrical Design	3
THE 302 History of Theatre I	3
THE 304 World Drama OR THE 306 Modern Drama OR ENG 425 Shakespeare	3
THE 312 History of Theatre II	3
THE 320 Fundamentals of Directing	3
THE 450 Practicum: Senior Thesis	3
DAN 131 Foundations of Dance	3
Theatre Electives (select three courses)	9
Theatre Practicum Electives	6
Additional Electives/Minor	38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any 3-credit Special Experience Course

Department of Culture, Media, and Performance

- **Writing-Intensive Component Courses (2 courses required):** THE 312 Theatre History II AND Select from: THE 304, THE 306 or ENG 425
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: Minimum GPA 2.0; Minimum credits 120. At least 42 credits (14 courses) must be advanced courses.

Additional Requirements

Theatre majors are required to take practicum credits, which give them practical experience in various areas of production: acting, dance, design, directing, dramaturgy, outreach, stage management, technical production and technical direction. As students advance in their training, they have the opportunity to be awarded significant production responsibility working alongside faculty as a member of the artistic team. Opportunities include:

- Full production direction
- Design
- Technical direction
- Choreography
- Playwriting
- Dramaturgy

Special Recommendations

A minor in art, arts administration, event planning, music, psychology, sociology or social work is recommended for those majoring in theatre.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/theater/index.aspx>

B.A. in Theatre: Design and Entertainment Technology Concentration

Program Description

The design and entertainment technology concentration of the Bachelor of Arts in Theatre degree focuses on the skills and technology used to create theater productions.

Delivery Mode

Traditional (on campus)

Accreditation and Affiliation

This program is accredited the National Association of Schools of Theatre.

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3

Department of Culture, Media, and Performance

Course	Credits
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics or Quantitative Literacy Course	3
<i>Health and Wellness</i> HSC 315 First Aid and Personal Safety (recommended) OR any course on menu	3
<i>Technological Literacy</i> GET 130 Introduction to Engineering OR DMT 180 Foundations of Digital Media	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> ART 110 Drawing I (recommended) OR any course on menu	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • THE 140 Script Analysis (recommended) OR any Ethics and Multicultural Awareness Emphasis Course • General Education Options Courses (three courses) 	12
Required Theatre Core Courses	27
DAN 131 Foundations of Dance	3
THE 131 Fundamentals of Acting	3
THE 141 Stagecraft I	3
THE 150 Introduction to Theatrical Design	3
THE 302 History of Theatre I	3
THE 304 World Drama OR ENG 425 Shakespeare Theatre OR THE 306 Modern Drama	3
THE 312 History of Theatre II	3
THE 320 Fundamentals of Directing	3
THE 450 Senior Thesis	3

Department of Culture, Media, and Performance

Course	Credits
Required Design/Tech Core	9
THE 143 Drafting and Rendering for the Theatre	3
THE 340 Advanced Theatrical Design	3
THE 354 Theatre Practicum: Management AND/OR THE 355 Theatre Practicum: Technical Direction (1 credit each)	3
Theatre Electives	6
Select at least two of the following: <ul style="list-style-type: none"> • THE 120 Entertainment Audio I • THE 126 Makeup I • THE 220 Entertainment Audio II • THE 211 Lighting Technology • THE 225 Costume Construction • THE 226 Makeup II • THE 255 Puppetry • THE 271 Scene Design I • THE 272 Properties Design for Theatre • THE 311 Lighting Design • THE 325 Costume Design • THE 327 Stage Management • THE 328 Scene Painting • THE 341 Stagecraft II • THE 480 Digital Performance 	6
Additional Electives/Minor	38
THE 356 Practicum: Tech Production (recommended)	0 to 6
ART 212 Art History I (recommended)	0 or 3
ART 214 Art History II (recommended)	0 or 3
Student-Selected Electives/Minor Courses	26 to 38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any 3-credit Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** THE 312 Theatre History II AND Select from: THE 304, THE 306 OR ENG 425
- **Laboratory Course (1 course required):** Any Laboratory Course

Department of Culture, Media, and Performance

Program Notes: Minimum GPA 2.0; Minimum credits 120. At least 42 credits (14 courses) must be advanced courses.

Special Recommendations

A minor in art, arts administration, event planning, music, psychology, sociology or social work is recommended for those majoring in theatre.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/design-entertainment-technology/>

B.A. in Theatre: Musical Theatre

Program Description

The musical theatre concentration of the Bachelor of Arts in Theatre degree hones students' performance skills in acting, voice and dance.

Delivery Mode

Traditional (on campus)

Accreditation and Affiliation

This program is accredited by the National Association of Schools of Theatre. It has also earned Educational Affiliate status with Estill Voice International®. Students can elect to pursue their Certificate of Proficiency in EVT prior to graduation.

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 Composition I	3
<i>Public Speaking</i> CDC 201 Argumentation and Advocacy (recommended) OR any course on menu	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics or Quantitative Literacy Course	3
<i>Health and Wellness</i> HSC 315 First Aid and Personal Safety (recommended) OR any course on menu	3
<i>Technological Literacy</i> THE 480 Digital Performance (recommended) OR any course on menu	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i>	3

Department of Culture, Media, and Performance

Course	Credits
MUS 104 Voice Class (recommended) OR any course on menu	
<i>Natural Sciences</i> CMD 221 Speech Science OR any course on menu	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology OR PSY 211 Social Psychology OR any course on menu	3
<i>General Education Options</i> <ul style="list-style-type: none"> • THE 140 Script Analysis (recommended) OR any Ethics and Multicultural Awareness Emphasis Course • General Education Options Courses (three courses) 	12
Required Theatre Core Courses	27
DAN 131 Foundations of Dance	3
THE 131 Fundamentals of Acting	3
THE 141 Stagecraft I	3
THE 150 Introduction to Theatrical Design	3
THE 302 History of Theatre I	3
THE 304 World Drama OR ENG 425 Shakespeare Theatre OR THE 306 Modern Drama	3
THE 312 History of Theatre II	3
THE 320 Fundamentals of Directing	3
THE 450 Senior Thesis	3
Required Musical Theatre Core	15
Select 15 credits from the following: <ul style="list-style-type: none"> • DAN 132 Ballet Technique • DAN 134 Tap Technique I • DAN 133 Jazz Technique I • DAN 233 Jazz Technique II • DAN 260 Modern Dance • DAN 301 Theatre Dance I • DAN 302 Theatre Dance II • MUS 215 Comprehensive Musicianship I • THE 203 Musical Theatre Performance I 	15

Course	Credits
<ul style="list-style-type: none"> • THE 126 Makeup I • THE 145-445 Private Instruction (4 credits) • THE 255 Puppetry • THE 303 Musical Theatre Performance II • THE 403 Musical Theatre Performance III • THE 356 Practicum: Technical Practicum (3 to 6 credits) 	
Additional Electives/Minor	38
MUS 211 Keyboard Class (recommended)	0 or 3
THE 431 Acting in Musical Theatre (recommended)	0 or 3
THE 401 Finding Your Voice (recommended)	0 or 3
Student-Selected Electives/Minor Courses	29 to 38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any 3-credit Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** THE 312 Theatre History II AND Select from: THE 304, THE 306 OR ENG 425
- **Laboratory Course (1 course required):** Any Laboratory Course

Special Recommendations

A minor in art, arts administration, event planning, music, psychology, sociology or social work is recommended for those majoring in theatre.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/musical-theater/>

B.S. in Commercial Music Technology

Program Description

The Bachelor of Science in Commercial Music Technology degree delves into three distinct areas: music, technology and entrepreneurship. The curriculum combines traditional approaches to the study of music performance, music history and theory and modern-day applications (including popular music analysis, live sound reinforcement, audio engineering and entrepreneurship).

Note: Students wishing to enroll in the Commercial Music Technology program must go through the audition process outlined on the Cal U website.

Curriculum

This program can be completed in four years. The curriculum shown below illustrates the scope of courses that are required for graduation from this program. In addition to courses in music history, music theory and performance, commercial music technology majors will take classes in audio and video production, digital video, Web publishing, 3-D and computer animation, and music production, as well as business courses in economics and finance.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> DMT 180 Foundations of Digital Media	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> MUS 100 Intro to Music	3
<i>Natural Sciences</i> CMD 221 Speech Science	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>Ethics and Multicultural Awareness Emphasis</i> MUS 300 Jazz: History, Form and Analysis	3
<i>General Education Options</i> <ul style="list-style-type: none"> • THE 211 Lighting I • ENG 217 Scientific and Tech. Writing I • Student-Selected General Education Option Course 	9
Core Major Courses	33
MUS 211 Keyboard Class	3
MUS 215 Comprehensive Musicianship I	3

Department of Culture, Media, and Performance

Course	Credits
MUS 315 Comprehensive Musicianship II	3
MUS 316 Comprehensive Musicianship III	3
MUS 416 Comprehensive Musicianship IV	3
MUS 425 Commercial Music Arranging	3
MUS 275 Music and Recording Technology I	3
MUS 375 Music and Recording Technology II	3
MUS 475 Music and Recording Technology III	3
MUS 476 Music and Recording Technology IV	3
MUS 477 Music and Recording Technology V	3
History, Form and Analysis Electives (select from list)	6
MUS 304 The American Musical: History, Form and Analysis	3
MUS 305 African American Gospel and Caribbean Music: History, Form and Analysis	3
MUS 306 The Opera: History, Form and Analysis	3
MUS 310 Music and the Media	3
MUS 313 Rock 'N Roll: History, Form and Analysis	3
MUS 314 The Music Industry: History, Form and Analysis	3
Performance Ensemble Electives (select from list)	6
MUS 187 Guitar Ensemble	1
MUS 188 String Ensemble	1
MUS 191 Choir	1
MUS 192 California Singers	1
MUS 193 Gospel Choir	1
MUS 196 Jazz Ensemble	1
MUS 197 Pep Band	1
MUS 198 Marching Band	1
MUS 199 Concert Band	1

Department of Culture, Media, and Performance

Course	Credits
MUS 307 Special Music Project	1
Applied Instruction Electives (select from list)	8
Brass - MUS 109, 209, 309, 409	1 to 3
Piano - MUS 119, 219, 319, 419	1 to 3
Percussion - MUS 129, 229, 329, 429	1 to 3
Woodwind - MUS 149, 249, 349, 449	1 to 3
Voice - MUS 159, 259, 359, 459	1 to 3
Guitar - MUS 170, 270, 370, 470	1 to 3
String - MUS 179, 279, 379, 479	1 to 3
Special Experience Electives (select from list)	6
MUS 485 Music Tech Practicum	1 to 3
MUS 488 Music Tech Internship	1 to 12
MUS 499 Senior Project/Recital	3
Required Business Course	3
MKT 300 Principles of Marketing	3
Business Electives (select from list)	6
ACC 200 Financial Accounting	3
FIN 304 Personal Finance	3
MGT 300 Principles of Management	3
MGT 303 Entrepreneurship I: Fundamentals	3
MGT 376 Cyberlaw and E-Privacy Issues	3
Technology Electives (select from list)	6
CDC 151 Producing Media Messages I	3
DMT 220 Digital Photography	3
DMT 225 Digital Page Layout	3

Department of Culture, Media, and Performance

Course	Credits
DMT 240 Vector Based Graphics	3
DMT 250 Digital Imaging	3
DMT 320 Digital Video	3
DMT 331 Web Publishing	3
DMT 340 3D Computer	3
THE 311 Lighting II	3
THE 480 Digital Performance	3
EET 110 Electrical Circuits I	3
EET 160 Electrical Circuits II	3
Free Electives	6
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any CMT listed in the Special Experience course menu
- **Writing-Intensive Component Courses (2 courses required):** MUS 375 Music and Recording Technology II AND MUS 477 Music and Recording Technology V
- **Laboratory Course (1 course required):** DMT 180 Foundations of Digital Media

Program Notes: All prescribed courses, included general education courses, may not be substituted except at the discretion of the music department. Developmental courses do not count toward the 120 credits necessary for graduation, but are calculated in your overall GPA.

Additional Requirements

- **Music:** Each student is required to become an accomplished performer on an instrument of their choice. This entails students being able to read, write and analyze a musical score, to perform in an ensemble setting and to then apply their musical understanding to popular or commercial applications. Students perform regularly in one (or more) of the 11 ensembles at Cal U in order to gain professional performance experience, both on and off campus. Students also complete projects in capstone music theory courses (for example, composition/arranging projects, film score projects, etc.) that aide them in applying the theoretical knowledge to which they are exposed.
- **Technology:** The CMT program's five-course Music and Recording Technology (MRT) curriculum focuses on providing students with solid foundational knowledge within the disciplines of audio engineering and modern music production. The curriculum is experiential in nature, focusing on having students apply theoretical knowledge of acoustics, signal flow, recording, editing and mixing audio in various classroom projects and on-campus activities. To ensure students gain additional hands-on-experience, each student is required to earn a total of 6 credits of "special experience." These experience credits are earned through the student's choice of on-campus practicum assignments, off-campus internships or a senior recital/project. Examples of on-campus special experience assignments include audio engineering responsibilities for any of our departmental

ensembles, music recital and performance archive engineer, sporting events audio engineer, university event and ceremony audio engineer. Lastly, Cal U is one of only a few recognized Academic Avid Learning Partners in the state of Pennsylvania that prepares and tests students for professional certifications of Avid software products, including Pro Tools, one of the music industry's standards for music production. The MRT curriculum incorporates extensive exploration and usage of Pro Tools hardware and software. Students are provided with the opportunity to take a certification exam, which (if passed) awards them with a professional certification in Pro Tools. This professional certification provides our degree seekers with an employment advantage both regionally and nationally.

- **Entrepreneurship:** Finding success in today's entertainment industry depends just as much upon understanding business and entrepreneurship as upon music and media. Cal U's CMT program requires students to take business courses that encourage them to think of their artistic skills as marketable business assets. Courses such as Financial Accounting, Principles of Marketing and The Music Industry offer students a broad perspective on how to think critically and competitively. Students also attend weekly convocation meetings in the music department that feature guest speakers, guest performances, etc. Our guests have included touring musicians, professional sound engineers, recording studio owners, lighting designers and songwriters, and each has shared their business, experiences and insight into the music and media industries.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/commercial-music-technology/index.aspx>

B.S. in Commercial Music Technology: Commercial Music Business Concentration

Program Description

The commercial music business (CMB) concentration of the Bachelor of Science in Commercial Music Technology follows the three-tiered curricular structure of the Commercial Music Technology (CMT) degree, but places greater emphasis on business and entrepreneurship training. Students enrolled in the CMB program take approximately 18 additional business credits when compared to a CMT major (9 credits).

CMB students have the option of customizing their business studies in order to place them on a fast-track for completing a Masters of Business Administration (MBA) one year after their four-year CMB studies.

Note: Students wishing to enroll in the Commercial Music Business program must go through the audition process outlined on the Cal U website.

Delivery Mode

Traditional (on campus)

Curriculum

This program can be completed in four years. The curriculum shown below illustrates the scope of courses that are required for graduation from this program.

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i>	3

Department of Culture, Media, and Performance

ENG 101 English Composition I	
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> DMT 180 Foundations of Digital Media	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> MUS 100 Intro to Music	3
<i>Natural Sciences</i> CMD 221 Speech Science	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>Ethics and Multicultural Awareness Emphasis</i> MUS 300 Jazz: History, Form and Analysis	3
<i>General Education Options</i> <ul style="list-style-type: none"> • THE 211 Lighting I • ENG 217 Scientific and Tech. Writing I • Student-Selected General Education Option Course 	9
Core Major Courses	18
MUS 211 Keyboard Class	3
MUS 215 Comprehensive Musicianship	3
MUS 275 Music and Recording Technology	3
MUS 314 The Music Industry: History, Form and Analysis	3
MUS 315 Comprehensive Musicianship II	3
MUS 375 Music and Recording II	3
Performance Ensemble Electives (select from list)	6
MUS 187 Guitar Ensemble	1
MUS 188 String Ensemble	1

Department of Culture, Media, and Performance

MUS 191 Choir	1
MUS 192 California Singers	1
MUS 193 Gospel Choir	1
MUS 196 Jazz Ensemble	1
MUS 197 Pep Band	1
MUS 198 Marching Band	1
MUS 199 Concert Band	1
MUS 307 Special Music Project	1
Applied Instruction Electives (select from list)	8
Brass - MUS 109, 209, 309, 409	1 to 3
Piano - MUS 119, 219, 319, 419	1 to 3
Percussion - MUS 129, 229, 329, 429	1 to 3
Woodwind - MUS 149, 249, 349, 449	1 to 3
Voice - MUS 159, 259, 359, 459	1 to 3
Guitar - MUS 170, 270, 370, 470	1 to 3
String - MUS 179, 279, 379, 479	1 to 3
Special Experience Electives (select from list)	6
MUS 485 Music Tech Practicum	1 to 3
MUS 488 Music Tech Internship	1 to 12
Required Business Courses	12
BUS 100 Introduction to Business	3
BUS 242 Business Law I	3
MGT 300 Principles of Management	3
MKT 300 Principles of Marketing	3
Business Ethics (select one course)	3
BUS 342 Business, Society and Government	3
BUS 343 Corporate Social Responsibility	3

Department of Culture, Media, and Performance

BUS 345* Business Ethics (required for Law Group, so Law Group students must choose additional ethics course above)	3
Business Elective Groups (choose one group)	12
Law Group	
BUS 345* Business Ethics (see above)	3
BUS 346 Business Law II	3
MGT 375 Info Tech Ethics	3
MGT 376 Cyber Law	3
Entrepreneurship Group	
MGT 303 Entrepreneurship I	3
MGT 305 Entrepreneurship II	3
FIN 321 Entrepreneurial Finance	3
MKT 361 Entrepreneurial Marketing	3
Sales and Marketing Group	
MKT 320 Selling	3
MKT 321 Sales Management	3
MKT 351 Advertising	3
MKT 311 E-Marketing	3
Free Electives	15
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** MUS 488 Music Tech Internship
- **Writing-Intensive Component Courses (2 courses required):** MUS 375 Music and Recording Technology II AND any approved advanced writing course
- **Laboratory Course (1 course required):** DMT 180 Foundations of Digital Media

Program Notes: All prescribed courses, including general education courses, may not be substituted except at the discretion of the music department. Developmental courses do not count toward the 120 credits necessary for graduation, but are calculated in your overall GPA.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.S. in Commercial Music Technology to MBA) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/music-business/index.aspx>

B.S. in Graphic Design

Program Description

The Bachelor of Science in Graphic Design degree program focuses on development of concepts, skills and sensitivities essential to the graphic designer. In addition to gaining a solid technical foundation in graphic design, students learn communication, critical and analytic thinking and problem-solving skills, as well as individual initiative and responsibility and professional knowledge.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar OR UNI 100 Intro to University Studies OR HON 100 Honors Orientation	1
<i>Composition</i> ENG 101 English Composition I OR HON 150 Honors Composition I	3
<i>Public Speaking</i> CDC 201 Argument and Advocacy	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> CDC 200 Truth and Representation	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i>	3

Department of Culture, Media, and Performance

Course	Credits
Any Social Sciences Course	
<i>General Education Options</i> <ul style="list-style-type: none"> • CDC 365 Media Ethics • ENG 102 Composition II OR HON 250 Honors Composition II • General Education Options Courses (two courses) 	12
Foundation Courses	24
CDC 120 Visual Communication I	3
DES 327 Visual Communication II	3
DES 361 Typography I	3
ART 110 Drawing	3
CDC 220 Visual Culture	3
PHI 335 Aesthetic Theory	3
Select two of the following art/art studio courses: <ul style="list-style-type: none"> • ART 119 Design 2-D • ART 120 Design 3-D • ART 350 Printmaking: Relief OR ART 351 Printmaking: Intaglio • ART 383 Painting Studio • ART 310 Advanced Drawing • ART 382 Ceramics Studio • ART 376 Jewelry/Metals: Casting OR ART 377 Jewelry/Metals: Fabrication • ART 385 Sculpture Studio 	6
Art History Courses	12
ART 212 Art History I OR ART 214 Art History II	3
ART 243 Intro to Asian Art OR ART 270 Art History Today	3
ART 422 After Modernism	3
Select one of the following: <ul style="list-style-type: none"> • ART 323 Women in Art • ART 324 Modern Art • ART 326 Contemporary Art • ART 333 American Art • ART 345 Methods of Art History • ART 420 Contemporary Issues in Art 	3

Department of Culture, Media, and Performance

Course	Credits
Advanced Graphic Design Courses	18
DES 328 Branding Design I	3
DES 429 Branding Design II	3
DES 431 Advertising Design	3
DES 362 Typography II	3
DES 497 Senior Design Seminar	3
DES 498 Senior Design Portfolio	3
Interactive/Motion Design Courses	6
Select two courses from the following: <ul style="list-style-type: none"> • DES 381 Interactive Media and Culture • DES 382 Design for Interactivity • DMT 180 Foundations of Digital Media • DMT 101 Time-Based Media • DMT 320 Digital Video 	6
Free Electives/Minor Courses	20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** PHI 335 Aesthetic Theory AND ART 422 After Modernism
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: Portfolio review requirements include DES 227, DES 327, DES 361. Portfolio review is a pre-requisite to all advanced graphic design courses.

A minimum of 9 credits (three courses) must be selected from upper-division courses (300 or 400 level) in the General Education area. 35% of the required 120 credits must include upper-division courses (300 or 400 level).

Minimum GPA: 2.0. Minimum credits: 120, with all major and general education courses completed.

Developmental courses do not count toward the 120 credits necessary for graduation.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/graphic-design/index.aspx>

Minor in Acting Curriculum

Course	Credits
Required Courses	14
THE 101 Voice and Speech	3
THE 131 Fundamentals of Acting	3
THE 221 Theatrical Foundations	3
THE 231 Intermediate Acting	3
THE 350 Practicum: Performance*	2
Electives <i>(Select two courses from the following)</i>	6
DAN 131 Foundations of Dance	3
THE 145 Private Instruction (may repeat)	1
THE 245 Private Instruction	1
THE 201 Voice and Interpretation	3
THE 301 Voice and Speech II: Dialects	3
THE 331 Advanced Acting	3
Total	20

* The performance practicum credit must be fulfilled by performing in department theatre productions.

Minor in Art History Curriculum

Course	Credits
Required Courses	15
ART 212 Art History 1	3
ART 214 Art History 2	3
ART 243 Intro to Asian Art	3
ART 345 Methods of Art History	3
ART 422 Art History: Art World after Modernism	3

Department of Culture, Media, and Performance

Course	Credits
Electives (select two)	6
ART 311 Medieval Art and Architecture	3
ART 319 Ancient Greek and Roman Art	3
ART 323 Women in Art	3
ART 324 Modern Art	3
ART 326 Contemporary Art	3
ART 328 Italian Renaissance Art	3
ART 333 American Art: European Settlement through 1918	3
ART 420 Contemporary Issues in Art	3
PHI 335 Aesthetic Theory	3
PHI 336 Philosophy of Film	3
HIS 333 Film and History	3
Total	21

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/art-history/index.aspx>

Minor in Communication Studies Curriculum

Course	Credits
Required Courses*	6
CDC 100 Communication Perspectives OR CDC 150 Imagine, Design, Create	3
CDC 450 Media, Society, Culture OR CDC 490 Theorizing Human Communication	3
Electives	12
Select any 12 credits of coursework in the field of Communication, Design and Culture**	12
Total	18

Department of Culture, Media, and Performance

* Students must take at least one of these courses in the "lower" (100) level and one at the "upper" (400) level.

** To be eligible, a course must have a CDC designator in the University's catalog of courses. At least half of your minor must consist of courses at the 300 and 400 level. Students may use up to 6 credits of CDC 497 (Communication, Design and Culture Internship) toward their 12 credits of CDC electives. Finally, please pay attention to course pre-requisites.

Minor in Creative Writing Curriculum

Course	Credits
Required Courses <i>(Select two courses from the following)</i>	6
ENG 376 Creative Writing: Fiction	3
ENG 377 Creative Writing: Poetry	3
ENG 378 Creative Writing: Drama	3
Creative Writing Electives <i>(Select four courses from the following)</i>	12
ENG 308 Research for Writers OR ENG 375 Advanced Writing	3
PHI 335 Aesthetic Theory	3
ENG 346 History of the English Language OR ENG 347 Introduction to Linguistics	3
ENG 351 Publishing the Magazine	3
ENG 410 Advanced Study in Creative Writing (repeatable once for the minor)	3 or 6
ENG 419 Internship in Professional Writing	3
Total	18

Minor in Dance Curriculum

Course	Credits
Required Courses	9
DAN 131 Foundations of Dance	3
DAN 132 Ballet Technique I	3
THE 131 Fundamentals of Acting	3

Department of Culture, Media, and Performance

Course	Credits
Electives <i>(Select at least two courses from the following)</i>	6
DAN 133 Jazz Technique I	3
DAN 134 Tap Technique I	3
DAN 232 Ballet Technique II	3
DAN 233 Jazz Technique II	3
DAN 260 Modern Dance	3
DAN 301 Theatre Dance I	3
DAN 302 Theatre Dance II	3
THE 150 Introduction to Theatrical Design	3
THE 221 Theatrical Foundations	3
THE 225 Costume Construction	3
Practicum Credits	3
THE 350 Practicum: Performance	2
THE 352 Practicum: Directing and Choreography	1
Total	18

Program Notes:

- Substitutions will be considered by the department, pending course availability.
- All minors must have a minimum of 2 credits in THE 350 through participation in department productions. The remaining practicum credit can be attained by choreographing for or participating in a department production.

Minor in Design and Entertainment Technology Curriculum

Course	Credits
Required Courses	12
THE 141 Stagecraft I	3
THE 143 Drafting and Rendering for the Theatre	3
THE 150 Introduction to Theatrical Design	3

Department of Culture, Media, and Performance

Course	Credits
THE 340 Advanced Theatrical Design	3
Practicum Credits <i>(Select from any combination of the following)</i>	3
THE 354 Practicum: Management	1
THE 355 Practicum: Design	1
THE 356 Practicum: Technical Production	1
Electives <i>(Select two from the following)</i>	6
THE 120 Entertainment Audio I	3
THE 126 Makeup I	3
THE 220 Entertainment Audio II	3
THE 221 Lighting Technology	3
THE 225 Costume Construction	3
THE 226 Makeup II	3
THE 255 Puppetry	3
THE 271 Scene Design I	3
THE 272 Properties Design for the Theatre	3
THE 311 Lighting Design	3
THE 325 Costume Design	3
THE 327 Stage Management	3
THE 341 Stagecraft II	3
THE 480 Digital Performance	3
Total	21

Program Notes: Substitutions will be considered based on a student's focus. For example, a Technical Director might take GET 130 Intro to Engineering, or a Projection Designer might take DMT 180 Foundations of Digital Media.

Minor in Graphic Design Curriculum

Course	Credits
Required Core Courses	18
DES 227 Visual Communication I	3
DES 327 Visual Communication II	3
DES 361 Typography I	3
ART 110 Drawing	3
PHI 335 Aesthetic Theory	3
CDC 201 Argument and Advocacy	3
Electives <i>(Select one of the following)</i>	3
ART 212 Art History I	3
ART 214 Art History II	3
ART 243 Intro to Asian Art	3
ART 270 Art History Today	3
ART 323 Women in Art	3
ART 324 Modern Art	3
ART 326 Contemporary Art	3
ART 333 American Art	3
ART 420 Contemporary Issues in Art	3
ART 422 After Modernism	3
Total	21

Program Notes: Course substitutions and admission to closed sections will not automatically be granted to fulfill requirements for minors; students should plan their schedules carefully and in a way that will allow them to take needed courses. They should consult with their major adviser when working on their schedule; however, they must also consult with the “department of the minor” when registering for upcoming classes.

Minor in Journalism Curriculum

Course	Credits
Required Courses <i>(Select five courses from the following)</i>	15
ENG 306 Press Law and Ethics	3
ENG 320 Multimedia Journalism	3
ENG 367 Journalism Newswriting and Editing	3
ENG 369 Beat Reporting and Feature Writing	3
ENG 450 Advanced Study in Journalism (repeatable)	3
Journalism Electives <i>(Select two courses from the following)</i>	6
ENG 345 Grammar and Usage	3
ENG 351 Publishing the Magazine	3
ENG 375 Advanced Writing	3
ENG 419 Internship	3
CDC 151 Producing Media Messages	3
CDC 305 Sports Communication and Media Relations	3
Total	21

Minor in Literature Curriculum

Course	Credits
Major Core	6
Any two 100-level ENG courses, except ENG 100, 101, 102, 110, 179	6
Required Courses <i>(Select three courses from the following)</i>	9
ENG 301 British Literature I	3
ENG 302 British Literature II	3

Department of Culture, Media, and Performance

Course	Credits
ENG 315 Survey of American Women Writers	3
ENG 325 World Literature I	3
ENG 326 World Literature II	3
ENG 337 American Literature I	3
ENG 338 American Literature II	3
ENG 355 African American Literature	3
Literature Electives <i>(Select two courses from the following)</i>	6
ENG 406 Advanced Study in Literature (repeatable)	3
ENG 425 Shakespeare	3
Total	21

Minor in Music

Program Description

The music minor is an abbreviated version of Cal U's B.S. in Commercial Music Technology (CMT), and is designed for students who wish to study music in conjunction with another major area of study. Similar to the CMT degree, the Cal U Music minor has three distinct areas of focus that aid students in developing a well-rounded set of artistic and multimedia skills. These three areas of focus are:

- Music
- Technology
- Entrepreneurship

Curriculum

Course	Credits
Required Courses	9
MUS 100 Introduction to Music	3
MUS 215 Comprehensive Musicianship I	3
MUS 315 Comprehensive Musicianship II	3
History, Theory and Education Electives <i>(Select from following list)</i>	9
MUS 275 Music and Recording Technology I	3

Department of Culture, Media, and Performance

Course	Credits
MUS 300 Jazz: History, Form and Analysis	3
MUS 304 American Musical: History, Form and Analysis	3
MUS 305 African American Gospel and Caribbean Music: History, Form and Analysis	3
MUS 306 The Opera: History, Form and Analysis	3
MUS 310 Music in the Media	3
MUS 313 Rock 'N Roll: History, Form and Analysis	3
MUS 314 The Music Industry: History, Form and Analysis	3
MUS 372 Creative Arts for Elementary Ed	3
MUS 375 Music and Recording Technology II	3
Applied Electives <i>(Select from the following options)</i>	3
Option 1 (select one)	
MUS 104 Voice Class	3
MUS 211 Keyboard Class	3
Option 2* (Private Instruction - select 3 credits)	
Brass - MUS 109, 209, 309, 409	1
Piano - MUS 119, 219, 319, 419	1
Percussion - MUS 129, 229, 329, 429	1
Woodwind - MUS 149, 249, 349, 449	1
Voice - MUS 159, 259, 359, 459	1
Guitar - MUS 170, 270, 370, 470	1
Strings - MUS 179, 279, 379, 479	1
Performance Electives** <i>(Select from the following list)</i>	3
MUS 187 Guitar Ensemble	1

Department of Culture, Media, and Performance

Course	Credits
MUS 188 String Ensemble	1
MUS 191 University Choir	1
MUS 192 California Singers	1
MUS 193 University Gospel Choir	1
MUS 196 Jazz Ensemble	1
MUS 198 University Marching Band	1
MUS 199 University Concert Band	1
MUS 307 Special Music Project	1
MUS 485 Music Tech Practicum	1
Total	24

* Courses are repeatable to a maximum of 8 credits each.

** Courses are repeatable to a maximum of 8 credits. The option to continue without credit is available.

Program Notes: 9 of the 24 credits for the minor must be at the 300 or 400 level.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/music/index.aspx>

Minor in Musical Theatre Performance Curriculum

Course	Credits
Required Courses	13
MUS 104 Voice Class I	3
MUS 215 Comprehensive Musicianship I	3
THE 131 Fundamentals of Acting	3
THE 401 Finding Your Voice	3
THE 350 Practicum: Performance*	1
Choose two courses from the following:	6
DAN 131 Foundations of Dance	3
DAN 134 Tap Technique I	3

Department of Culture, Media, and Performance

Course	Credits
DAN 301 Theatre Dance I	3
DAN 302 Theatre Dance II	3
MUS 221 Keyboard Class	3
THE 203 Musical Theatre Performance I	3
THE 221 Theatrical Foundations	3
THE 303 Musical Theatre Performance II	3
THE 431 Acting Musical Theatre	3
Choose two courses from the following:	2
MUS 191 University Choir	1
MUS 192 California Singers	1
THE 145 Private Instruction	1
Total	21

* The performance practicum credit must be fulfilled by performing in a department musical theatre production.

Minor in Philosophy Curriculum

Course	Credits
Logic Courses (Select one course from the following)	3
PHI 115 Logic and Language	3
PHI 311 Formal Logic I	3
History of Philosophy Courses (Select two courses from the following)	6
PHI 201 Ancient Philosophy	3
PHI 205 Medieval Philosophy	3
PHI 206 16th-18th Century Phil.	3
PHI 431 Analytic Philosophy	3

Course	Credits
Philosophy Electives	12
Select four PHI courses at the 300 or 400 level	12
Total	21

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/philosophy/index.aspx>

Minor in Theatre Curriculum

Course	Credits
Required Courses	15
DAN 131 Foundations of Dance	3
THE 100 Introduction to Theatre	3
THE 131 Fundamentals of Acting	3
THE 141 Stagecraft I	3
THE 150 Introduction to Theatrical Design	3
Select two courses from the following:	6
DAN 132 Ballet Technique I	3
DAN 133 Jazz Technique I	3
DAN 134 Tap Technique I	3
DAN 260 Modern Dance	3
DAN 301 Theatre Dance I	3
THE 101 Voice and Speech	3
THE 126 Makeup I	3
THE 140 Script Analysis	3
THE 211 Lighting Technology	3
THE 221 Theatrical Foundations	3
THE 225 Costume Construction	3
THE 231 Intermediate Acting	3
THE 255 Puppetry	3

Department of Culture, Media, and Performance

Course	Credits
THE 327 Stage Management	3
THE 350 Practicum: Performance* (may repeat)	1
THE 356 Practicum: Technical Production (may repeat)	1
Total	21

*The performance practicum credit must be fulfilled by performing in theatre productions.

Program Notes: Substitutions will be considered by the department based on student's focus.

Minor in Theatre History and Literature Curriculum

Course	Credits
Required Courses	18
ENG 108 Introduction to Drama	3
ENG 425 Shakespeare I	3
THE 140 Script Analysis	3
THE 302 Theatre History I	3
THE 304 World Drama OR THE 306 Modern Drama	3
THE 312 Theatre History II	3
Select one of the following courses:	3
ENG 178 Literature and Film	3
THE 304 World Drama	3
THE 306 Modern Drama	3
Total	21

Minor in Writing Curriculum

Course	Credits
Required Courses	6

Department of Culture, Media, and Performance

Course	Credits
ENG 102 English Composition II	3
ENG 375 Advanced Writing	3
Writing Electives <i>(Select four courses from the following)</i>	12
ENG 211 Business Writing	3
ENG 217 Scientific and Technical Writing	3
ENG 345 Grammar and Usage	3
ENG 346 History of the English Language	3
ENG 347 Introduction to Linguistics	3
ENG 376 Creative Writing: Fiction	3
ENG 377 Creative Writing: Poetry	3
ENG 378 Creative Writing: Drama	3
ENG 419 Internship in Professional Writing	3
ENG 452 Advanced Study in Rhetoric and Composition	3
CDC 355 Media Writing I	3
ENG ____ Additional Course as Scheduled	3
Total	18

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/writing-minor/index.aspx>

Department of Education

Faculty

Dr. Michael Perrotti (chair) | Dr. Silvia Braidic | Dr. James Burton | Dr. Peter Cormas | Dr. Holly L. Diehl | Dr. Diane Fine | Dr. Peter Heh | Dr. Marcia Hoover | Dr. J. William Hug | Dr. Jason Kight | Dr. Kalie Kossar | Dr. René Kruse | Dr. J. Kevin Lordon | Dr. Rebecca Maddas | Dr. Connie Monroe | Dr. Susan Morris-Rutledge | Dr. Christine Peterson | Dr. Michelle Torregano | Michael Ulderich | Dr. Mary Wolf | Dr. Clover Simms Wright

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Education includes undergraduate programs in childhood, secondary and special education.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.S. in Early Childhood Education
- B.S. in Professional Studies in Education
- B.S.Ed. in Grades Pre-K-4 Education
- B.S.Ed. in Middle Level Grades 4-8 Education, with concentrations in:
 - Language Arts/Reading
 - Mathematics
 - Science
 - Social Studies
- B.S.Ed. degrees with secondary teacher certification in:
 - Art (K-12)
 - Biology
 - Chemistry
 - Communications
 - Earth and Space Science
 - English
 - Mathematics
 - Physics
 - Social Studies
- B.S.Ed. in Special Education Pre-K-12
- B.S.Ed. in Technology Education

Post-Baccalaureate Certification-Only Programs

Post-baccalaureate certification-only programs are also available in:

- Grades 4-8 Education: Language Arts and Reading
- Grades 4-8 Education: Mathematics
- Grades 4-8 Education: Science
- Grades 4-8 Education: Social Studies
- Pre-K-4

Minors

Cal U's Department of Education also offers minors in:

- Education Multidisciplinary
- Foundations of Secondary Education

Honor Society

Kappa Delta Pi, an international honor society in education, has a Cal U chapter. Students in education who have demonstrated a high level of academic achievement are invited to apply for induction.

A.S. in Early Childhood Education

Program Description

The Associate of Science in Early Childhood Education degree program is a hands-on program that builds students' understanding of early childhood learning and pedagogy.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	31
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3
<i>Health and Wellness</i> CHD 250 Health and Physical Education Methods for PreK-Grade 4	3
<i>Technological Literacy</i> EDU 333 Educational Technology	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Natural Sciences</i> PHS 120 Basic Physical Science with Lab	3 or 4
<i>Ethics and Multicultural Awareness Emphasis Course</i> CHD 350 Family and Community Collaboration	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics in Math II • British/American Literature Course (see approved list) 	9

Department of Education

Course	Credits
• HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877	
Required Major Courses	21
CHD 200 Introduction to PreK to Grade 8 Education	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Instruction and Assessment in K-4	3
CHD 312 Instruction: Leadership in Child. Ed.	3
ELE 300 Emerging Literacy	3
ELE 310 Teaching Math/Science PreK	3
ELE 410 PreK Field Experience	3
Required Related Courses	9
ESP 311 Assessment Positive Behavior Int.	3
PSY 205 Child Psychology	3
PSY 208 Educational Psychology	3
Total	60

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** ELE 410 PreK Field Experience
- **Writing-Intensive Component Course (1 course required):** ELE 410 PreK Field Experience
- **Laboratory Course (1 course required):** PHS 120 Basic Physical Science with Lab

Program Notes:

- CHE 200 and ELE 220 require current clearances and minimum 2.0 GPA to register for courses.
- All other EDU, ELE, ESP and CHD courses require current clearances and minimum 2.5 GPA to register for courses.
- Pre-requisites for ELE 221 and all 300-level courses are ELE 200 and ELE 220.
- Current clearances are required prior to enrolling in program courses.
- Approved American/British literature courses: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

General Education Program Notes:

Department of Education

General education courses listed above are required for the associate's degree. However, students may wish to take additional courses, listed below, to apply to a bachelor's degree program in Pre-K-4 education with certification.

- **Public Speaking:** EDU 350
- **Fine Arts:** MUS 372, ART 372, THE 372
- **Social Sciences:** GEO 102, POS 102, ECO 102

B.S. in Professional Studies in Education

Program Description

The Bachelor of Science in Professional Studies in Education degree is designed for students who are interested in education but who are not seeking Pennsylvania teaching certification. Coursework develops skills and knowledge relevant to working with young children, and students gain hands-on experience through internships.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I (or any approved Comp menu course)	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners (or any approved Public Speaking menu course)	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I (or any approved Math and QL menu course)	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning (or any approved Tech Lit menu course)	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration (or any approved Humanities menu course)	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Select one of the following:	3 or 4

Department of Education

Course	Credits
<ul style="list-style-type: none"> • PHS 120 Basic Physical Science • PHS 137 Environmental Chemistry • PHY 101 College Physics • EAS 100 Intro to Earth Sciences • GLG 150 Intro to Geology • CHE 101 General Chemistry • Any approved Natural Sciences menu course with lab 	
<i>Social Sciences</i> GEO 102 Geographic Systems (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit) (or any approved Social Sciences menu course)	3
<i>Ethics and Multicultural Awareness Emphasis</i> CHD 350 Family and Community Collab. Part.	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Approved American/British Literature Course • MAT 130 Elementary Topics II (or any approved Math and QL menu course) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 (or any approved History menu course) 	9
Required Major Courses	30
PSE 200 Intro to Professional Studies in Education	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Instruction and Assessment in K-4	3
CHD 250 Health and Physical Education Methods for PreK-Grade 4	3
ELE 300 Emerging Literacy	3
ELE 310 Teaching PreK STEAM	3
CHD 312 Instructional Leadership in Childhood Ed.	3
ELE 410 Field Experience PreK-4	3
CHD 322 Professional Education Internship (x2)	6
Minor Courses*	18 to 24

Department of Education

Course	Credits
Free Electives	23 to 32
Total	120 or 121

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** CHD 322 Professional Education Internship
- **Writing-Intensive Component Courses (2 courses required):** ELE 410 Field Experience PreK-4 AND CHD 322 Professional Education Internship
- **Laboratory Course (1 course required):** Approved Natural Science Course with Lab

* In consultation with your adviser, choose one minor from the university approved minors list.

Program Notes:

- The following courses need a grade of "C" or higher to pass: MAT 120, MAT 130, ENG 101, Am/Brit Lit course and all ELE, CHD or ESP courses.
- PSE 200 requires a 2.0 GPA and current clearances. CHD/ELE 200 and ELE 220 require a 2.0 GPA and current clearances; all other ELE, CHD and ESP courses require current clearances and a minimum 2.5 GPA to register.
- 40% of courses (16 courses) must be 300 to 400 level.
- At least one minor must be selected.
- Internship application, training and guidelines must be completed a semester in advance of registration.
- Internship: must take at least two 3-credit internships. Can repeat up to 12 credits. Consult your dept. adviser.
- Approved American/British literature courses: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

- B.S. in Professional Studies in Education to M.S. in Clinical Mental Health Counseling
- B.S. in Professional Studies in Education to M.Ed. in School Counseling

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/professional-studies-education/index.aspx>

B.S.Ed. in Art: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Art: Secondary Education degree is designed for students seeking to teach art in K-12 school settings. Through this program, students build knowledge of pedagogical principles as well as studio art and art history. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration	3
<i>Fine Arts</i> ART 119 Design 2D	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis</i> EDU 310 Teaching in a Multicultural Society	3
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 206 Adolescent Psychology OR PSY 207 Developmental Psychology • MAT Course • U.S. or British Literature Course 	9

Department of Education

Course	Credits
Required Concentration Courses	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
SEC 391 Teaching of Art	3
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 419 Evidence-Based Practices	3
Related Content Courses	36
ART 110 Drawing I	3
ART 120 Design 3D	3
ART 350 OR 351 Printmaking	3
ART 376 OR 377 Jewelry/Metals	3
ART 382 Ceramics	3
ART 383 Painting	3
ART 385 Sculpture	3
ART 212 Art History I	3
ART 214 Art History II	3
ART 243 Intro to Asian Art	3
ART 410 Teaching Art K-8 OR ART Elective	3
ART Elective	3

Department of Education

Course	Credits
Total	121

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** Student Selected (science recommended)

* EDU 333, 310, 350; PSY 206; and ESP 210 fulfill general education requirements but are also considered "Required Education Foundation Courses."

Program Notes: This is a professional program. All courses listed as program requirements must be passed with a grade of C or higher. Math and English courses must also be passed with a grade of C or higher. Many SEC courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/art.aspx>

B.S.Ed. in Biology: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Biology: Secondary Education degree is designed for students seeking to teach middle and high school (grades 7-12) biology. Through this program, students build knowledge and competencies in education and the life sciences. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 199 Pre-Calculus	3
<i>Health and Wellness</i> HSC 315 First Aid	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry	4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis</i> EDU 310 Teaching in a Multicultural Society	3
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 206 Adolescent Psychology • MAT Course • Approved U.S. or British Literature Course 	9
Required Concentration Courses	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3

Department of Education

Course	Credits
SEC 395 Teaching of Science	3
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 413 Evidence-Based Practices	3
Related Content Courses	36
CHE 102 Gen Chemistry II	4
PHY 121 Gen. Physics	4
BIO 120 Gen. Zoology	4
BIO 125 Gen. Botany	4
BIO 215 Cellular and Molecular	4
BIO 305 OR 306 Anatomy	4
BIO 248 Gen. Ecology	4
BIO 318 Genetics	4
BIO 328 OR 486 Physiology	4
Total	122

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** CHE 101 General Chemistry

* EDU 333, 310, 350; PSY 206; and ESP 210 fulfill general education requirements but are also considered "Required Education Foundation Courses."

Program Notes: This is a professional program. All courses listed as program requirements must be passed with a grade of C or higher. Math and English courses must also be passed with a grade of C or higher. Many SEC

Department of Education

courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/biology.aspx>

B.S.Ed. in Chemistry: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Chemistry: Secondary Education degree is designed for students seeking to teach middle and high school (grades 7-12) chemistry. Through this program, students build knowledge and competencies in education and chemistry. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I*	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners*	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I*	3
<i>Health and Wellness</i> HSC 315 First Aid	3
<i>Technological Literacy</i>	3

Department of Education

Course	Credits
EDU 333 Technology in Teaching and Learning*	
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration*	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry*	4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis</i> EDU 310 Teaching in a Multicultural Society*	3
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 206 Adolescent Psychology* • MAT 282 Calculus II* • Approved U.S. or British Literature Course* 	9
Required Concentration Courses*	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
SEC 395 Teaching of Science	3
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 413 Evidence-Based Practices	3
Related Content Courses*	37

Department of Education

Course	Credits
CHE 102 Gen Chemistry II	4
CHE 104 Intro to Experimental	3
CHE 306 Inorganic Chemistry	3
CHE 320 Analytical/Instrument	3
CHE 331 Organic Chemistry I	4
CHE 341 Organic Chemistry II	3
CHE 371 Intermediate Lab I	1
CHE 372 Intermediate Lab II	1
CHE 415 Biochemistry	4
CHE 461 Physical Chemistry	3
CHE 471 Advanced Lab I	1
Science Elective	3
PHY 101 College Physics I	4
Total	123

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** CHE 101 General Chemistry

* Must be passed with a C or higher.

Program Notes: This is a professional program. Many SEC courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program. The science elective can have a prefix of: CHE, BIO, EAS, PHS, PHY.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/chemistry.aspx>

B.S.Ed. in Communications: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Communications: Secondary Education degree is designed for students seeking to teach communications in high school settings. Through this program, students build knowledge of pedagogical principles as well as communication theory and theater. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration	3
<i>Fine Arts</i> THE 150 Intro to Theatrical Design	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3
<i>Social Sciences</i> PSY 100 General Psychology	3

Department of Education

Course	Credits
<i>Ethics and Multicultural Awareness Emphasis</i> EDU 310 Teaching in a Multicultural Society	3
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 206 Adolescent Psychology • MAT Course • ENG 102 English Composition II 	9
Required Concentration Courses	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
SEC 392 Teaching of English	3
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 413 Evidence-Based Practices	3
Related Content Courses	36
ENG 308 Research for Writers OR ENG 352 Studies in Writing	3
ENG 345 English Grammar and Usage OR ENG 347 Introduction to Linguistics	3
ENG 425 Shakespeare	3
ENG Literature Elective	3
CDC 101 Public Speaking	3
COM 230 Argumentation	3
COM 142 Video Production	3

Department of Education

Course	Credits
COM 490 Communication Theory	3
THE 131 Fundamentals of Acting	3
THE 141 Stagecraft	3
THE 320 Fundamentals of Directing	3
THE 302, 304 OR 306	3
Total	121

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** Natural Sciences Course with Lab

* EDU 333, 310, 350; PSY 206; and ESP 210 fulfill general education requirements but are also considered "Required Education Foundation Courses."

Program Notes: This is a professional program. All courses listed as program requirements must be passed with a grade of C or higher. Math and English courses must also be passed with a grade of C or higher. Many SEC courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/communications.aspx>

B.S.Ed. in Earth and Space Science: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Earth and Space Science: Secondary Education degree is designed for students seeking to teach Earth and space science in middle and high school (grades 7-12) settings. Through this program, students build knowledge and competencies in education and Earth science. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> HSC 315 First Aid	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 121 General Physics	4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis</i> EDU 310 Teaching in a Multicultural Society	3
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 206 Adolescent Psychology • MAT Course • Approved U.S. or British Literature Course 	9

Department of Education

Course	Credits
Required Concentration Courses	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
SEC 395 Teaching of Science	3
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 413 Evidence-Based Practices	3
Related Content Courses	35
PHS 145 Astronomy	3
CHE 101 Gen Chem I	4
GLG 150 Intro to Geology	3
EAS 163 Intro to Oceanography	3
GLG 200 Historical Geology	3
EAS 104 Intro to Meteorology	4
EAS 142 Climatology	3
GLG 303 Hydrology	3
GLG 343 Geomorphology	3
GLG 230 Earth Resources OR GLG 39X	3
EAS Elective	3
Total	121

Department of Education

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** PHY 121 General Physics

* EDU 333, 310, 350; PSY 206; and ESP 210 fulfill general education requirements but are also considered "Required Education Foundation Courses."

Program Notes: This is a professional program. All courses listed as program requirements must be passed with a grade of C or higher. Math and English courses must also be passed with a grade of C or higher. Many SEC courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program. The science elective can have a prefix of: CHE, BIO, EAS, PHS, PHY.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/earth-science.aspx>

B.S.Ed. in English: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in English: Secondary Education degree is designed for students seeking to teach middle and high school English. Through this program, students build knowledge of pedagogical principles as well as literature, linguistics and writing. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1

Department of Education

Course	Credits
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis</i> EDU 310 Teaching in a Multicultural Society	3
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 206 Adolescent Psychology • MAT Course • ENG 102 English Composition II 	9
Required Concentration Courses	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
SEC 392 Teaching of English	3
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3

Department of Education

Course	Credits
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 413 Evidence-Based Practices	3
Related Content Courses	36
ENG 106, 107 OR 108 Intro to (genre)	3
ENG 205 OR 206 World Literature	3
ENG 301 OR 302 English Literature	3
ENG 337 OR 338 American Literature	3
ENG 425 Shakespeare	3
ENG 346 History of English Language OR ENG 301 English Literature I	3
ENG 345 English Grammar and Usage OR ENG 347 Introduction to Linguistics	3
ENG 308 Research for Writers OR ENG 352 Studies in Writing	3
English Writing Elective	3
English Literature Elective	3
ENG Upper-Level Elective	3
ENG Elective	3
Total	121

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** Natural Sciences Course with Lab

* EDU 333, 310, 350; PSY 206; and ESP 210 fulfill general education requirements but are also considered "Required Education Foundation Courses."

Program Notes: This is a professional program. All courses listed as program requirements must be passed with a grade of C or higher. Math and English courses must also be passed with a grade of C or higher. Many SEC

Department of Education

courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/english.aspx>

B.S.Ed. in Grades Pre-K-4 Education

Program Description

The Bachelor of Science in Education in Grades Pre-K-4 Education degree prepares students to teach children at the pre-kindergarten to grade 4 levels. Pennsylvania certification in pre-K to grade 4 education is awarded upon graduation and completion of state certification requirements.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3
<i>Health and Wellness</i> CHD 250 Health and Physical Education for PreK-Grade 4	3
<i>Technological Literacy</i>	3

Department of Education

Course	Credits
EDU 333 Technology for Teaching and Learning	
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Approved Fine Arts Course	3
<i>Natural Sciences</i> Approved Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • Approved British/American Lit Course (see program notes) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	60
CHD 200 Intro to PreK-Grade 8 Education	3
ELE 220 Instruction and Assessment in PreK	3
ELE 221 Instruction and Assessment in K-4	3
ELE 300 Emergent Literacy	3
ELE 301 Literacy Foundations I: Lang Arts*	3
ELE 302 Literacy Foundations II: Reading*	3
ELE 310 Teaching PreK STEAM	3
ELE 311 Teaching Math K-4*	3
CHD 312 Leadership and Advocacy in Childhood Ed	3
ELE 321 Teaching Science K-4*	3
ELE 331 Teaching Social Studies K-4*	3
EDU 375 Introduction to Integrated STEM Education	3
ELE 410 PreK-4 Field Experience	3

Department of Education

Course	Credits
ELE 411 K-4 Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Required Related Courses	12
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3
PSY 205 Child Psychology	3
PSY 208 Educational Psychology	3
Free Electives	9
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELE 461 Student Teaching PreK-Grade 4
- **Writing-Intensive Component Courses (2 courses required):** ELE 410 PreK-4 Field Experience AND ELE 411 K-4 Field Experience
- **Laboratory Course (1 course required):** Approved Natural Sciences Course with Lab

* Pre-requisite for all courses marked with an asterisk is Admission to Teacher Education.

Program Notes:

- All courses required for certification must earn C or better.
- CHD 200 and ELE 220 require current clearances and minimum 2.0 GPA to register for courses.
- ALL other EDU, ELE, ESP and CHD courses require current clearances and minimum 2.5 GPA to register for courses.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisites for ELE 221 and all 300 level ELE and CHD courses are ELE 200 and ELE 220.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

Department of Education

- B.S.Ed. in Grades Pre-K-4 Education to M.Ed. in Reading Specialist
- B.S.Ed. in Grades Pre-K-4 Education to M.Ed. in Integrative STEM Education K-12

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/grades-prek-4-education/index.aspx>

B.S.Ed. in Mathematics: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Mathematics: Secondary Education degree is designed for students seeking to teach middle and high school (grades 7-12) math. Through this program, students build knowledge and competencies in teaching, problem-solving and math. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 199 Pre-Calculus	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning	3

Department of Education

Course	Credits
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis</i> EDU 310 Teaching in a Multicultural Society	3
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 206 Adolescent Psychology • MAT 281 Calculus I • Approved U.S. or British Literature Course 	9
Required Concentration Courses	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
SEC 394 Teaching of Mathematics	3
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 413 Evidence-Based Practices	3
Related Content Courses	36
MAT 272 Discrete Mathematics	3

Department of Education

Course	Credits
MAT 281 Calculus I	3
MAT 282 Calculus II	3
MAT 290 Technology for Math	3
MAT 303 Geometry	3
MAT 304 History of Mathematics	3
MAT 305 Theory of Equations	3
MAT 341 Linear Algebra	3
MAT 351 Abstract Algebra	3
MAT 381 Calculus III	3
MAT 400 Mathematical Modeling	3
MAT 461 Statistical Analysis I	3
MAT Elective (200 level or higher)	3
Total	121

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** Student Selected (science recommended)

* EDU 333, 310, 350; PSY 206; and ESP 210 fulfill general education requirements but are also considered "Required Education Foundation Courses."

Program Notes: This is a professional program. All courses listed as program requirements must be passed with a grade of C or higher. Math and English courses must also be passed with a grade of C or higher. Many SEC courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/mathematics.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Language Arts/Reading

Program Description

The language arts/reading concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach English language and reading to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American	3

Department of Education

Course	Credits
Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	45
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3
ELM 302 Language Arts Methods, Assessments and Interventions*	3
ELM 311 Math Methods, Assessments and Interventions*	3
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3
EDU 375 Intro to Integrated STEM Education	3
ELM 415 Middle Level Education Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18
ENG 102 English Composition II	3
ENG 337 Survey of American Lit. I	3
ENG 338 Survey of American Lit. II	3
Select three courses from the following: <ul style="list-style-type: none"> • ENG 308 Research for Writers 	9

Department of Education

Course	Credits
<ul style="list-style-type: none"> • ENG 315 Survey of AM. Women Writers • ENG 345 English Grammar and Usage • ENG 347 Intro to Linguistics • ENG 425 Shakespeare 	
Required Related Courses	15
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psychology (PSY 100 waived)	3
MAT 181 College Algebra	3
Free Electives	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** Any Natural Sciences Course with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)
- Approved English Concentration Courses are: ENG 106, 107, 108, 125, 127, 148, 150, 155, 203, 376, 377, 378.

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

- B.S.Ed. in Middle Level Education: Language Arts/Reading to M.Ed. in Reading Specialist
- B.S.Ed. in Middle Level Education: Language Arts/Reading to M.Ed. in Integrative STEM Education K-12

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/english.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Mathematics

Program Description

The mathematics concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach math to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3

Department of Education

Course	Credits
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 215 Statistics • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	45
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3
ELM 302 Language Arts Methods, Assessments and Interventions*	3
ELM 311 Math Methods, Assessments and Interventions*	3
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3
EDU 375 Intro to Integrated STEM Education	3

Department of Education

Course	Credits
ELM 415 Middle Level Education Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18
MAT 191 College Trigonometry	3
MAT 272 Discrete Math	3
MAT 281 Calculus	3
MAT 303 Geometry	3
MAT 341 Linear Algebra	3
MAT 400 Mathematical Modeling	3
Required Related Courses	12
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psychology (PSY 100 waived)	3
Free Electives	6
Free Elective OR MAT 130 Elementary Topics in Mathematics II	3
Free Elective	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** Any Natural Sciences Course with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (with credits toward a master's degree in integrative STEM education K-12) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/mathematics.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Science

Program Description

The science concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach science to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i>	1

Department of Education

Course	Credits
UNI 100 First-Year Seminar	
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHS 120 Basic Physical Science with Lab	3 or 4
<i>Social Sciences</i> GEO 102 Geographic Systems for Elementary Education (1 credit) AND POS 102 American Government for Elementary Education (1 credit) AND ECO 102 Economics for Elementary Education (1 credit)	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 OR HIS 102 U.S. History since 1877 	9
Required Major Courses	45
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3
ELM 302 Language Arts Methods, Assessments and Interventions*	3

Department of Education

Course	Credits
ELM 311 Math Methods, Assessments and Interventions*	3
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3
ELM 360 Environ., Eco. and Nature Study Ed	3
ELM 415 Middle Level Education Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18
Select one Earth Science course from approved list, in consultation with adviser	4
Select one Physical Science course from approved list, in consultation with adviser	4
BIO 120 General Zoology OR BIO 125 General Botany	4
Select 6 credits of Concentration courses from approved list	6
Required Related Courses	15
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psychology (PSY 100 waived)	3
MAT 215 Statistics	3
Free Electives	1 to 3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

Department of Education

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** PHS 120 Basic Physical Science with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)
- Please consult with your science education adviser before selecting from the following concentration courses: EAS 104, 105, 142, 163; ENS 101; GLG 150, 210; PHS 121, 122, 137, 145; CHE 101, 103; EDU 375.

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (with credits toward a master's degree in integrative STEM education K-12) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/science.aspx>

B.S.Ed. in Middle Level Grades 4-8 Education: Social Studies

Program Description

The social studies concentration of the Bachelor of Science in Education in Middle Level Education degree prepares students to teach social studies to children in grades 4 through 8. Upon successful completion of this program, students will earn a bachelor's degree and be eligible for Pennsylvania teaching certification.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education

Department of Education

(NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 120 Elementary Topics I	3
<i>Health and Wellness</i> CHD 250 Teaching Health and Physical Education	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundations and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> GEO 100 Intro to Geography	3
<i>Ethics and Multicultural Emphasis</i> CHD 350 Family and Community Collaborations	3
<i>General Education Options</i> <ul style="list-style-type: none"> • MAT 130 Elementary Topics II • British/American Lit Course (from approved list) • HIS 101 U.S. History to 1877 	9
Required Major Courses	45
ELM 200 Intro to Middle Level Ed	3
ELM 220 Instruction and Assessment in Grades 4-8	3
ELM 301 Reading Methods, Assessments and Interventions (Grades 4-8)*	3

Department of Education

Course	Credits
ELM 302 Language Arts Methods, Assessments and Interventions*	3
ELM 311 Math Methods, Assessments and Interventions*	3
ELM 321 Science Methods, Assessments and Interventions*	3
ELM 331 Social Studies Methods, Assessments and Interventions*	3
EDU 375 Intro to Integrated STEM Education	3
ELM 415 Middle Level Education Field Experience*	3
CHD 413 Content Area Literacy Field Experience*	3
CHD 450 Assessment and Data Literacy*	3
ELM 461 Student Teaching and School Law*	12
Concentration Courses	18
HIS 102 History of the U.S. since 1877	3
HIS 112 World History since 1500	3
HIS 200 History of Pennsylvania	3
POS 105 American Politics	3
ECO 100 Elements of Economics	3
Select one of the following courses: <ul style="list-style-type: none"> • ECO 200 Current Economics Issues • ECO 201 Principles of Microeconomics • ECO 202 Principles of Macroeconomics • GEO 105 Human Geography • GEO 217 Demographic Analysis • GEO 220 Geography of N. America and PA • POS 101 Contemporary Policy and Politics • POS 306 The Congress • POS 310 The Presidency 	3
Required Related Courses	15
ESP 311 Assessment and Positive Behavior Interventions	3
ESP 412 Evidence Based Practices*	3

Department of Education

Course	Credits
PSY 206 Adolescent Psychology	3
PSY 208 Educational Psychology (PSY 100 waived)	3
MAT 181 College Algebra	3
Free Electives	3
Total	121

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ELM 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ELM 415 Middle Level Education Field Experience AND CHD 413 Content Area Literacy Field Experience
- **Laboratory Course (1 course required):** Any Natural Sciences Course with Lab

* Courses marked with an asterisk are restricted to candidates admitted to Teacher Education.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM, CHD and ESP courses require current clearances and minimum 2.5 GPA to register for courses, except ELM 200 and 220, which require 2.0 GPA to register.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- Pre-requisite for ELM 220 and all 300-level ELM and CHD courses is ELM 200.
- State licensure exams must be passed before student teaching.
- Current clearances are required prior to enrolling in program courses.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338 and HON 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Additional Requirements

Students accepted into a teacher certification program must be admitted to Teacher Education before they may register for upper-level, restricted courses. Please refer to the Teacher Education Program Student Handbook for details on Admission to Teacher Education requirements.

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

- B.S.Ed. in Middle Level Education: Social Studies to M.Ed. in Reading Specialist
- B.S.Ed. in Middle Level Education: Social Studies to M.Ed. in Integrative STEM Education K-12

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/middle-level-education/social-studies.aspx>

B.S.Ed. in Physics: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Physics: Secondary Education degree is designed for students seeking to teach middle and high school (grades 7-12) physics. Through this program, students build competencies and knowledge in teaching, science and math. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I	3
<i>Health and Wellness</i> HSC 315 First Aid	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 101 College Physics I (lab)	4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis</i> EDU 310 Teaching in a Multicultural Society	3

Department of Education

Course	Credits
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 206 Adolescent Psychology • MAT 282 Calculus II • ENG 102 Composition II 	9
Required Concentration Courses	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
SEC 395 Teaching of Science	3
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 413 Evidence-Based Practices	3
Related Content Courses	36
MAT 381 Calculus III	3
MAT 382 Calculus IV	3
MAT 406 Differential Equations	3
PHY 202 College Physics II	4
PHY 203 College Physics III	4
PHY 221 Intermediate Elect and Mag	4
PHY 301 Intermediate Mechanics	4
PHY 331 Modern Physics	3
PHY 495 Physics Seminar	1
CHE 101 Gen Chemistry I	4

Department of Education

Course	Credits
Science Elective	3
Total	122

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** Student Selected (science recommended)

* EDU 333, 310, 350; PSY 206; and ESP 210 fulfill general education requirements but are also considered "Required Education Foundation Courses."

Program Notes: This is a professional program. All courses listed as program requirements must be passed with a grade of C or higher. Math and English courses must also be passed with a grade of C or higher. Many SEC courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program. The science electives start with CHE, PHY, BIO or EAS.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/physics.aspx>

B.S.Ed. in Social Studies: Secondary Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Social Studies: Secondary Education degree is designed for students seeking to teach social studies in middle and high school (grades 7-12) settings. Through this program, students build competencies and knowledge related to teaching, history, political science and geography. This undergraduate degree program meets all education requirements for teaching certification in Pennsylvania.

Delivery Mode

Traditional (on campus)

Accreditation

This undergraduate degree program is approved by the Pennsylvania Department of Education. Cal U's education programs have also been accredited by the National Council for Accreditation of Teacher Education (NCATE) since 1954, and we are continuing with the successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> MAT Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> EDU 333 Technology in Teaching and Learning	3
<i>Humanities</i> ESP 210 Special Education Foundation and Collaboration	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>Ethics and Multicultural Awareness Emphasis</i> EDU 310 Teaching in a Multicultural Society	3
<i>General Education Options</i> <ul style="list-style-type: none"> • POS 105 American Politics • MAT Course • Approved U.S./British Literature Course 	9
Required Concentration Courses	39
SEC 210 Intro to Secondary Ed	3
SEC 220 Standards-based Instruction	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
SEC 360 Technology Integration	3
SEC 396 Teaching of Social Studies	3

Department of Education

Course	Credits
SEC 400 Classroom Management	3
SEC 420 Assessment and Interventions	3
SEC 460 Professional Practices	3
SEC 461 Student Teaching	12
Required Education Foundation Courses*	6
ESP 311 Assessment and Positive Interventions	3
ESP 413 Evidence-Based Practices	3
Related Content Courses	36
PSY 206 Adolescent Psychology	3
ANT 100 Intro to Anthropology	3
ECO 100 Elements of Economics	3
GEO 100 Introduction to Geography	3
SOC 100 Principles of Sociology	3
HIS 101 U.S. History to 1877	3
HIS 102 U.S. History since 1877	3
HIS 104 History of Western Society to 1500 OR HIS 111 World Civilization to 1500	3
HIS 106 History of Western Society since 1500 OR HIS 112 World Civilizations since 1500	3
HIS 3XX Non-Western Elective	3
HIS 3XX Elective	3
Social Studies Elective	3
Total	121

Additional requirements not counted toward the General Education requirements and included in this program are:

- **Special Experience Course (1 course required):** SEC 461 Student Teaching
- **Writing-Intensive Component Courses (2 courses required):** SEC 420 Assessment and Interventions AND SEC 460 Professional Practices
- **Laboratory Course (1 course required):** Student Selected (science recommended)

Department of Education

* EDU 333, 310, 350 and ESP 210 fulfill general education requirements but are also considered "Required Education Foundation Courses." POS 105 fulfills general education requirements and is also considered part of the "Required Content Courses."

Program Notes: This is a professional program. All courses listed as program requirements must be passed with a grade of C or higher. Math and English courses must also be passed with a grade of C or higher. Many SEC courses are linked to include field experiences and must be taken together as co-requisites. LiveText software is a requirement of this program. Social Studies elective begins with ANT, PSY, ECO, GEO, POS, SOC or HIS.

Additional Requirements

Undergraduate secondary education majors are required to:

- Maintain a GPA of 2.80.
- Pass the required PAPA exams.
- Have Act 34, 151 and 114 clearances for formal Admission to Teacher Education.

A GPA of 3.00 and passing scores for Praxis II are needed to apply for a Recommendation for Student Teaching.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/secondary-education/social-studies.aspx>

B.S.Ed. in Special Education Pre-K-12

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Special Education Pre-K-12 degree provides students with the skills, knowledge and competencies necessary to meet the needs of students with disabilities in multiple settings. The program prepares students to earn Pennsylvania pre-K through grade 12 special education teacher certification and Pennsylvania Department of Education endorsement in autism spectrum disorders.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners	3
<i>Mathematics and Quantitative Literacy</i> Any 100-level Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course (Recommended: HSC 315, SOW 303)	3

Department of Education

Course	Credits
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning	3
<i>Humanities</i> Any Humanities Course (Recommended: CMD 350, PHI 220)	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course with Lab	3 or 4
<i>Social Sciences</i> Any Social Sciences Course (Recommended: CMD 108, SOC 315, SOC 325)	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Ethics and Multicultural Awareness Course (Recommended: PHI 220, SOC 325) • Any 100-level Math Course • British/American Lit Course (from approved list) • General Education Course 	12
Required Major Courses	66
ESP 100 Disability / Popular Media	3
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and PBS	3
ESP 312 ABA for Special Education	3
ESP 329 Intro to Special Education Field	3
ESP 339 Special Education Field II	3
ESP 349 Special Education Field III*	3
ESP 402 Life Skills Planning and Instruction*	3
ESP 403 Assessment and Prescriptive Teaching	3
ESP 406 Transition Planning and Instruction	3
ESP 407 Early Intervention Special Education	3
ESP 411 History, Theory and Exceptionality	3
ESP 419 Evidence Based Practices for Special Education	3

Department of Education

Course	Credits
ESP 420 Advanced Evidence-Based Practices*	3
ESP 440 Nature of ASD*	3
ESP 441 Comm., Beh. and Instr. - ASD*	3
ESP 442 Life Transition and Partnership*	3
ESP 443 Navigating the Social World*	3
ESP 461 Student Teaching	12
Required Related Courses	12
CMD 105 Language and Speech Development	3
PSY 205 Childhood: Developmental Psychology	3
PSY 206 Adolescent: Developmental Psychology	3
PSY 208 Educational Psychology	3
Free Electives	2
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ESP 461 Student Teaching and School Law
- **Writing-Intensive Component Courses (2 courses required):** ESP 339 Special Education Field Experience I AND ESP 349 Special Education Field Experience II
- **Laboratory Course (1 course required):** Any Laboratory Course

* Pre-requisite for courses marked with an asterisk is Admission to Teacher Education.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ESP courses require current clearances and minimum 2.5 GPA to register for courses.
- Candidates must follow policies for Admission to Teacher Education as stated in the Teacher Education Handbook.
- State licensure exams must be passed before student teaching.
- Approved American/British Literature Courses are: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338; HON 150, 250. (HON 250 has a pre-requisite of HON 150; the 300-level ENG courses have pre-requisites of ENG 101 and 102.)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/special-education/index.aspx>

B.S.Ed. in Technology Education

Program Description

The Bachelor of Science in Education (B.S.Ed.) in Technology Education degree prepares students for K-12 technology education teaching certification through the Pennsylvania Department of Education. Technology education includes the study of selected technological systems. Through this program, students explore solutions to technological problems and their associated social and environmental impacts. They also develop skills in the safe and appropriate use of tools, materials and processes as they design, produce, use and evaluate technological systems.

Delivery Mode

Traditional (on campus)

Accreditation

This program was one of the first in the nation to be accredited by the International Technology and Engineering Educators Association's (ITEEA) Council on Technology and Engineering Teacher Education and the National Council for the Accreditation of Teacher Education (NCATE). We are continuing with NCATE's successor organization, the Council for the Accreditation of Educator Preparation (CAEP).

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting the English Language Learner	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> HSC 315 First Aid and Personal Safety	3
<i>Technological Literacy</i> TED 316 Structural Design	3
<i>Humanities</i> ESP 419 Evidence-Based Practices for K-12 Inclusion	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	4
<i>Social Sciences</i> PSY 100 Psychology	3
<i>Ethics and Multicultural Awareness</i>	3

Department of Education

Course	Credits
EDU 310 Teaching in a Multicultural Society	
<i>General Education Options</i> <ul style="list-style-type: none"> • Approved Literature Course (see list) • MAT 191 College Trigonometry • Approved Natural Sciences Course (see list) 	9
Required Major Courses	58
TED 100 Introduction to Technology Education	3
TED 105 Communicating Technical Designs	3
TED 111 Information Systems	3
TED 126 Engineering Materials and Product Design	3
TED 210 Design and Appropriate Technology	3
TED 226 Applications and Processing of Engineering Materials	3
TED 300 Assessment and Instruction in Technology	3
TED 302 Energy and Control Systems	3
TED 304 Design in Bio-Related Technology	3
TED 335 Transportation Systems	3
TED 346 Digital Communications	3
TED 426 Manufacturing Enterprise	3
TED 436 Engineering Design and Development	3
TED 450 Teaching Technology in the Secondary School	3
TED 451 Teaching Technology in the Elementary School	3
TED 461 Technology Education Student Teaching	10
TED 462 Professional Practices in Technology Education	3
Required Related Courses	9
ESP 210 Special Education Foundations and Collaboration	3
ESP 311 Assessment and Positive Behavior Intervention	3

Department of Education

Course	Credits
ITE 250 Introduction to Automation OR RET 110 Agile Robotics I	3
Related Electives	9
Approved Technical/Technological Courses (x3)	9
Free Electives	3
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** TED 436 Engineering Design and Development
- **Writing-Intensive Component Courses (2 courses required):** TED 450 Teaching Technology in the Secondary School AND TED 451 Teaching Technology in the Elementary School
- **Laboratory Course (1 course required):** TED 304 Design in Bio-Related Technology

Program Notes:

- Elective credits may be used toward a minor (see adviser).
- Any TED course must be passed with a "C" or better grade.
- Approved Literature Courses: ENG 107, 125, 127, 148, 150, 155, 160, 203, 301, 302, 337, 338.
- Approved Natural Sciences Courses: (one 4-credit LAB and one LAB or SCIENCE required):
 - LAB (4 credits): BIO 115, BIO 206, CHE 101, PHY 121.
 - SCIENCE (3 credits): EAS 163, ENS 101, PHS 120, PHS 137.
- Approved Technical/Technological Electives: COM 141, 142, 241; THE 141; CSC 120 or above; any CET, EET, GCM, RET, ITE or TED course not already required by the major; or any other courses approved by adviser.
- Developmental course credits do not count toward graduation, but are calculated in the GPA.

Admission to Teacher Education Window:

- 48-65 credits.
- Admission/Retention form signed.
- C or better grades in 6 credits of Composition/English Literature.
- C or better grades in 6 credits of Math.
- C or better grade in TED 100 Preservice Teacher Professional Disposition Instrument Level 2.
- Document Act 34, Act 114 and Act 151 clearances.
- Pass PAPA exams in Reading, Writing, Math (modules 1-3).
- 2.80 GPA overall.

Recommendation for Student Teaching (required 1 semester prior):

- Due Jun. 1 for Fall, Nov. 1 for Spring.
- 3.00 GPA overall (at time of application and start of student teaching).
- C or better grade in each TED course.
- TB test.

Department of Education

- Pass Praxis II TED exam (0051) and Fundamental Subjects exam (0511).
- Current Act 34, 114 and 151 clearances, valid through student teaching.
- Pass Live Text Performance Principles Portfolio review.
- \$1 million liability insurance policy.

Certification

Certification to teach K-12 is awarded upon graduation and completion of state certification requirements.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/technology-education/index.aspx>

Minor in Education Multidisciplinary Curriculum

Course	Credits
ELE 200 Introduction to PreK-Grade 4 Education OR CHD 200 Introduction to PreK-Grade 8 Education	3
ELM 200 OR ELM 220 (or any approved education-related course on the General Education menu that is not already a requirement for the PSE program)	3
ESP 311 Assessment Positive Behavior Interventions	3
PSY 208 Educational Psychology	3
PSY 216 Child Psychology Ages Birth-4 OR PSY 217 Child Psychology Age 5 to 9 OR PSY 205 Child Psychology	3
Select one course (3 credits) of the following: <ul style="list-style-type: none">• CHD 350 Family & Community Collaboration Partnerships• EDU 350 Supporting English Language Learners• EDU 333 Technology in Teach and Learning• EDU 310 Teaching in a Multicultural Society• EDU 375 Introduction to Integrative STEM Education• ELE 301 Literacy Foundations I: LA• ELE 302 Literacy Foundations II: Reading• Any 300-level education-related course that is not already a requirement for the PSE program	3
Total	18

Program Notes: Meet with a childhood education faculty member in the Department of Education or your adviser to discuss this minor.

Minor in Foundations of Secondary Education

Program Description

The foundations of secondary education minor does not lead to teacher certification. It provides a base of knowledge for students who have an interest in education and/or teaching in other formats or settings.

Curriculum

Course	Credits
General Education	9
EDU 310 Teaching in a Multicultural Society (<i>Ethics/Multicultural</i>)	3
EDU 333 Technology for Teaching and Learning (<i>Technological Literacy</i>)	3
ESP 210 Special Ed Foundations and Collaboration (<i>Humanities</i>)	3
Secondary Education Program	12
SEC 210 Intro to Secondary Education	3
SEC 220 Standards-based Education	3
SEC 310 Instructional Strategies	3
SEC 350 Content Area Literacy	3
Total	21

Post-Baccalaureate Certification Only: Grades 4-8 Education: Language Arts and Reading Curriculum

Course	Credits
General Education: PDE Content Requirements	
Mathematics (100 level or higher)	9
MAT 120 Elementary Topics I	
MAT 130 Elementary Topics II	
MAT 181 College Algebra	
Natural Sciences	9

Department of Education

Course	Credits
BIO 103 Contemporary Issues Biology	
EAS 100 OR ENS 101	
Physical Science Course	
Social Sciences	6
HIS 101 OR HIS 102	
ECO 102 Economics for Elementary Ed	1
GEO 102 Geographic Systems	1
POS 102 American Government for Elementary Ed	1
Health and Wellness	3
HSC 115 Current Health Issues	
Fine Arts	3
Program Requirements: PDE Professional Education Requirements	
Professional Education Courses	24
EDU 310 Tchg Multicultural Society	
EDU 333 Technology for Tchg and Learning	
EDU 350 Supporting ELL in the Classroom	
ESP 210 Special Ed. Found and Collaboration	
ESP 311 Assessing Positive Behavior Interv.	
ESP 412 Evidence Based Practices	
PSY 206 Adolescent Psychology	
* PSY 208 Educational Psychology	
Grades 4-8 Specialization Courses	27
ELM 200 Intro to Middle Level Education (gr 4-8)	
ELM 220 Instruction and Assessment in 4-8 Classrooms	

Department of Education

Course	Credits
ELM 311 Math Methods, Assessment and Interv.	
ELM 321 Science Methods, Assessment and Interv.	
ELM 331 Social Studies Methods, Assessment and Interv.	
ELM 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements)	
Concentration Courses	27
ELM 301 Reading Methods, Assessment and Interv.	
ELM 302 Lang. Arts Methods, Assessment and Interv.	
ENG 101 English Composition I	
ENG 102 English Composition II	
ENG 337 Survey of American Literature I	
ENG 338 Survey of American Literature II	
ENG ____ Approved Concentration Courses (2)**	
American/British Literature Course	
Field Experience Courses	6
ELM 411 Field Experience Grades 4-6	
ELM 412 Field Experience Grades 7-8	
Total	114

* Pre-requisite PSY 100 waived for this major.

** In consultation with your adviser, select courses from your area of concentration.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM and ESP courses require current clearances submitted before the first day of class.
- Pre-requisites for all ELM 300-level courses are ELM 200 and 220.
- Approved American/British literature courses include: ENG 107, 127, 148, 150, 155, 203, 301, 302, 337, 338.
- Requirements:
 - PAPA qualifying scores at start of the program.
 - GPA of 2.8 at start of the program.
 - Appropriate Praxis II exams prior to student teaching.

Post-Baccalaureate Certification Only: Grades 4-8 Education: Mathematics Curriculum

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Course	Credits
General Education: PDE Content Requirements	
English and Literature Composition	6
ENG 101 English Composition I	
American or British Literature Course	>
Natural Sciences	9
BIO 103 Contemporary Issues Biology	
EAS 100 OR ENS 101	
Physical Science Course	
Social Sciences	6
HIS 101 OR HIS 102	
ECO 102 Economics for Elementary Ed	1
GEO 102 Geographic Systems	1
POS 102 American Government for Elementary Ed	1
Health and Wellness	3
HSC 115 Current Health Issues	
Fine Arts	3
Program Requirements: PDE Professional Education Requirements	
Professional Education Courses	24
EDU 310 Tchg Multicultural Society	
EDU 333 Technology for Tchg and Learning	
EDU 350 Supporting ELL in the Classroom	

Department of Education

Course	Credits
ESP 210 Special Ed. Found and Collaboration	
ESP 311 Assessing Positive Behavior Interv.	
ESP 412 Evidence Based Practices	
PSY 206 Adolescent Psychology	
*PSY 208 Educational Psychology	
Grades 4-8 Specialization Courses	30
ELM 200 Intro to Middle Level Education	
ELM 220 Instruction and Assessment in 4-8	
ELM 301 Reading Methods Assessment and Interv.	
ELM 302 Lang. Arts Methods Assessment and Interv.	
ELM 311 Math Methods, Assessment and Interv.	
ELM 321 Science Methods, Assessment and Interv.	
ELM 331 Social Studies Methods, Assessment and Interv.	
ELM 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements)	
Concentration Courses	24
MAT 120 Elementary Topics in Math I	
MAT 130 Elementary Topics in Math II	
MAT 181 College Algebra	
MAT 191 College Trigonometry	
MAT 272 Discrete Mathematics	
MAT 303 Geometry	
MAT 341 Linear Algebra	
Field Experience Courses	6
ELM 411 Field Experience Grades 4-6	
ELM 412 Field Experience Grades 7-8	

Department of Education

Course	Credits
Total	111

* Pre-requisite PSY 100 waived for this major.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM and ESP courses require current clearances submitted before the first day of class.
- Pre-requisites for all ELM 300-level courses are ELM 200 and 220.
- All coursework must be completed before student teaching.
- Approved American/British literature courses: ENG 107, 127, 148, 150, 155, 203, 301, 302, 337, 338.
- Requirements
- PAPA qualifying scores at start of the program.
- GPA of 2.8 at start of the program.
- Appropriate Praxis II exams prior to student teaching.
- Admission to Teacher Education before registering for ESP 412.

Post-Baccalaureate Certification Only: Grades 4-8 Education: Science Curriculum

Course	Credits
General Education: PDE Content Requirements	
English and Literature Composition	6
ENG 101 English Composition I	
American or British Literature Course	
Mathematics (100 level or higher)	9
MAT 120 Elementary Topics I	
MAT 130 Elementary Topics II	
MAT 181 College Algebra	
Social Sciences	6
HIS 101 OR HIS 102	
ECO 102 Economics for Elementary Ed	1
GEO 102 Geographic Systems	1
POS 102 American Government for Elementary Ed	1

Department of Education

Course	Credits
Health and Wellness	3
HSC 115 Current Health Issues	
Fine Arts	3
Program Requirements: PDE Professional Education Requirements	
Professional Education Courses	24
EDU 310 Tchg Multicultural Society	
EDU 333 Technology for Tchg and Learning	
EDU 350 Supporting ELL in the Classroom	
ESP 210 Special Ed. Found and Collaboration	
ESP 311 Assessing Positive Behavior Interv.	
ESP 412 Evidence Based Practices	
PSY 206 Adolescent Psychology	
*PSY 208 Educational Psychology	
Grades 4-8 Specialization Courses	33
ELM 200 Intro to Middle Level Education	
ELM 220 Instruction and Assessment in 4-8	
ELM 301 Reading Methods Assessment and Interv.	
ELM 302 Lang. Arts Methods Assessment and Interv.	
ELM 311 Math Methods, Assessment and Interv.	
ELM 321 Science Methods, Assessment and Interv.	
ELM 331 Social Studies Methods, Assessment and Interv.	
ELM 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements)	
Concentration Courses	27
BIO 103 Contemporary Issues Biology	

Department of Education

Course	Credits
EAS 100 Intro to Earth Science	
ELM 360 Environ, Ecology and Nature - Study Ed	
PHS 120 Basic Phys. Science with Lab	
** _____	
** _____	
** _____	
** _____	
** _____	
Field Experience Courses	6
ELM 411 Field Experience Grades 4-6	
ELM 412 Field Experience Grades 7-8	
Total	117

* Pre-requisite PSY 100 waived for this major.

** **Concentration Courses:** Please consult with your science education adviser before selecting from the following concentration courses:

- **GLG 150** Intro to Geology
- **EAS 240** Intro to Meteorology
- **EAS 163** Intro to Oceanography
- **PHS 145** Astronomy
- **GLG 210** Intro to Soils
- **BIO 120** General Zoology (4 credits)
- **BIO 125** General Botany (4 credits)
- **ENS 101** Intro to Environmental Science
- **CHE 103** Chemistry in Every Day World
- **PHS 137** Intro to Environment Chemistry
- **PHY 121** General Physics I

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM and ESP courses require current clearances submitted before the first day of class.
- Pre-requisites for all ELM 300-level courses are ELM 200 and 220.
- All coursework must be completed before student teaching.

Department of Education

- Approved American/British literature courses: ENG 107, 127, 148, 150, 155, 203, 301, 302, 337, 338.
- Requirements
- PAPA qualifying scores at start of the program.
- GPA of 2.8 at start of the program.
- Appropriate Praxis II exams prior to student teaching.
- Admission to Teacher Education before registering for ESP 412.

Post-Baccalaureate Certification Only: Grades 4-8 Education: Social Studies

Curriculum

Course	Credits
General Education: PDE Content Requirements	
English and Literature Composition	6
ENG 101 English Composition I	
American or British Literature Course	
Mathematics (100 level or higher)	9
MAT 120 Elementary Topics I	
MAT 130 Elementary Topics II	
MAT 181 College Algebra	
Natural Sciences	9
BIO 103 Contemporary Issues Biology	
EAS 100 OR ENS 101	
Physical Science Course	
Health and Wellness	3
HSC 115 Current Health Issues	
Fine Arts	3
Program Requirements: PDE Professional Education Requirements	
Professional Education Courses	24

Department of Education

Course	Credits
EDU 310 Tchg Multicultural Society	
EDU 333 Technology for Tchg and Learning	
EDU 350 Supporting ELL in the Classroom	
ESP 210 Special Ed. Found and Collaboration	
ESP 311 Assessing Positive Behavior Interv.	
ESP 412 Evidence Based Practices	
PSY 206 Adolescent Psychology	
*PSY 208 Educational Psychology	
Grades 4-8 Specialization Courses	33
ELM 200 Intro to Middle Level Education	
ELM 220 Instruction and Assessment in 4-8	
ELM 301 Reading Methods Assessment and Interv.	
ELM 302 Lang. Arts Methods Assessment and Interv.	
ELM 311 Math Methods, Assessment and Interv.	
ELM 321 Science Methods, Assessment and Interv.	
ELM 331 Social Studies Methods, Assessment and Interv.	
ELM 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements)	
Concentration Courses	21
ECO 100 Elements of Economics	
GEO 100 Intro to Geography (prerequisite: ELM 220)	
HIS 101 U.S. History to 1877	
HIS 102 U.S. History since 1877	
HIS 200 History of Pennsylvania	
HIS ____ Approved World History Course	
POS 100 Intro to Political Science OR POS 105 American National Government	
Field Experience Courses	6

Department of Education

Course	Credits
ELM 411 Field Experience Grades 4-6 (Sp)	
ELM 412 Field Experience Grades 7-8 (Fall)	
Total	114

* Pre-requisite PSY 100 waived for this major.

Program Notes:

- All courses required for certification with C- or lower must be repeated.
- All ELM and ESP courses require current clearances submitted before the first day of class.
- Pre-requisites for all ELM 300-level courses are ELM 200 and 220.
- All coursework must be completed before student teaching.
- Approved American/British literature courses: ENG 107, 127, 148, 150, 155, 203, 301, 302, 337, 338.
- Requirements
- PAPA qualifying scores at start of the program.
- GPA of 2.8 at start of the program.
- Appropriate Praxis II exams prior to student teaching.
- Admission to Teacher Education before registering for ESP 412.

Post-Baccalaureate Certification Only: Pre-K-4 Curriculum

Course	Credits
General Education: PDE Content Requirements	
English Composition and British & American Literature	6
ENG 101 English Composition I	3
British/American Lit (see list below)	3
Mathematics	6
MAT 120 Elementary Topics I	3
MAT 130 Elementary Topics II	3
Natural Sciences	9
BIO 103 Contemporary Issues Biology	3
EAS 100 OR ENS 101	3
Physical Science Course	3

Department of Education

Course	Credits
Social Sciences	6
HIS 101 OR HIS 102	3
ECO 102 Economics for Elementary Ed	1
GEO 102 Geographic Systems	1
POS 102 American Government for Elementary Ed	1
Health and Wellness	3
HSC 250 Health and PE for PreK-4	3
Fine Arts	3
MUS/ART/THE 372 Creative Arts for PreK-4	3
Program Requirements: PDE Professional Education Requirements	
Professional Education Courses	24
EDU 310 Tchg Multicultural Society	3
EDU 333 Technology for Tchg & Learning	3
EDU 350 Supporting ELL in the classroom	3
ESP 210 Special Ed. Found & Collaboration	3
ESP 311 Assessing Positive Behavior Interv.	3
ESP 412 Evidence Based Practices	3
PSY 206 Adolescent Psychology	3
* PSY 208 Educational Psychology	3
PreK to 4 Certification Track	48
ELE 200 Intro to Pre-K Grade 4 Education	3
ELE 220 Instruction & Assessment in PreK	3
ELE 300 Emerging Literacy	3
ELE 301 Literacy Foundations I: Language Arts	3
ELE 302 Literacy Foundations II: Reading	3

Department of Education

Course	Credits
ELE 310 Teaching Math/Science PreK	3
ELE 311 Teaching Math K-4	3
ELE 321 Teaching Science K-4	3
ELE 331 Teaching Social Studies K-4	3
ELE 350 Family and Community Relations	3
ELE 400 Issues, Advocacy, & Leadership PreK	3
ELE 410 K-4 Field Experience	3
ELE 461 Student Teaching PreK-Grade 4 (see Teacher Handbook for requirements for Recommendations for Student Teaching)	3
Field Experience Courses	6
ELM 411 Field Experience Grades 4-6	3
ELM 412 Field Experience Grades 7-8	3
Total	111

*Pre-requisite PSY 100 waived for this major.

Program Notes:

- ALL ELE and ESP courses require current clearances and minimum 2.5 GPA to register for courses.
- All courses required for certification with a grade of "C-" or lower must be repeated.
- Pre-requisites for ELE 221 and all 300 level courses are ELE 200 and ELE 220.
- Approved American/British literature courses: ENG 107, 127, 148, 150, 155, 203, 301, 302, 337, 338.
- Requirements
- PAPA (on admission)
- Current Clearances (within 30 days)
- PECT (prior to Student Teaching)
- Upon admission-All requirements for Admission to Teacher Ed.

Department of Exercise Science and Sport Studies

Faculty

Justin Barroner (chair) | Wendy Batts | Dr. Carol Biddington | Dr. Marc S. Federico | Lindsay M. Hammond | Dr. Jeffrey R. Hatton | Dr. Rebecca A. Hess | Dr. Mary Kreis | Dr. Barry E. McGlumphy | Dr. Laura Miller | Dr. Brian Oddi | Dr. Benjamin Reuter | Dr. Christine Romani-Ruby | Dr. Robert G. Taylor | Dr. Ronald Wagner | Dr. Ellen J. West | Dr. Tom West | Dr. Brian D. Wood

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Exercise Science and Sport Studies offers undergraduate programs in exercise science and sport management, including:

- B.S. in Exercise Science
- B.S. in Exercise Science: Professional Golf Management
- B.S. in Sport Management Studies
- B.S. in Sport Management Studies: Professional Golf Management

Facilities

The department is housed in both Hamer and Gallagher halls.

B.S. in Exercise Science

Program Description

The Bachelor of Science in Exercise Science degree prepares students for careers in wellness and fitness. Students pursuing the program will be prepared to sit for a certification in personal training offered by the National Academy of Sports Medicine (NASM).

Fall and spring semesters include two 8-week terms each. The summer includes two 5-week terms or one 10-week term.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Oral Communication Course	3
<i>Mathematics and Quantitative Literacy</i>	3

Department of Exercise Science and Sport Studies

Course	Credits
Any Mathematics and Quantitative Literacy Course	
<i>Health and Wellness</i> HSC 115 Current Health Issues	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> HSC 110 Human Anatomy and Physiology I	4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • SPT 305 Ethics in Sport • ATE 340 Sports Nutrition OR HSC 250 Nutrition for Wellness • Any General Education Options Courses (two courses) 	12
Required Major Courses	49
FIT 100 Intro to Fitness	3
FIT 115 Applied Anatomy and Physiology in Wellness and Fitness	4
FIT 125 Fundamentals of Speed Training	3
FIT 250 Current Topics and Strategies for Youth Fitness	3
FIT 300 Business Aspects of Fitness	3
FIT 305 Motivational Strategies in Wellness and Fitness	3
FIT 325 Integrated Personal Fitness Training	3
FIT 335 Integrated Personal Fitness Program Design	3
FIT 350 Fitness for Special Populations*	3
FIT 380 Wellness and Fitness for the Aging Population	3
FIT 401 Leadership Concepts and Actions in Wellness and Fitness	3

Department of Exercise Science and Sport Studies

Course	Credits
FIT 405 Wellness Seminar I	3
FIT 410 Wellness Seminar II*	3
FIT 420 Contemporary Issues in Fitness*	3
FIT 425 Evaluating Research in Fitness and Wellness	3
FIT 430 Application of Fitness and Wellness Research	3
Required Related Courses	12
SPT 300 Psychology of Sport	3
SPT 400 Legal Aspects of Sport	3
HSC 275 Functional Kinesiology	3
HSC 325 Physiology of Exercise	3
Free Electives	18
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** FIT 410 Wellness Seminar II
- **Writing-Intensive Component Courses (2 courses required):** FIT 425 Evaluation Research in Fitness and Wellness AND FIT 430 Application of Fitness and Wellness Research
- **Laboratory Course (1 course required):** FIT 115 Applied Anatomy and Physiology in Wellness and Fitness

* An internship option is also available; students may substitute **FIT 499** Exercise Science Internship (9 credits) for three 3-credit didactic courses (FIT 350, 410 and 420). Students may also elect to complete an internship as elective credit (SPT 499) if they wish to complete all courses in the didactic.

Program Notes:

- Students must earn a cumulative GPA of 2.0 or higher to participate in an internship and to be eligible for graduation.
- All General Education/Elective credits, all SPT, all HSC and ATE courses can be completed on campus.
- All FIT prefix courses are completed online.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/exercise-science/index.aspx>

B.S. in Exercise Science: Professional Golf Management Concentration

Program Description

The professional golf management concentration of the Bachelor of Science in Exercise Science is designed for students who plan to teach or coach golf athletes.

Delivery Mode

Multimodal (attend classes on campus and/or via online learning)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Oral Communication Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> HSC 315 First Aid and Personal Safety	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • SPT 305 Ethics in Sport • Any General Education Options Courses (three courses) 	12
Required Major Courses	51
PGM 100 Intro to PGM	3

Department of Exercise Science and Sport Studies

Course	Credits
PGM 125 PGM Internship I	3
PGM 150 Teaching of Golf I	3
PGM 200 Intermediate Topics in PGM	3
PGM 210 Golf Shop Management	3
PGM 225 PGM Internship II	3
PGM 250 Golf Operations Management	3
PGM 260 Golf Perf. Coach. and Tech.	3
PGM 300 Advanced Topics in PGM	3
PGM 310 Turfgrass Management	3
PGM 325 PGM Internship III	3
PGM 350 Food and Beverage Mgt.	3
PGM 405 Expanded Golf Operations	3
PGM 410 Teaching of Golf II	3
PGM 415 Trends and Issues in the Golf Ind.	3
PGM 425 Senior Internship	3
PGM 435 Capstone Internship	3
Required Related Courses	9
FIT 100 Intro to Fitness	3
FIT 250 Current Topics and Strategies for Youth Fitness	3
FIT 325 Integrated Personal Fitness Training	3
Free Electives	19 to 20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** PGM 425 Senior Internship
- **Writing-Intensive Component Courses (2 courses required):** PGM 210 Golf Shop Management AND PGM 410 Teaching Golf II
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/professional-golf-management/index.aspx>

B.S. in Sport Management Studies

Program Description

The Bachelor of Science in Sport Management Studies develops knowledge and skills used by managers, marketers and other professionals within the sport industry.

Delivery Mode

Multimodal (attend classes on campus and/or via online learning)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • SPT 305 Ethics in Sport • Any ACC, BUS or ECO Courses (three courses) 	12
Required Major Courses	60

Department of Exercise Science and Sport Studies

Course	Credits
SPT 100 Introduction to Sport Mgt.	3
SPT 101 Practica in Sport Mgt.	1
SPT 300 Psychology of Sport	3
SPT 310 Sport Marketing	3
SPT 311 Sales Techniques in Sport Ind.	3
SPT 312 Practica in Sport Sales	1
SPT 315 Facility and Event Management	3
SPT 316 Practica in Fac. and Event Mgt.	1
SPT 320 Admin. Intercolleg. Ath. Pgm.	3
SPT 330 Globalization and Intl. Sport	3
SPT 400 Legal Aspects of Sport	3
SPT 405 Finance and Economics of Sport	3
SPT 410 Governance in Sport	3
SPT 425 Org. and Admin. of Sport	3
SPT 430 Sport Mgt. Senior Seminar	3
SPT 499 Internship in Sport Management	12
SOC 309 Sociology of Sport OR SPT 325 Sport and Society	3
HIS 348 History of American Sport OR SPT 340 Hist. Persp. Of American Spt.	3
CDC 305 Spt. Comm. and Media OR SPT 360 Sport Communications	3
Free Electives	19 to 21
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** SPT 430 Sport Management Senior Seminar
- **Writing-Intensive Component Courses (2 courses required):** SPT 310 Sport Marketing AND SPT 425 Organization and Administration of Sport
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes:

Department of Exercise Science and Sport Studies

- Dev. Math and Eng. course do NOT count towards graduation.
- Once a student matriculates into the program, they may not transfer major courses into Cal U.
- Students must have a 2.0 GPA prior to enrolling in SPT 499.
- A business minor is strongly encouraged.

Additional Requirements

Admission to the sport management studies program is open to any student who has been admitted to Cal U. Once a student has requested to be a sport management studies major, a practicum class of observation/work in an approved sport management environment is required. The practicum class is a work experience in a major sport management setting (Heinz Field, PNC Park, community clubs and game day activities) to experience behind-the-scenes operations of sporting events. As a culminating activity in the program, students are required to complete a supervised 400-hour internship. The internship is the student's capstone experience. Students, in conjunction with the program faculty and Internship Office, will secure an internship site based on their unique educational needs and experience.

Candidates for admission to the sport management studies program leading to the Bachelor of Science in Sport Management Studies are required to:

- Maintain a minimum 2.0 cumulative grade point average; students earning a grade below a D in any sport management course(s) (SPT) must repeat the course(s).
- Follow the predetermined sequence of courses; failure to follow the sequence may result in delayed graduation.
- Complete all didactic coursework prior to the capstone internship experience, SPT 499.
- Enroll in the Internship Intent during the preregistration process the semester prior to completing the internship.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/sport-management/index.aspx>

B.S. in Sport Management Studies: Professional Golf Management Concentration

Program Description

The professional golf management concentration of the Bachelor of Science in Sport Management Studies is designed for students interested in golf operations and executive management.

Delivery Mode

Multimodal (attend classes on campus and/or via online learning)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i>	3

Department of Exercise Science and Sport Studies

Course	Credits
Any Oral Communication Course	
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> HSC 315 First Aid and Personal Safety	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> BUS 100 Introduction to Business	3
<i>General Education Options</i> <ul style="list-style-type: none"> • ECO 100 Elements of Economics • SPT 305 Ethics in Sport • Any General Education Options Courses (two courses) 	12
Required Major Courses	51
PGM 100 Intro to PGM	3
PGM 125 PGM Internship I	3
PGM 150 Teaching of Golf I	3
PGM 200 Intermediate Topics in PGM	3
PGM 210 Golf Shop Management	3
PGM 225 PGM Internship II	3
PGM 250 Golf Operations Management	3
PGM 260 Golf Perf. Coach. and Tech.	3
PGM 300 Advanced Topics in PGM	3
PGM 310 Turfgrass Management	3
PGM 325 PGM Internship III	3
PGM 350 Food and Beverage Mgt.	3
PGM 405 Expanded Golf Operations	3

Department of Exercise Science and Sport Studies

Course	Credits
PGM 410 Teaching of Golf II	3
PGM 415 Trends and Issues in the Golf Ind.	3
PGM 425 Senior Internship	3
PGM 435 Capstone Internship	3
Required Related Courses	9
SPT 310 Sport Marketing	3
SPT 400 Legal Aspects of Sport	3
SPT 405 Finance and Economics of Sport	3
Free Electives	19 to 20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** PGM 425 Senior Internship
- **Writing-Intensive Component Courses (2 courses required):** PGM 210 Golf Shop Management AND PGM 410 Teaching Golf II
- **Laboratory Course (1 course required):** Any Laboratory Course

Additional Requirements

Students in this program must maintain a minimum 2.00 cumulative grade point average.

Students complete a total of 16 months of internship through five separate internships. For these internships, they are required to work under a Class A PGA professional at a minimum of three different types of facilities ranging from public, private, municipal and military golf facilities to organizations such as a PGA section office, an amateur or professional tournament series, or a golf equipment manufacturer.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/professional-golf-management/index.aspx>

Department of Health Sciences

Faculty

Dr. Shelly Fetchen DiCesaro (chair) | Dr. Jodi Dusi | Jeff Giovannucci | Dr. Scott Hargraves | Dr. Chris T. Harman | Dr. Mercedes Himmons | Dr. Karen Hjerpe | James Hoover | Aimee (Bosely) Maruniak | Jenni Morrison | Larry Pollack | Tami Sealy | Dr. Ayanna (Lyles) Walker | Dr. Jamie Weary | Michael Scott Zema

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Program

Cal U's Department of Health Sciences offers undergraduate programs in health sciences and physical therapy assistant.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.A.S. in Physical Therapist Assistant
- B.S. in Health Science
- B.S. in Health Science: Pre-Athletic Training

Certificates

The department offers a sub-baccalaureate certificate in:

- Aging Specialist

Minors

Minors available through this department include:

- Gerontology
- Health Science

A.A.S. in Physical Therapist Assistant

Program Description

The Associate of Applied Science in Physical Therapist Assistant degree prepares students for the National Physical Therapy Examination (NPTE) and PTA licensure.

Delivery Mode

Traditional (on campus)

Accreditation

Cal U's PTA program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

Curriculum

Course	Credits
General Education Courses	21
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1

Department of Health Sciences

Course	Credits
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Natural Sciences</i> HSC 110 Human Anatomy and Physiology I	4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • HSC 120 Human Anatomy and Physiology II (4 credits) • SOC 100 Principles of Sociology OR GTY 100 Intro to Gerontology (3 credits) 	7
Required Major Courses	50
PTA 100 Intro to Physical Therapist Assistant	3
PTA 101 Basic Physical Therapy Procedures	1
PTA 110 Intro to Pathology	2
PTA 150 PT Clinical Internship I	4
PTA 200 Professional Issues in PT	2
PTA 205 Interventions in Cardiopulmonary Impairments	3
PTA 210 Interventions in Neurological Impairments	4
PTA 225 Interventions in Orthopedic Impairments	4
PTA 230 PT Interventions Across the Lifespan	3
PTA 240 PTA Special Topics	3
PTA 250 PT Clinical Internship II	12
PTA 260 Pharmacology and Imaging	2
HSC 275 Functional Kinesiology	3
HSC 290 Therapeutic Modalities	4
Total	71

Program Notes: Must pass Part A and Part B of Math Placement Test OR Pass Part A and take DMA 092 Developmental Algebra. The first semester consists of a pre-technical phase that is designed to be a rigorous test

Department of Health Sciences

of students' academic abilities. Students' performance during this phase will largely determine if they are admitted to the technical phase of the program.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/physical-therapist-assistant/index.aspx>

B.S. in Health Science

Program Description

The Bachelor of Science in Health Science degree explores a variety of healthcare-related concepts, including: anatomy and physiology, nutrition and exercise, holistic healthcare, basic sciences, complementary medicine and care for seniors.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> HSC 115 Current Health Issues	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> HSC 110 Anatomy and Physiology I	4
<i>Social Sciences</i> GTY 200 Aging in American Society	3
<i>General Education Options</i> <ul style="list-style-type: none">• PHI 307 Medical Ethics• HSC 315 First Aid and Personal Safety• PSY 100 General Psych	12

Department of Health Sciences

Course	Credits
<ul style="list-style-type: none"> • ATE 340 Sports Nutrition OR Student-Selected General Education Course 	
Required Major Courses	34
GTY 100 Intro to Gerontology	3
HSC 101 Foundations of Health Science	3
HSC 120 Anatomy and Physiology II	4
HSC 210 Culturally Competent Community Health	3
HSC 225 Medical Terminology	2
HSC 250 Nutrition for Health/Wellness	3
HSC 275 Functional Kinesiology	3
HSC 310 Special Populations and Pathology of Disease	3
HSC 325 Physiology of Exercise	3
HSC 360 Holistic Medicine and Healthcare	3
HSC 425 Health Science Capstone	4
Required Related Courses	26
BIO 117 Intro to Human Biology	3
BIO 120 General Zoology	4
CHE 101 General Chemistry I	4
CHE 102 General Chemistry II	4
MAT 205 Stats for Health and Social Science	3
PHY 121 General Physics I	4
PHY 122 General Physics II	4
General Electives	19
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** HSC 425 Health Science Capstone

- **Writing-Intensive Component Courses (2 courses required):** HSC 360 Holistic Medicine and Healthcare AND HSC 310 Special Populations and Pathology of Disease
- **Laboratory Course (1 course required):** HSC 120 Anatomy and Physiology II

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/health-science/index.aspx>

B.S. in Health Science: Pre-Athletic Training Concentration

Program Description

The pre-athletic training concentration of the Bachelor of Science in Health Science degree is designed to prepare students for graduate-level study in athletic training.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> HSC 115 Current Health Issues	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> HSC 110 Anatomy and Physiology I	4
<i>Social Sciences</i> PSY 100 General Psychology	3
<i>General Education Options</i> • GTY 200 Aging in American Society	12

Department of Health Sciences

Course	Credits
<ul style="list-style-type: none"> • PHI 307 Medical Ethics • HSC 315 First Aid and Personal Safety • ATE 340 Sports Nutrition 	
Required Major Courses	58
ATE 150 Intro to Athletic Training	4
ATE 215 Evidence-Based Practice	3
ATE 460 Sports Medicine Research	3
BIO 117 Intro to Human Biology	3
CHE 101 General Chemistry I	4
ENG 102 Composition II	3
HSC 101 Foundations of Health Science	3
HSC 120 Anatomy and Physiology II	4
HSC 210 Culturally Competent Community Health	3
HSC 225 Medical Terminology	2
HSC 250 Nutrition for Health/Wellness	3
HSC 275 Functional Kinesiology	3
HSC 310 Special Populations and Pathology of Disease	3
HSC 325 Physiology of Exercise	3
HSC 360 Holistic Medicine and Healthcare	3
HSC 425 Health Science Capstone	4
MAT 205 Stats for Health and Social Science	3
PHY 121 General Physics I	4
Free Electives*	21
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** HSC 425 Health Science Capstone
- **Writing-Intensive Component Courses (2 courses required):** HSC 360 Holistic Medicine and Healthcare AND HSC 310 Special Populations and Pathology of Disease
- **Laboratory Course (1 course required):** HSC 120 Anatomy and Physiology II

* Any courses desired. Students are encouraged to work with their adviser to determine the appropriate courses to select.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's athletic training program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Certificate in Aging Specialist

Program Description

The aging specialist certificate provides students from a wide variety of majors with the knowledge and skills necessary to work with older populations.

Curriculum

Course	Credits
Required Courses	15
GTY 100 Intro to Gerontology	3
GTY 200 Aging in American Society OR GTY 300 Aging Policies and Services	3
GTY 305 Biology of Aging OR GTY 380 Wellness and Aging	3
GTY 315 Practicum	3
GTY 400 Adult Development and Aging	3
Gerontology Elective <i>(Select one course not previously taken)</i>	3
GTY 200 Aging in American Society	3
GTY 300 Aging Policies and Services	3
GTY 305 Biology of Aging	3
GTY 310 Aging and the Family	3
GTY 320 Alternatives in Long-Term Care	3
GTY 330 Dying, Death and Bereavement	3
GTY 340 Diversity in Aging	3
GTY 350 Ethical Issues in Aging	3
GTY 380 Wellness and Aging	3
GTY 410 Research Methods in Gerontology	3
GTY 430 Seminar in Gerontology	3

Course	Credits
Total	18

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/aging-specialist/index.aspx>

Minor in Gerontology Curriculum

Course	Credits
Required Courses	3
GTY 100 Intro to Gerontology	3
Social Aspects of Aging <i>(Select one course)</i>	3
GTY 200 Aging in American Society	3
GTY 300 Aging Policies and Services	3
GTY 320 Alternatives in Long-Term Care	3
GTY 340 Diversity in Aging	3
GTY 350 Ethical Issues in Aging	3
Psychological Aspects of Aging <i>(Select one course)</i>	3
GTY 330 Dying, Death and Bereavement	3
GTY 400 Adult Development and Aging	3
Biological/Health Aspects of Aging <i>(Select one course)</i>	3
GTY 305 Biology of Aging	3
GTY 380 Wellness and Aging	3
Practicum <i>(Select one course)</i>	3 to 6
GTY 315 Practicum	3
GTY 440 Internship	6

Department of Health Sciences

Course	Credits
Integrating Course <i>(Select one course)</i>	3
GTY 310 Aging and the Family	3
GTY 350 Ethical Issues in Aging	3
GTY 430 Seminar in Gerontology	3
Gerontology Elective	3
Any GTY course not previously taken above	3
Total	21 to 24

Minor in Health Science Curriculum

Course	Credits
Required Courses	
HSC 101 Foundations of Health Science	3
HSC 210 Culturally Competent Community Health	3
HSC 225 Medical Terminology	2
HSC 250 Nutrition for Health / Wellness	3
HSC 310 Special Populations and Pathology of Disease	3
HSC 315 First Aid and Personal Safety	3
HSC 360 Holistic Medicine and Healthcare	3
Total	20

Suggested additional courses for professional development:

- **HSC 110** Anatomy and Physiology 1 (4 cr)
- **HSC 120** Anatomy and Physiology 2 (4 cr)
- **HSC 275** Functional Kinesiology (3 cr)
- **HSC 325** Physiology of Exercise (3 cr)
- **HSC 425** Health Science Capstone (4 cr)

Department of Health and Human Service Professions

Faculty

Dr. Azadeh Block (chair) | Ashley Barr Soske | Ann Bergamasco | Dr. Sheri Boyle | Nancy Carlino | Erica Maloney | Dr. Marta S. McClintock-Comeaux | Dr. Robert Skwarecki | Dr. Carolyn Wass | April Wright | Dr. Bonnie Young Laing | Jane Zupancic

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Health and Human Service Professions includes undergraduate programs in communication disorders and social work. Programs offered through this department include:

- B.S. in Communication Disorders
- BSW in Social Work
- Certificate in Trauma-Informed Care
- Minor in Social Work
- Minor in Women's Studies

B.S. in Communication Disorders

Program Description

The Bachelor of Science in Communication Disorders (CMD) is a pre-professional program designed for students seeking to eventually become speech-language pathologists. The program prepares students for future graduate training, which is needed before employment as a speech-language pathologist is possible. It is important to maintain a GPA of 3.00 or higher because few graduate schools will accept less.

At the undergraduate level, students gain a broad understanding of the scientific bases of normal speech and hearing processes and the diagnostic and rehabilitation procedures necessary to work with individuals who have communication problems.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> EDU 350 Supporting English Language Learners (recommended) OR Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i>	3

Department of Health and Human Service Professions

Course	Credits
MAT 181 College Algebra (recommended) OR Any Mathematics and Quantitative Literacy Course	
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> EDU 333 Technology for Teaching and Learning (recommended) OR Any Technological Literacy Course	3
<i>Humanities</i> Any American/English Literature Course (recommended) OR Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course (CMD-approved BIO, CHE or PHY recommended)	3 or 4
<i>Social Sciences</i> EDU 310 Teaching in a Multicultural Society (recommended) OR Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • PSY 100 General Psychology (recommended) • Any CMD-approved Ethics and Multicultural Awareness Emphasis Course • General Education Options Courses (two courses approved by adviser; ANT, BIO, CHE, ESP, GTY, PHY, foreign language and linguistics courses recommended) 	12
Required Major Courses	50
CMD 105 Language and Speech Development	3
CMD 108 Nature of Language	3
CMD 203 Phonetics	3
CMD 216 Articulation	3
CMD 220 Comm Across the Lifespan	3
CMD 221 Speech Science	3
CMD 300 Fundamentals of Language Disorders in Children	3

Department of Health and Human Service Professions

Course	Credits
CMD 301 Fundamentals of Language Disorders in Adults	3
CMD 305 Intro to Audiology	3
CMD 306 Acoustics/Psychoacoustics	3
CMD 310 Anatomy and Physiology	3
CMD 320 Assessment of Speech and Language	3
CMD 321 Common Organic Disorders	3
CMD 322 Tech Writing in Health and Ed	3
CMD 450 Intro to Clinical Procedures	3
CMD Clinical Practicum Series: <ul style="list-style-type: none"> • CMD 400 Clinic Pract: Video (1 credit) • CMD 401 Clinic Pract: Sp/Hear Clinic (1 credit) • CMD 402 Clinic Pract: Learn/Lang Ctr (2-3 credits) 	4 to 6
Recommended Related Courses	9 to 11
Any BIO (CMD approved)	3 or 4
Any CHE or PHY (CMD approved)	3 or 4
Any Statistics (CMD approved)	3
Related Electives	9
CMD 350 Sign Language and Braille I	3
ESP 210 Special Education Foundations and Collaboration	3
PSY 208 Educational Psychology	3
Free Electives	10 to 12
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** CMD 450 Intro to Clinical Procedures
- **Writing-Intensive Component Courses (2 courses required):** CMD 321 AND CMD 322
- **Laboratory Course (1 course required):** BIO, CHE or PHY recommended

Program Notes:

- 42 credits must be upper division courses (300 or 400 level).
- Credits associated with developmental courses do not count toward degree
- 3.0 overall GPA is required to graduate from this major; otherwise, the student will earn a General Education degree.
- Biology, chemistry, ethics and physics courses must meet current ASHA requirements.
- Two science courses are required. One biology and one physical science course that addresses either chemistry or physics and meets current ASHA requirements.
 - One of these courses should satisfy the Gen Ed - Natural Sciences requirement.
 - One of these courses should satisfy the Gen Ed - Laboratory course requirement.
- Student must submit current clearances, checks, etc., prior to academic term in which clinical experiences/observations are obtained, such as CMD Clinical Practicum Series. These include but are not limited to: ACT 24 (Arrest/Conviction), ACT 31 (Mandated Report Training), Act 34 (Criminal Hx), ACT 114 (FBI Fingerprinting), ACT 151 (Child Abuse Hx), HIPAA Compliance and Hand Hygiene Training.
- Four credits of the Clinical Practicum Series are required (6 credit max) for this degree. Rec: CMD 400 (1-credit), CMD 401 (1- credit) and CMD 402 (2-3 credits). First-year students and those without an overall GPA of 2.0 are not permitted to enroll in the CMD Clinical Practicum Series.
- Graduate school acceptance is competitive and the completion of this undergraduate program does not guarantee acceptance into this University's graduate program in communication disorders.

Additional Requirements

Students will complete clinical work via the CMD 400 series.

The American Speech-Language-Hearing Association (ASHA) requires all CMD majors to successfully complete one biology course, one physics or chemistry course, one statistics course and a social science course outside of this department. Students register for these courses through the General Education portion of the curriculum.

Clinical Experience

Faculty believe that students should experience hands-on clinical contact early in their program of study. The communication disorders program provides contact with clients by having undergraduate students assist in:

- the department's Learning and Language Center, a preschool program;
- the University Speech and Hearing Clinic; and
- the University Audiology Clinic.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/communication-disorders/index.aspx>

BSW in Social Work

Program Description

The Bachelor of Social Work (BSW) in Social Work degree builds knowledge and skills related to the delivery of social services to individuals, families and groups. Students complete 480 hours of practicum with a social services agency or organization as part of this program.

Delivery Mode

Traditional (on campus)

Accreditation

This BSW program is accredited by the Council on Social Work Education.

Curriculum

Course	Credits
General Education Courses	40
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> SOC 100 Principles of Sociology	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • Any HIS Course (U.S. History recommended) • Any POS Course (American Government recommended) 	12
Special Experience/Field Work Courses <i>(pre-reqs. SOW 345, 370, 405)</i>	15
SOW 425 Field Education	12
SOW 435 Field Education Seminar	3

Department of Health and Human Service Professions

Course	Credits
Advanced Writing Courses	6
SOW 370 Policy Practice in Social Work (<i>majors only; pre-req. SOW 360</i>)	3
SOW 405 Social Work Research Method (<i>majors only; pre-req. SOW 302</i>)	3
Pre-Candidacy Courses	12
SOW 150 Introduction to Social Work	3
SOW 201 Interviewing for the Human Services*	3
SOW 208 Diversity in a Changing World	3
SOW 215 Human Behavior and the Social Environment I: Life Course	3
Practice Intervention Courses	15
SOW 302 SW Practice with Individuals (<i>majors only; pre-reqs. SOW 150, 201, 208, 215 and ENG 101, 102, all courses with a grade of C or higher</i>)	3
SOW 304 SW Practice with Families (<i>majors only; pre-req. SOW 302 with a grade of C or higher</i>)	3
SOW 345 SW Practice with Groups (<i>majors only; pre-req. SOW 302 with a grade of C or higher</i>)	3
SOW 349 SW Practice with Organizations and Communities (<i>majors only; pre-reqs. SOW 302, 304 with a grade of C or higher</i>)	3
SOW 316 Human Behavior and the Social Environment II: Groups, Organizations and Communities	3
Social Welfare and Policy Analysis Course	3
SOW 360 Social Welfare History, Policy Analysis and Social Service Delivery (<i>majors and minors only; pre-req. SOW 150 with a grade of C or higher for SW majors ONLY</i>)	3
Special Interest Courses	6
Select two of the following:	6

Department of Health and Human Service Professions

Course	Credits
<ul style="list-style-type: none"> • SOW 306 SW in the Rural Environment (<i>pre-req. SOW 150</i>) • SOW 310 Trauma Informed Social Work Practice • SOW 330 Child Welfare • SOW 350 SW with the Aging (<i>pre-req. SOW 150</i>) • SOW 364 Juvenile Delinquency (<i>pre-req. PSY 100</i>) • SOW 410 SW in Mental Health • SOW 495 Seminar in Special Topics (<i>Jr. or Sr. in major or permission of instructor</i>) 	
Required Related Course	3
PSY 100 General Psychology	3
Related Electives	3
Any ANT, ECO, EDU, GTY, JUS, POS, PSY, SOC, SOW, WST 300-level or above course	3
Free Electives	17 or 18
Total	120

* Fulfills laboratory course requirement.

Program Notes: Students must have a grade of C (2.0) or better for pre-candidacy courses. Courses required for candidacy are ENG 101, ENG 102, SOW 150, SOW 201, SOW 208 and SOW 215. Students must apply for acceptance to candidacy before enrolling in SOW 302. All social work courses must be completed with a full C or higher.

Additional Requirements

Full admission into the upper-division skills classes of the social work program requires that the student apply for degree candidacy prior to entering SOW 302. By the start of this class (SOW 302), students must have:

1. completed a minimum of 45 credit-hours;
2. completed SOW 150, 201, 208 and 215 and ENG 101 and 102 with a minimum grade of C; and
3. achieved an overall GPA of 2.00.

Social work majors also need to complete Social Work Pre-Practicum Orientation the semester before they enroll in SOW 425 and 435.

Students need to maintain a 2.50 GPA in the major to remain in good standing and to graduate from the program.

Related Courses/Electives

To earn the BSW degree, students must take the following courses as related courses and related electives:

- PSY 100 General Psychology
- Any two ANT, ECO, GTY, POS, PSY, SOC, SOW or WST courses, one 200 level or above, one 300 level or above

General Education Recommendations

The department recommends that students in the major choose from the following courses for other General Education requirements or for free electives:

- **BIO 103** Contemporary Issues in Biology
- **BIO 112** Biology of Sexually Transmitted Diseases
- **CSC 101** Personal Productivity Software (technological literacy menu)
- **ECO 100** Elements of Economics
- **GIS 311** Geographic Information Systems
- **GTY 100** Introduction to Gerontology
- **MAT 215** Statistics (math menu)
- **PSY 400** Abnormal Psychology
- **SOC 205** Contemporary Social Problems
- **SOW 303** Human Sex and Society (health and wellness menu)

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/social-work/index.aspx>

Certificate in Trauma-Informed Care (TIC)

Program Description

The trauma-informed care (TIC) sub-baccalaureate certificate combines discipline-specific approaches to TIC in psychology and social work to provide students with a well-rounded generalist approach to providing such care.

Curriculum

Course	Credits
SOW 201 Interviewing for the Human Services	3
PSY 222 Psychology of Stress Management	3
SOW 310 Trauma Informed Social Work Practice	3
PSY 415 Trauma-Informed Care in Psychology	3
Total	12

Minor in Social Work

Program Description

The Social Work minor provides students with a fundamental knowledge of social work processes and theories of human behavior in the social environment. It facilitates an understanding of social work as an allied profession or further study in the field.

Curriculum

Department of Health and Human Service Professions

Course	Credits
Social Work Program Requirements	18
SOW 150 Introduction to Social Work	3
SOW 201 Interviewing for the Human Services	3
SOW 208 Diversity in a Changing World	3
SOW 215 Human Behavior and the Social Environment I: Life Course	3
SOW 316 Human Behavior and the Social Environment II: Groups, Organizations and Communities	3
SOW 360 Social Welfare History, Policy Analysis and Social Service Delivery	3
General Education (Health and Wellness)	3
SOW 303 Human Sex and Society	3
Total	21

Program Notes: Contact the Department of Health and Human Services for a permit override for SOW 303 and 360.

Minor in Women's Studies

Program Description

The minor in women's studies promotes critical-thinking and self-reflection while enabling students to better understand other perspectives. Students develop a keen awareness of how gender and diversity affect perspectives and experiences as they examine gender and social justice issues within individual, familial, national and global systems. Analysis of the complex intersections of individual and cultural factors and how they relate to power and social justice are integrated throughout the program. Coursework challenges students to reconsider assumptions about the similarities and differences between and among women, men and all genders.

The minor complements a wide range of fields, such as social work, psychology, anthropology, sociology, history, criminal justice, education, business, nursing, counseling, law, art, journalism, political science, athletics, English and medicine, to name a few.

Curriculum

Course	Credits
Required Courses	6
WST 200 Intro to Women's Studies	3

Department of Health and Human Service Professions

Course	Credits
WST 400 Capstone: Advanced Women's Studies	3
Women's Experience Electives <i>(Select two courses from the following)</i>	6
ANT 300 Cultural Views of Women	3
ENG 127 Woman as Hero	3
ENG 315 Survey American Women Writers	3
HIS 309 Gender in Latin America	3
HIS 312 Women in Europe	3
HIS 325 History of American Women	3
NUR 101 Women's Health Issues	3
PSY 311 Psychology of Gender Roles	3
SOC 290 Gender and Work	3
SOC 320 International Women's Movement	3
WST 300 Selected Topics	3
WST 320 Lesbian, Gay, Bisexual, Transgender, Queer Studies	3
WST 330 Exam Gender, Race, Sexuality and Class in Visual Media	3
WST 340 International Violence: Focused on Women	3
WST 430 Women's Studies Internship	3
Women's Studies Electives <i>(Select three courses from the following)</i>	9
ANT 300 Cultural Views of Women	3
ANT 329 Anthropology Internship	3
ECE 319 Parent and Community Involvement in Education	3
ECE 405 Early Childhood Education Seminar	3
EDU 310 Teaching Multicultural Society	3
ENG 112 Myth, Magic and Mysticism	3
ENG 127 Woman as Hero	3

Department of Health and Human Service Professions

Course	Credits
ENG 315 Survey of American Women Writers	3
GTY 200 Aging in American Society	3
GTY 300 Aging Policies and Services	3
GTY 310 Aging in the Family	3
GTY 330 Dying, Death and Bereavement	3
GTY 340 Diversity in Aging	3
HIS 309 Gender in Latin America	3
HIS 312 Women in Europe	3
HIS 317 African-American History to 1877	3
HIS 318 African-American History since 1877	3
HIS 325 Women in U.S. History	3
HIS 347 Race and Ethnicity in U.S.	3
HIS 352 Native American History to 1850	3
HIS 353 Native American History from 1850	3
HIS 366 History of Modern Latin America	3
HIS 422 History of the Antebellum South	3
HIS 445 Social History	3
JUS 215 Victimology	3
JUS 399 Selected Topics (with WST director's approval)	3
PHI 225 Social/Political Philosophy	3
POS 322 Politics of the Middle East	3
POS 323 Politics of Latin America	3
POS 325 Politics of Asia	3
POS 326 Politics of Africa	3
PSY 311 Psychology of Gender Roles	3
PSY 424 Capstone (with WST director's approval)	3
PSY 425 Project (with WST director's approval)	3
SOC 205 Contemporary Social Problems	3
SOC 210 Social Stratification	3
SOC 290 Gender and Work	3

Department of Health and Human Service Professions

Course	Credits
SOC 315 Social Minorities	3
SOC 320 International Women's Movements	3
SOC 325 The Family	3
SOC 377 Modern Freedom Movements	3
SOC 410 Social Theory and Society	3
SOW 303 Human Sex and Society	3
SOW 308 Diversity in a Changing World	3
SOW 340 Poverty/Related Social Problems	3
SOW 495 Seminar in Special Topics (with WST director's approval)	3
WST 300 Selected Topics in Women's Studies	3
WST 320 Lesbian, Gay, Bisexual, Transgender and Queer Studies	3
WST 330 Examining Gender, Race, Sexuality and Class in Visual Media	3
WST 340 International Violence: Focused on Women	3
WST 430 Internship in Women's Studies	3
Total	21

Program Notes: 9 credits must be in 300- and 400-level courses.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/womens-studies/index.aspx>

Department of Humanities

Faculty

Dr. Michael Slaven (chair) | Dr. Abdullah Alsaffar | Maggy D. Aston | James B. Bové | Dr. Andrea Cencich | Dr. Clarissa W. Confer | Dr. Paul Crawford | Laura DeFazio | Dr. Kelton Edmonds | Dr. Arcides Gonzalez | Dr. Joseph C. Heim | Dr. Elizabeth A. Larsen | Dr. Sean Madden | Todd Pinkham | Dr. Craig A. Smith | Dr. Codie Stone | Dr. Razak Surrey | Dr. Emily M. Sweitzer | Dr. Christina A. Toras | Dr. Laura Tuennerman

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Humanities includes undergraduate programs in art, history, global studies, jurisprudence, languages, political science and sociology.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.A. in Liberal Studies
- B.A. in Arabic Language and Culture
- B.F.A. in Art Studio
- B.A. in Global Studies
- B.A. in History
- B.A. in Jurisprudence: Legal Studies
- B.A. in Liberal Studies
- B.A. in Political Science
- B.A. in Political Science: Pre-Law
- B.A. in Social Sciences
- B.A. in Sociology
- B.A. in Sociology: Social Deviance

Note: Cal U also offers B.S.Ed. degrees in secondary education for Art (K-12) and Social Studies through its Department of Education.

Certificate Programs

The department also offers sub-baccalaureate certificates in:

- Arabic Language and Culture
- History of War, Service and the American Experience
- Spanish for Business
- Spanish for Law Enforcement
- Studio Art
- Violence and Incidence Collaboration Evaluation in Schools

Minors

The following minors are also available through the Department of Humanities:

- African American Studies
- Arabic
- French
- History
- Political Science
- Pre-Law
- Sociology

Department of Humanities

- Spanish
- Studio Art

Note: Additional art-related minors offered under other departments include:

- Arts Administration, through the Department of Business, Economics and Enterprise Sciences
- Art History, through the Department of Culture, Media, and Performance

Honor Societies

- **History** students who meet the academic requirements are eligible for membership in Phi Alpha Theta, national honor society in history.
- **Political science** students who meet the academic requirements are eligible for membership in Pi Sigma Alpha, the national political science honor society.
- Students in the **sociology** program are eligible for membership in Pi Gamma Mu, the social science honor society, and Alpha Kappa Delta, the honor society for sociology.

A.A. in Liberal Studies

Program Description

The Associate of Arts in Liberal Studies degree offers students a flexible, customized curriculum. Students are able to select courses from a wide range of liberal arts topics in the humanities, social sciences and natural sciences. This enables them to tailor their degree to their personal and professional interests.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	30
<i>Composition</i> <ul style="list-style-type: none">• ENG 101 English Composition I• ENG 102 English Composition II	6
<i>Public Speaking</i> Any CDC Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Science Course	3
<i>Health and Wellness</i>	3

Department of Humanities

Course	Credits
Any Health Wellness Course	
<i>General Education Options</i> Any General Education Options Course	3
Required Major Courses*	24
Lower- and/or Upper-Division Electives	15
Upper-Division Electives	9
Related Additional Electives	6
Total	60

* "Required Major Courses" must be selected from humanities, natural sciences and social sciences disciplines, as follows: ANT, ARB, ART, BIO, CHE, CMD, COM, CSC, EAS, ECO, EDE, EDU, ELC, ELE, ELM, ENG, ENS, ESP, FRE, GEO, HIS, JUS, LEA, MAT, MUS, PHI, PHS, PHY, POS, PSY, SEC, SOC, SOW, SPN, TED, THE, WFD, WST.

Program Notes:

- A laboratory course is also required; students may select any laboratory course.
- A maximum of 24 credits can be used with the same course prefix.
- 12 credits (four courses) of upper-division (any course numbers 200 or above with at least one pre-requisite) are required.
- Developmental courses do not count toward the 120 credits necessary for graduation, but are calculated in your overall GPA.

Program Webpages

<https://www.calu.edu/academics/undergraduate/associate/liberal-studies/index.aspx>

<https://www.calu.edu/academics/undergraduate/associate/liberal-studies-online/>

B.A. in Arabic Language and Culture

Program Description

The Bachelor of Arts in Arabic Language and Culture degree prepares students to read, write and speak Modern Standard Arabic and to gain deep insights into Arabic people, society and customs.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	40 or 41

Department of Humanities

Course	Credits
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 English Composition II • General Education Options Courses (two courses) 	12
Required Major Courses	18
ARB 101 Elementary Arabic I	3
ARB 102 Elementary Arabic II	3
ARB 203 Intermediate Arabic I	3
ARB 204 Intermediate Arabic II	3
ARB 350 Advanced Arabic I	3
ARB 351 Advanced Arabic II	3
Required Related Courses	12
Select from the following:	12

Department of Humanities

Course	Credits
<ul style="list-style-type: none"> • MFL 481 Mod Lang Intern (3-12 credits) • MFL 460 Mod Lang and Cultural Intern (3-12 credits) • MFL 479 Mod Lang and Field Studies (3-12 credits) • ARB 480 Selected Topics in Arabic (3-12 credits) • ARB 311 Arabic Conversation (3 credits) • ARB 341 Contemp. Arabic Culture (3 credits) • ARB 342 The Culture of Islam (3 credits) • ARB 343 Images of Islam (3 credits) • ARB 401 Intro. to Arabic Linguistics (3 credits) • ARB 402 Arabic Translation (3 credits) • ARB 421 Arabic Lit. in Translation (3 credits) 	
Related Electives	6
Select two courses in a foreign language and/or culture other than Arabic	6
Free Electives	44
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Approved Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any Approved Writing-Intensive, Upper-Division ARB courses
- **Laboratory Course (1 course required):** Any Approved Laboratory Course

Program Notes:

- Graduation Requirements: Minimum GPA - 2.00; Minimum Credits - 120 for only B.A. All major and general education courses completed.
- 42 credits of the required 120 credits must include advanced-standing courses (defined as any course numbered 200 or above with at least one pre-requisite course). Any course numbered 200-299 must have at least one pre-requisite course to be counted as upper division. 300 level and above is counted automatically as upper division.
- Academic Advisement: Consult your adviser regarding an appropriate schedule and all other issues relating to your major.
- Additional Reminders: Developmental courses do not count toward the credits necessary for graduation but are calculated in your overall GPA.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's Arabic program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/arabic-language-and-culture/index.aspx>

B.A. in Global Studies

Program Description

The Bachelor of Arts in Global Studies degree increases students' global awareness while allowing them to select a focus area of study that aligns with their career goals and interests.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none">Any Ethics and Multicultural Awareness Emphasis Course	12

Department of Humanities

Course	Credits
• General Education Courses (three courses)	
Required Major Course	3
INT 200 Intro to International Studies	3
Language Proficiency Courses*	15
Elementary I: SPN 101, FRE 101 or ARB 101	3
Elementary II: SPN 102, FRE 102 or ARB 102	3
Intermediate I: SPN 203, FRE 203 or ARB 203	3
Intermediate II: SPN 204, FRE 204 or ARB 204	3
Advanced Course: SPN 311, FRE 345 or ARB 350	3
Cultural/International Experience Courses	6
Select two courses: SPN 345, SPN 346, SPN 348, SPN 349, SPN 350, FRE 341, FRE 343, FRE 344, FRE 346, ARB 351, ARB 480, MFL 479, MFL 481, ENS 480	6
Focus Area Courses (select one focus area)**	18
<i>Business and Economics Focus:</i> ACC 200, ECO 201, ECO 202, FIN 301, MGT 300, MGT 431, MKT 300	0 or 18
<i>History and Political Science Focus</i> HIS 106, HIS 112, HIS 240, HIS 309, HIS 316, HIS 323, HIS 348, HIS 366, HIS 370, HIS 379, HIS 425, HIS 430, POS 210, POS 312, POS 320, POS 322, POS 323, POS 325, POS 326, POS 336	0 or 18
<i>Biology and Environment Focus***:</i> BIO 327, BIO 337, BIO 400, BIO 414, BIO 433, BIO 435, BIO 441, BIO 445, BIO 478, BIO 488, ENS 399, ENS 425, ENS 440, ENS 475, ENS 480, ENS 495	0 or 18
<i>Geography Focus:</i> GEO 100, TOU 101, TOU 205, GEO 217, GEO 220, GEO 325, TOU 350, TOU 400	0 or 18
<i>Global Issues Focus:</i> ACC 200, ANT 100, ANT 255, ANT 232, ANT 300, ART 316, ART 317, BIO 103, BIO 232, CHE 381, GLG	0 or 18

Department of Humanities

Course	Credits
230, EAS 300, ECO 201, ECO 202, ENS 101, FIN 301, GEO 100, TOU 101, TOU 205, GEO 217, GEO 220, GEO 325, TOU 350, TOU 400, HIS 106, HIS 112, HIS 240, HIS 309, HIS 316, HIS 323, HIS 348, HIS 366, HIS 370, HIS 379, HIS 425, HIS 430, JUS 305, JUS 400, JUS 470, MAT 304, MGT 300, MGT 431, MKT 300, PHS 137, PHI 200, PHI 220, PHI 225, POS 210, POS 312, POS 320, POS 322, POS 323, POS 325, POS 326, POS 336, SOC 210, SOC 320, SOC 330, SOC 377, SOW 340	
Free Electives	37 or 38
Electives courses are based on the student's interests and may include requirements toward a declared minor	37 or 38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Approved by Focus Area Adviser
- **Laboratory Course (1 course required):** Any Laboratory Course

* Additional languages may be taken, with approval.

** Select six courses within the chosen focus area.

*** Those who select the "Biology and Environmental Focus" are also required to minor in biology (21 credits in BIO/ENS). Required courses are: BIO 120, 125, 215 (12 credits). Suggested additional courses are: BIO 232, 248, 318 and ENS 101.

Program Notes: Minimum GPA - 2.0; Minimum Credits - 120. Developmental courses do not count toward the 120 credits necessary for graduation but are calculated in your overall GPA.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/international-studies/index.aspx>

B.A. in History

Program Description

The Bachelor of Arts in History degree develops students' historical knowledge and critical thinking skills.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> <ul style="list-style-type: none"> • ENG 101 English Composition I • ENG 102 Composition II OR HON 250 	6
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Additional General Education Courses (two courses) 	9
Required Major Courses	42
HIS 295 Craft of History	3
HIS 491 Readings in History	3
HIS 495 Seminar in History	3
Select two: HIS 101, 104, 111	6
Select two: HIS 102, 106, 112	6
Select two: HIS 309, 310, 317, 323, 324, 345, 352, 353, 366, 367, 370, 410, 425, 430; POS 322, 325, 326	6

Department of Humanities

Course	Credits
Select five HIS electives (at least three at the 300 or 400 level)	15
Free Electives	37 to 38
Select at least 20 credits at the 300 or 400 level	37 to 38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** HIS 491 Reading in History
- **Writing-Intensive Component Courses (2 courses required):** HIS 491 Readings in History AND HIS 495 Seminar in History
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: Minimum GPA - 2.0; Minimum Credits - 120. Developmental courses do not count toward the 120 credits necessary for graduation but are calculated in your overall GPA.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/history/index.aspx>

B.A. in Jurisprudence: Legal Studies Concentration

Program Description

The legal studies concentration of the Bachelor of Arts in Jurisprudence degree provides students with a strong foundation in legal reasoning, legal analysis and the historical development of legal principles. Special emphasis is given to the practical application of law in today's workplace through a comprehensive study of a wide range of legal practice areas. Discipline-related elective courses enable students to tailor this program to suit specific career aspirations.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i>	3

Department of Humanities

Course	Credits
Any CDC Public Speaking Course	
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Additional General Education Courses (three courses) 	12
Required Major Courses	9
JUR 300 Classical Jurisprudence	3
JUR 310 Medieval Jurisprudence	3
JUR 320 Anglo-American Jurisprudence	3
Required Related Courses	33
LAW 300 The Paralegal Profession	3
LAW 310 Legal Research and Writing	3
LAW 320 Litigation and Trial Evidence	3
LAW 330 Criminal Law for Paralegals	3
LAW 340 Family Law	3
LAW 350 Real Estate Law	3
LAW 360 Law, Business and the Workplace	3
LAW 370 Administrative Law	3

Department of Humanities

Course	Credits
LAW 380 Estates and Trusts	3
LAW 400 Constitutional Law for Paralegals	3
LAW 410 Law and Ethics	3
Free Electives*	37 to 38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** JUR 310
- **Writing-Intensive Component Courses (2 courses required):** JUR 300 AND JUR 310
- **Laboratory Course (1 course required):** Any Laboratory Course

* The following LAW electives are recommended, though any upper-division course qualifies as an elective:

- **LAW 390** Bankruptcy (3 credits)
- **LAW 420** Law and Conflict Resolution (3 credits)
- **LAW 430** Elder Law (3 credits)
- **LAW 440** Immigration Law (3 credits)
- **LAW 450** Labor and Employment Law (3 credits)
- **LAW 460** School Law (3 credits)

Program Notes: 42 credits of advanced coursework (any 300- or 400-level course or any 200-level course with at least one pre-requisite) are required. Transfer students entering this program will have at least 40 semester-credit-hours of college credits; first-year students are also accepted. Students entering with an associate degree will need fewer electives.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.A. in Jurisprudence to M.S. in Legal Studies) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/jurisprudence/legal-studies/index.aspx>

B.A. in Liberal Studies

Program Description

The Bachelor of Arts in Liberal Studies degree provides students with flexible, customizable curriculum options. Courses from the humanities, natural sciences and social sciences are used to fulfill the major requirements. They include the following:

- **Humanities:** art, communication studies, English, foreign languages, literature, music, philosophy and theatre
- **Natural Sciences:** biology, chemistry, computer science, earth science, environmental science, mathematics, physical science and physics

Department of Humanities

- **Social Sciences:** anthropology, criminal justice, economics, geography, history, political sciences, psychology, sociology, social work, leadership and women's studies

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> <ul style="list-style-type: none"> • ENG 101 English Composition I • ENG 102 English Composition II 	6
<i>Public Speaking</i> Any CDC Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Additional General Education Courses (two courses) 	9
Required Major Courses	39
LST 490 Seminar in Liberal Studies	3
Lower- and/or Upper-Division Electives*	21
Upper-Division Electives*	15

Department of Humanities

Course	Credits
Free Electives	40 or 41
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** LST 490 Liberal Studies Seminar
- **Writing-Intensive Component Courses (2 courses required):** Any Upper-Division, Writing-Intensive Menu Courses from: ANT, ARB, ART, BIO, CHE, COM, CSC, EAS, ECO, ENG, ENS, FRE, GEO, HIS, JUS, LEA, MAT, MUS, PHI, PHS, PHY, POS, PSY, SOC, SOW, SPN, THE, WST
- **Laboratory Course (1 course required):** Any Laboratory Course

* Electives listed under "Required Major Courses" must be selected from the following disciplines: ANT, ARB, ART, BIO, CHE, COM, CSC, EAS, ECO, ELC, ENG, ENS, FRE, GEO, HIS, JUS, LEA, MAT, MUS, PHI, PHS, PHY, POS, PSY, SOC, SOW, SPN, THE, WFD, WST

Program Notes:

- A maximum of 24 credits can be used with the same course prefix.
- 42 credits (or 14 courses) of upper-division (any course numbered 200 or above with at least one pre-requisite course) courses are required.
- No more than 30 credits may be earned via PLA.
- Developmental courses do not count toward graduation but are calculated in the overall GPA.

Program Webpages

<https://www.calu.edu/academics/undergraduate/bachelors/liberal-studies/index.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/liberal-studies/online.aspx>

B.A. in Political Science

Program Description

The Bachelor of Arts in Political Science degree explores the American political system, public administration and policy, political theories, international relations and comparative political systems.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> <ul style="list-style-type: none">• ENG 101 English Composition I	6

Department of Humanities

Course	Credits
<ul style="list-style-type: none"> Select from: ENG 102, 211, 217; HON 250 	
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> Any Ethics and Multicultural Awareness Emphasis Course Additional General Education Courses (two courses) 	9
Required Major Courses	12
POS 100 Intro. To Political Sci.	3
POS 105 American Politics	3
POS 301 Research Methods POS	3
POS 450 Seminar in Politics	3
Required Related Courses	12
<i>American Politics Course</i> (select one): POS 303, 306, 310, 311, 314, 315, 316, 317, 318, 319, 329, 344, 415	3
<i>International Relations/Comparative Politics Course</i> (select one): POS 210, 312, 320, 323, 325, 326, 336, 340, 346, 360, 381	3
<i>Political Theory Course</i> (select one): POS 307, 327, 330, 347, 348	3

Department of Humanities

Course	Credits
<i>Public Administration/Public Policy Course</i> (select one): POS 300, 308, 317, 335, 344, 355, 365, 370, 375	3
Political Science Electives	18
Select six POS courses	18
Free Electives	37 or 38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** POS 450 Seminar in Politics
- **Writing-Intensive Component Courses (2 courses required):** POS 301 Research Methods in Political Science AND POS 450 Seminar in Politics
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: Minimum GPA - 2.0; Minimum Credits - 120.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/political-science/index.aspx>

B.A. in Political Science: Pre-Law Concentration

Program Description

The pre-law concentration of the Bachelor of Arts in Political Science is designed for students who plan to go on to law school or pursue other graduate studies. The program hones students' analytical reading, writing and critical thinking skills as well as their ability to make a persuasive argument.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> <ul style="list-style-type: none"> • ENG 101 English Composition I • Select from: ENG 102, 211, 217; HON 250 	6

Department of Humanities

Course	Credits
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Additional General Education Courses (two courses) 	9
Required Major Courses	12
POS 100 Intro. To Political Sci.	3
POS 105 American Politics	3
POS 301 Research Methods POS	3
POS 450 Seminar in Politics	3
Required Related Courses	30
POS 316 Judicial Policy OR LAW 370 Administrative Law	3
HIS 435 History of Law OR HIS 322 History of Religious Persecution	3
POS 327 Contemp. Political Thought OR POS 330 American Political Ideas	3
PHI 115 Logic and Language OR PHI 211 Formal Logic	3

Department of Humanities

Course	Credits
CDC 201 Argumentation and Advocacy OR CDC 302 Persuasion	3
Political Science Elective	3
<i>U.S. Constitution Course</i> (select one): POS 314, 315; HIS 308	3
<i>Political Theory Course</i> (select one): POS 327, 330, 347, 348	3
<i>International Politics Course</i> (select one): POS 307, 312, 320, 346	3
<i>U.S. Government Course</i> (select one): POS 300, 306, 310, 318	3
Free Electives	37 or 38
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** POS 450 Seminar in Politics
- **Writing-Intensive Component Courses (2 courses required):** POS 301 Research Methods in Political Science AND POS 450 Seminar in Politics
- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: Minimum GPA - 2.0; Minimum Credits - 120. Developmental courses do not count toward the 120 credits necessary for graduation but are calculated in your overall GPA.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/pre-law/index.aspx>

B.A. in Social Sciences

Program Description

The Bachelor of Arts in Social Sciences degree explores multidisciplinary perspectives of human behavior, relationships and modern society.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i>	1

Department of Humanities

Course	Credits
UNI 100 First-Year Seminar	
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Additional General Education Courses (three courses) 	12
Required Major Courses	36
Select a 100- or 200-level course in six of the following disciplines: ANT, ECO, GEO, HIS, POS, PSY, SOC	18
Select a 300- or 400-level course in six of the following disciplines: ANT, ECO, GEO, HIS, POS, PSY, SOC	18
Free Electives	43 or 44
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any Upper-Division Social Science Writing-Intensive Menu Courses (ANT, ECO, GEO, HIS, POS, PSY, SOC)

Department of Humanities

- **Laboratory Course (1 course required):** Any Laboratory Course

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are required.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/sociology/social-science.aspx>

B.A. in Sociology

Program Description

The Bachelor of Arts in Sociology degree is designed for students who plan to pursue a career in research in applied settings and who are seeking practical experience using sociological concepts, methods and theory.

Students can take 12 credits in social research methods, plus statistics and a 3-credit internship in the second semester of their senior year.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i>	12

Department of Humanities

Course	Credits
<ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Social Science Menu Course • Additional General Education Courses (two courses) 	
Required Major Courses	15
SOC 100 Principles of Sociology	3
SOC 410 Social Theory and Society	3
SOC 415 Social Research Methods	3
SOC 429 Sociology Internship OR SOC 379 Special Problems in Sociology OR SOC 495 Seminar in Sociology	3
MAT 205 Statistics for the Health and Social Sciences OR MAT 215 Statistics OR PSY 220 Descriptive Statistics	3
Related Electives (select eight)	24
SOC 211 Collective Behavior	3
SOC 225 Sociology of Aging	3
SOC 240 Social Institutions	3
SOC 290 Gender and Work	3
SOC 309 Sociology of Sport	3
SOC 315 Social Minorities	3
SOC 316 Urban Sociology	3
SOC 317 Substance Use and Abuse	3
SOC 320 International Women's Movements	3
SOC 325 Sociology of the Family	3
SOC 378 Charismatic Leaders	3
Any One SOC Deviance OR SOC Applied Elective	3
Free Electives	40 or 41
Total	120

Department of Humanities

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any One SOC Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any Two SOC Approved Writing-Intensive Menu Courses
- **Laboratory Course (1 course required):** Any Laboratory Menu Course

Program Notes: 42 credits (or 14 courses) of upper-division (300- or 400-level) courses are required.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/sociology/index.aspx>

B.A. in Sociology: Social Deviance Concentration

Program Description

The social deviance concentration of the Bachelor of Arts in Sociology degree integrates concepts from various academic disciplines to examine and tackle the real-world issues of deviance as it relates to the aberrant, the diverse, the different and the ever-evolving values and norms of our society and broader culture. Students develop an in-depth understanding of the societal variables (values, norms, ideologies, sanctions, mores) that exist, influence and change with social, cultural and political influences.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any CDC Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3

Department of Humanities

Course	Credits
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Any Social Science Menu Course • Additional General Education Courses (two courses) 	12
Required Major Courses	12
SOC 100 Principles of Sociology	3
SOC 410 Social Theory and Society	3
SOC 415 Social Research Methods	3
SOC 429 Sociology Internship OR SOC 379 Special Problems in Sociology OR SOC 495 Seminar in Sociology	3
Related Electives	27
SOC 300 Sociology of Deviance	3
SOC 311 Sociology of Crime	3
SOC 318 Sociology of Addiction, Excess and Exploitation	3
SOC 319 Sociology of Technology	3
SOC 324 Child Abuse and Neglect: A Societal Perspective	3
SOC 380 Society and the Sociopath	3
SOC 395 Sociology of Elite Deviance	3
SOC 400 Structural and Institutional Violence	3
SOC 405 Re-socializing the Deviant and the Marginalized	3
Free Electives	40 or 41

Department of Humanities

Course	Credits
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any One SOC Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** Any Two SOC Approved Writing-Intensive Menu Courses
- **Laboratory Course (1 course required):** Any Laboratory Menu Course

Program Notes: 42 credits (or 14 courses) of upper-division (any course numbered 200 or above with at least one pre-requisite course) courses are required.

Accelerated Bachelor's-to-Master's Program

Accelerated bachelor's-to-master's programs are also available to undergraduate students who qualify, including:

- B.A. Sociology: Social Deviance to M.S. in Clinical Mental Health Counseling
- B.A. Sociology: Social Deviance to M.Ed. in School Counseling

Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpages

<https://www.calu.edu/academics/undergraduate/bachelors/sociology/deviance-campus.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/sociology/online.aspx>

B.F.A. in Art Studio

Program Description

The Bachelor of Fine Arts (B.F.A.) in Art Studio is a professional degree that allows students to develop a concentration of 18 advanced-level credits in any of the following areas:

- 2-dimensional media
- 3-dimensional media
- Digital media
- Graphic design
- Painting
- Printmaking
- Drawing
- Ceramics
- Jewelry
- Sculpture

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	40 or 41

Department of Humanities

Course	Credits
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Quantitative Literacy Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course*	3
<i>Humanities</i> Any Humanities Course**	3
<i>Fine Arts</i> Any Fine Arts Course***	3
<i>Natural Sciences</i> Any Natural Sciences Course	3
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Additional General Education Courses (three courses) 	12
Laboratory Course	3
Any Laboratory Course (ART 233 Natural Sciences Drawing OR ART 130 may be used here)	3
Required Major Courses	33
ART 110 Drawing I	3
ART 119 Design 2-D	3
ART 120 Design 3-D	3
ART 310 Advanced Drawing OR ART 438 Figure Drawing	3

Department of Humanities

Course	Credits
ART 350 Printmaking: Relief OR ART 351 Printmaking: Intaglio OR ART 295 Surface Design OR ART 352 Printmaking Processes	3
ART 376 Jewelry/Metals: Casting OR ART 377 Jewelry/Metals: Fabrication	3
ART 382 Ceramics Studio	3
ART 383 Painting Studio	3
ART 385 Sculpture Studio	3
ART 388 Critical Writing in Art	3
ART 490 Senior Studio Thesis	3
Required Art History Courses	12
Select one of the following: <ul style="list-style-type: none"> • ART 212 Art History I AND ART 214 Art History II • ART 106 Art Appreciation 	3 or 6
Select two to three courses from the following: <ul style="list-style-type: none"> • ART 109 Landmarks of World Art • ART 118 History of Making • ART 212 Art History I • ART 214 Art History II • ARB 343 Images of Islam: From Spain to Iran • ART 244 Seminar in Black Art • ART 243 Introduction to Asian Art • ART 323 Women in Art • ART 324 Modern Art • ART 326 Contemporary Art • ART 345 Methods of Art History • ART 420 Contemporary Issues in Art • ART 422 Art History: The Art World After Modernism 	6 or 9
Area of Emphasis (select one concentration)	18
<i>Single Studio Area Concentration:</i> Students complete 18 upper-level credits in any single ART studio area, including ART 329 and 490. <ul style="list-style-type: none"> • Drawing Studio: ART 130, 233 310, 438, 458, 490 and 329 • Painting Studio: ART 215, 383, 496, 490 and 329 • Figure Studies Studio: ART 438, 448, 458, 490 and 329 	0 or 18

Department of Humanities

Course	Credits
<ul style="list-style-type: none"> • Printmaking Studio: ART 295, 350, 351, 352, 490 and 329 • Jewelry/Metals Studio: 376, 377, 490 and 329 • Ceramics Studio: ART 382, 493, 490 and 329 • Sculpture Studio: ART 385, 448, 458, 498, 490 and 329 • Graphic Design Studio: ART 261, 262, 327, 427, 490, 329; and CDC 120, 150, 210, 220, 310, 350, 497 	
<p><i>2 Dimensional Concentration:</i> Students complete 18 credits in any combination of the following courses:</p> <ul style="list-style-type: none"> • ART 130 Biological Illustration: Form and Function • ART 227 Graphic Design Studio I • ART 233 Natural Science Drawing • ART 262 Color Theory • ART 266 Selected Topics • ART 295 Surface Design • ART 310 Advanced Drawing • ART 312 Introduction to New and Emerging Art Media • ART 315 Digital Immersive Worlds • ART 329 Art Internship • ART 350 Printmaking: Relief • ART 351 Printmaking: Intaglio • ART 352 Printmaking Processes • ART 383 Painting Studio • ART 438 Figure Drawing • ART 458 Figure Drawing and Modeling • ART 490 Senior Studio Thesis • ART 496 Advanced Painting 	0 or 18
<p><i>3 Dimensional Concentration:</i> Students complete 18 credits in any combination of the following courses:</p> <ul style="list-style-type: none"> • ART 118 History of Making • ART 266 Selected Topics • ART 329 Art Internship • ART 376 Jewelry-Metals: Casting • ART 377 Jewelry/Metals: Fabrication • ART 382 Ceramics Studio • ART 385 Sculpture Studio • ART 448 Figure Modeling • ART 458 Figure Drawing and Modeling • ART 490 Senior Studio Thesis • ART 493 Advanced Ceramics • ART 498 Advanced Sculpture 	0 or 18
<p><i>Digital Media Concentration:</i> Students complete 18 credits from the following courses:</p> <ul style="list-style-type: none"> • ART 127 Introduction to Graphic Design 	0 or 18

Department of Humanities

Course	Credits
<ul style="list-style-type: none"> • ART 315 Digital Immersive Worlds • ART 261 Typography • ART 262 Color Theory • ART 266 Selected Topics • ART 227 Graphic Design Studio 1+ • ART 329 Art Internship • ART 427 Graphic Design Studio 3 • ART 428 Graphic Design Studio 4 • ART 490 Senior Studio Thesis • CDC 120 Visual Communication 1 • CDC 252 The Art of Film • CDC 150 Imagine, Design, Create • CDC 210 Special Topics in Communication, Design and Culture • CDC 220 Visual Culture • CDC 310 Seminar in Communication, Design and Culture • DMT 101 Time-Based Media • DMT 180 Multimedia Foundations • DMT 225 Digital Layout and Design • DMT 240 Electronic Desktop Publishing • DMT 300 Digital Photography • DMT 320 Digital Video • DMT 331 Web Publishing • DMT 340 Computer Animation and 3-D Imaging • DMT 365 Color Imaging • DMT 410 Digital Portfolio • DMT 945 Graphic Communications Internship • GET 130 Introduction to Engineering Technology • CIS 120 Application Programming I 	
Art Electives	9
Select any three ART courses	9
Free Electives	3 to 5
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** ART 490 Senior Studio Thesis
- **Writing-Intensive Component Courses (2 courses required):** ART 388 Critical Writing in Art AND ART 490 Senior Studio Thesis

Department of Humanities

- **Laboratory Course (1 course required):** Any Laboratory Course (ART 233 Natural Science Drawing OR ART 130 Biological Illustration may be used here.)

* DMT 180 is a pre-requisite for many digital media courses and is recommended for students who plan to take digital media courses.

** Students are encouraged to consider taking courses in art, music, theatre, philosophy or languages related to their interests.

*** ART courses may be used here.

+ Pre-requisites for ART 227 (Graphic Design Studio I) include ART 120, CDC 120, ART 261 and ART 262, and students must pass a Portfolio Review in February of their sophomore year, which admits only selected students to the two-year junior-and-senior-year cohort of Graphic Design Studios 1, 2, 3 and 4.

Program Notes:

- 35% (42 credits/14 courses) of the required 120 credits must include upper-division courses (300-400 level).
- All art studio courses 300 level and above are repeatable.
- Requirements in Major: Students must complete 18 credits in one of the four listed concentrations as an area of emphasis.
- Students are eligible and advised to declare a Certificate in Studio Art. If planning to pursue an MFA in Art, they should complete four courses in a single studio area for their Certificate in Studio Art.
- Students preferring additional free electives may make room to do so by meeting general education course requirements with courses listed on the general education menus from their major.
- Graduation Requirements: Minimum GPA - 2.0; Minimum Credits - 120; all major and general education courses completed.
- Academic Advisement: Consult your adviser to discuss your appropriate schedule and all other issues relating to your major.
- Graduation: Students must apply during the first month of their last semester with the College Office.
- Additional Reminders: Developmental courses do not count toward the 120 credits necessary for graduation but are calculated in your overall GPA.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/fine-arts/index.aspx>

Certificate in Arabic Language and Culture

Program Description

The Arabic language and culture sub-baccalaureate certificate program helps students develop reading, writing and speaking skills in Modern Standard Arabic.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
ARB 101 Elementary Arabic I	3

Department of Humanities

Course	Credits
ARB 102 Elementary Arabic II	3
ARB 203 Intermediate Arabic I	3
Select 3 credits from the following:	
ARB 204 Intermediate Arabic II	3
ARB 480 Selected Topics in Arabic	3
ARB 341 Contemporary Arabic Culture	3
ARB 342 Culture of Islam	3
ARB 401 Intro to Linguistics	3
ARB 402 Arabic Translation	3
ARB 421 Arabic Literature in Translation	3
Total	12

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/arabic-language-culture/index.aspx>

Certificate in History of War, Service and the American Experience

Program Description

Through the history of war, service and the American experience sub-baccalaureate certificate, students gain a deeper understanding of our nation's history and the role of those who serve or served in all branches of the United States Armed Forces.

Curriculum

Course	Credits
Required Courses	3
HIS 305 Contemporary U.S. History	3
Select one of the following:	3
INT 300 Special Topics Section: Individual Military Experience in Context	3
SOC 379 Special Topics Section: Individual Military Experience in Context	3

Department of Humanities

Course	Credits
Select one of the following:	3
HIS 240 History of the Cold War	3
HIS 379 Special Topics Section: Vietnam	3
Select one of the following:	3
HIS 303 Military History through Wargaming	3
HIS 441 U.S. at War: 20th Century	3
HIS 445 Social History of the U.S.	3
Total	12

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/war-service-american-experience/index.aspx>

Certificate in Spanish for Business

Program Description

The Spanish for business sub-baccalaureate certificate is designed to meet the needs of business majors, business professionals and others seeking to pursue business opportunities or international trade in Spanish-speaking countries or U.S. communities with Spanish-speaking customers and clients. Students learn practical language skills that are specifically designed to address business situations, such as serving Spanish-speaking customers, understanding the economic realities in relevant countries, and successfully undertaking financial and commercial aspects in domestic or international Spanish-speaking communities. Emphasis is placed on everyday spoken Spanish and business terminology.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
SPN 101 Elementary Spanish I	3
SPN 102 Elementary Spanish II	3
SPN 203 Intermediate Spanish I	3
SPN 305 Spanish for Business	3
Total	12

To successfully complete the certificate program, students must take all four courses: SPN 101, 102, 203 and 305, regardless of their pre-existing level of Spanish.

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/spanish-business/index.aspx>

Certificate in Spanish for Law Enforcement

Program Description

The Spanish for law enforcement sub-baccalaureate certificate is designed to meet the needs of law enforcement officers, correctional officers and public and private security personnel, and for those students seeking employment in a related field. Students learn basic practical language skills that will assist them as criminal justice practitioners in a number of situations, such as law enforcement commands and dealing with suspects, victims and witnesses; prison populations; and border and immigration issues. Students will also learn about Hispanic culture and customs so they can better understand the needs of members of their communities.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
SPN 101 Elementary Spanish I	3
SPN 102 Elementary Spanish II	3
SPN 203 Intermediate Spanish I	3
SPN 304 Spanish for Law Enforcement	3
Total	12

To successfully complete the certificate program, students must take all four courses: SPN 101, 102, 203 and 304, regardless of their pre-existing level of Spanish.

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/spanish-law-enforcement/index.aspx>

Certificate in Studio Art

Program Description

The studio art sub-baccalaureate certificate program allows students to take multiple approaches to their study of studio art. They may:

- Take courses in multiple studio areas.
- Focus on a single studio concentration area (ceramics, digital art, drawing, jewelry/metals, painting or printmaking) or on one of the following: 2-dimensional, 3-dimensional or digital art areas.

Department of Humanities

This certificate includes course options from other related disciplines, such as digital media technology or graphic design.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
Choose One of the Following Concentrations:	
General Studio Art Concentration	12
Complete any four ART studio* courses	
Single Studio Area Concentration	12
Complete four courses in any single ART studio area*, including ART 329 and 490: <ul style="list-style-type: none"> • Drawing Studio: ART 130, 233 310, 438, 458, 490 and 329 • Painting Studio: ART 215, 383, 496, 490 and 329 • Figure Studies Studio: ART 438, 448, 458, 490 and 329 • Printmaking Studio: ART 295, 350, 351, 352, 490 and 329 • Jewelry/Metals Studio: 376, 377, 490 and 329 • Ceramics Studio: ART 382, 493, 490 and 329 • Sculpture Studio: ART 385, 448, 458, 498, 490 and 329 • Graphic Design Studio: ART 261, 262, 327, 427, 490, 329; and CDC 120, 150, 210, 220, 310, 350, 497 	
2-D Concentration Area	12
<i>Complete four courses from the following:</i>	
ART 130 Biological Illustration: Form and Function	
ART 227 Graphic Design Studio I	
ART 233 Natural Science Drawing	
ART 262 Color Theory	
ART 266 Selected Topics	

Department of Humanities

Course	Credits
ART 295 Surface Design	
ART 310 Advanced Drawing	
ART 312 Introduction to New and Emerging Art Media	
ART 315 Digital Immersive Worlds	
ART 329 Art Internship	
ART 350 Printmaking: Relief	
ART 351 Printmaking: Intaglio	
ART 352 Printmaking Processes	
ART 383 Painting Studio	
ART 438 Figure Drawing	
ART 458 Figure Drawing and Modeling	
ART 490 Senior Studio Thesis	
ART 496 Advanced Painting	
3-D Concentration Area	12
<i>Complete four courses from the following:</i>	
ART 118 History of Making	
ART 266 Selected Topics	
ART 329 Art Internship	
ART 376 Jewelry/Metals: Casting	
ART 377 Jewelry/Metals: Fabrication	
ART 382 Ceramics Studio	
ART 385 Sculpture Studio	
ART 448 Figure Modeling	
ART 458 Figure Drawing and Modeling	
ART 490 Senior Studio Thesis	
ART 493 Advanced Ceramics	
ART 498 Advanced Sculpture	
Digital Art Area Concentration	12

Department of Humanities

Course	Credits
<i>Complete four courses from the following:</i>	
ART 127 Introduction to Graphic Design	
ART 315 Digital Immersive Worlds	
ART 227 Graphic Design Studio 1	
ART 261 Typography	
ART 262 Color Theory	
ART 266 Selected Topics	
ART 329 Art Internship	
ART 427 Graphic Design Studio 3	
ART 428 Graphic Design Studio 4	
ART 490 Senior Studio Thesis	
CDC 120 Visual Communication 1	
CDC 252 The Art of Film	
CDC 150 Imagine, Design, Create	
CDC 210 Special Topics in Communication, Design and Culture	
CDC 220 Visual Culture	
CDC 310 Seminar in Communication, Design and Culture	
DMT 101 Time-Based Media	
DMT 180 Multimedia Foundations	
DMT 225 Digital Layout	
DMT 240 Electronic Desktop Publishing	
DMT 300 Digital Photography	
DMT 320 Digital Video	
DMT 331 Web Publishing	
DMT 340 Animation and 3-D Imaging	
DMT 365 Color Imaging	
DMT 410 Digital Portfolio	
DMT 495 Graphic Communications Internship	
GET 130 Introduction to Engineering Technology	

Department of Humanities

Course	Credits
CIS 120 Application Programming I	
Total	12

*Studio areas include:

- Ceramics
- Digital Art
- Drawing
- Jewelry/Metals
- Painting
- Printmaking

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/studio-art/index.aspx>

Certificate: Violence and Incidence Collaborative Evaluation in Schools

Program Description

The violence and incidence collaborative evaluation in schools (VICES) sub-baccalaureate certificate provides students with a system-based, comprehensive view of school violence, critical incidence identification, response and prevention. Students examine specific case law as it pertains to the school environment and operational procedures; become familiar with special education classifications (IDEA, PL-94-142, 504 plans and functional behavioral assessment procedures); and examine the socio-educational system and institutional variables that contribute to violence, incidence intervention and collaboration within the school and community.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
ESP 210 Special Education Foundations and Collaboration	3
LAW 460 School Law*	3
SOC 400 Structural and Institutional Violence: School, Workplace and Eldercare	3
SOC 405 Resocializing the Deviant and Marginalized	3
Total	12

* Note: LAW 410 will be the substitute for LAW 460 when LAW 460 is not available.

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/violence-incidence-collaboration/index.aspx>

Minor in African American Studies Curriculum

Course	Credits
Required Courses	9
HIS 317 African American History to 1877	3
HIS 318 African American History since 1877	3
HIS 380 Readings in African American Studies	3
African American Studies Electives <i>(Select four courses from the following)</i>	12
ENG 155 African American Literature	3
HIS 347 Race and Ethnicity	3
HIS 370 Topics in Atlantic History	3
MUS 305 African American Gospel and Caribbean Music: History, Form and Analysis	3
POS 326 The Politics of Africa	3
PSY 320 Black Psychology	3
SOC 210 Social Inequality	3
SOC 315 Social Minorities	3
WST 330 Gender, Race and Media	3
Total	21

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/african-american-studies/index.aspx>

Minor in Arabic Curriculum

Course	Credits
ARB 101 Elementary Arabic I	3
ARB 102 Elementary Arabic II	3

Department of Humanities

Course	Credits
ARB 203 Intermediate Arabic I	3
ARB 204 Intermediate Arabic II	3
ARB 350 Advanced Arabic I	3
ARB 351 Advanced Arabic II	3
Total	18

Minor in French Curriculum

Course	Credits
Required Courses	12
FRE 101 Elementary French I	3
FRE 102 Elementary French II	3
FRE 203 Intermediate French I	3
FRE 204 Intermediate French II	3
Electives <i>(Select 6 credits from the following)</i>	6
FRE 341 The 17th Century and the Classical Age	3
FRE 343 The Age of Romanticism: From the Napoleonic Empire to the Revolution of 1848	3
FRE 344 The Age of French Realism: The Second Empire to the Aftermath of the Franco-Prussian War	3
FRE 345 The Birth of the Modern French Culture in Arts: The 1990s - WWII	3
FRE 346 Contemporary French Culture in the Arts Since World War II	3
FRE 347 Francophone Africa	3
FRE 348 Francophone Canada	3
Total	18

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/french/index.aspx>

Minor in History Curriculum

Course	Credits
Required Courses	12
<i>Select two from the following:</i>	
HIS 101 United States History to 1877	3
HIS 104 History of Western Society to 1500	3
HIS 111 World Civilization to 1500	3
<i>Select two from the following:</i>	
HIS 102 United States History since 1877	3
HIS 106 History of Western Society since 1500	3
HIS 112 World Civilization since 1500	3
History Electives	9
Select any three HIS courses at the 300 level or higher	9
Total	21

Minor in Political Science Curriculum

Course	Credits
Required Courses	6
POS 100 Introduction to Political Science	3
POS 105 American Politics	3
Political Science Electives*	15
Two lower- or upper-level electives	6
Three 300- to 400-level electives	9
Total	21

Department of Humanities

* Select at least one course from each category below:

- **American Politics:** POS 303, 306, 310, 311, 314, 315, 316, 318, 319, 329, 344, 379, 415, 450
- **Comparative Politics/International Relations:** POS 210, 312, 320, 322, 323, 325, 326, 336, 340, 346, 360, 381
- **Political Theory:** POS 307, 327, 330, 347, 348
- **Public Administration/Public Policy:** POS 300, 301, 308, 335, 344, 355

Minor in Pre-Law Curriculum

Course	Credits
<i>Select one course from each of the following categories:</i>	
Political Science	3
POS 314 Constitutional Law: Governmental	3
POS 315 Constitutional Law: Civil Liberties	3
POS 316 Judicial Policy and Politics	3
History	3
HIS 308 American Constitution	3
HIS 322 Religious Persecution	3
HIS 435 History of Law	3
Philosophy	3
PHI 115 Logic and Language	3
PHI 225 Social and Political	3
PHI 370 Philosophy of Law	3
Criminal Justice	3
JUS 361 Court Systems	3
JUS 365 Mock Trial Concepts	3
JUS 397 Law and Evidence	3
English	3

Department of Humanities

Course	Credits
ENG 306 Press Law and Ethics	3
ENG 308 Research for Writers	3
ENG 345 English Grammar and Usage	3
Communication	3
COM 230 Argumentation and Debate	3
COM 350 Persuasion	3
COM 351 Rhetoric	3
Business and Economics	3
BUS 342 Business, Society and Government	3
BUS 345 Business Ethics	3
ECO 304 Money and Banking	3
ECO 308 Public Finance	3
Total	21

Minor in Sociology Curriculum

Course	Credits
Required Courses	9
SOC 100 Principles of Sociology	3
SOC 410 Social Theory/Society	3
SOC 415 Social Research Methods	3
Sociology Electives	12
Select four SOC courses (at least one must be at the 300+ level)	12
Total	21

Minor in Spanish Curriculum

Course	Credits
SPN 101 Elementary Spanish I	3
SPN 102 Elementary Spanish II	3
SPN 203 Intermediate Spanish I	3
SPN 204 Intermediate Spanish II	3
SPN 311 Spanish Conv/Comp/Phonetics I	3
SPN 312 Spanish Conv/Comp/Phonetics II	3
Total	18

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/spanish/index.aspx>

Minor in Studio Art Curriculum

Course	Credits
Required Courses	6
ART 110 Drawing I	3
ART 119 Design 2-D OR ART 120 Design 3-D	3
Art History Elective (select one)	3
ART 106 Art Appreciation	3
ART 109 Landmarks of World Art	3
ART 118 History of Making	3
ART 212 Art History I	3
ART 214 Art History II	3
ART 243 Introduction to Asian Art	3
ART 422 Art History: The Art World after Modernism	3
ARB 343 Images of Islam: From Spain to Iran	3

Department of Humanities

Course	Credits
Studio Electives (select four)*	12
ART 112 New and Emerging Media	3
ART 251 Digital Painting	3
ART 295 Surface Design	3
ART 350 Printmaking: Relief	3
ART 351 Printmaking: Intaglio	3
ART 352 Printmaking Processes	3
ART 376 Jewelry: Casting	3
ART 377 Jewelry: Fabrication	3
ART 382 Ceramics Studio	3
ART 383 Painting Studio	3
ART 385 Sculpture Studio	3
ART 438 Figure Drawing	3
ART 448 Figure Modeling	3
ART 458 Figure Drawing/Modeling	3
ART 493 Advanced Ceramics	3
ART 496 Advanced Painting	3
ART 498 Advanced Sculpture	3
Total	21

* All art studios 300 level and above are repeatable. Choose any combination of four of the listed studio courses OR four courses in the same studio area. (Studio areas include: ceramics, drawing, jewelry/metals, painting, printmaking and sculpture.)

Department of Mathematics and Physical Sciences

Faculty

Dr. Swardeep Gill (chair) | Dr. Mohamed Benbourenane | Dr. Kaddour Boukaabar | Dr. Gregg Gould | Dr. Maggie Habeeb | Dr. Olaniyi Iyiola | Dr. Leandro Junes | Dr. Chad Kauffman | Dr. Min Li | Dr. Mario Majcen | Kathleen McGrew | Attou Miloua | Dr. Bismark Oduro | Dr. Matthew J. Price | Dr. Ali Sezer | Dr. Melissa Sovak | Dr. Kimberly Woznack

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Programs

Cal U's Department of Mathematics and Physical Sciences includes undergraduate programs in chemistry, earth sciences, mathematics, physics, statistics and data science.

Bachelor's Degree Programs

Degrees offered through this department include:

- B.S. in Chemistry
- B.S. in Earth Science: Climate Science
- B.S. in Earth Science: Meteorology
- B.A. in Mathematics
- B.A. in Physics
- B.S. in Statistics and Data Science

Note: Cal U also offers B.S.Ed. degrees for secondary education in Chemistry, Earth and Space Science, Math and Physics through its Department of Education.

Certificates

The department offers a sub-baccalaureate certificate program in:

- Data Science

Minors

Minors available through this department include:

- Chemistry
- Mathematics
- Meteorology
- Physics
- Statistics

Facilities

The chemistry and physics programs are located in New Science Hall.

Students studying earth science have access to facilities for research, coursework and service-learning projects in crime mapping, meteorology and watershed analysis. Housed in Eberly Hall, these facilities include:

- Broadcast Meteorology Studio
- Earth Materials Laboratory
- Geosciences Laboratory
- Operational Meteorology Laboratory

Department of Mathematics and Physical Sciences

- Peter J. Daley Geotechnology Institute
- Watershed Analysis Laboratory

Honors

The national earth science honor society, **Sigma Gamma Epsilon**, has a chapter (Zeta Alpha) on campus. Students recognized for their academic and professional achievements are elected to it.

Accreditation

Cal U's B.S. in Chemistry degree is accredited by the American Chemical Society (ACS).

B.A. in Mathematics

Program Description

The Bachelor of Arts in Mathematics degree hones students' analytical and problem-solving skills while building their understanding of mathematical theories and applications.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	42
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 215 Statistics OR MAT 225 Business Statistics (recommended)	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy	3
<i>Humanities</i> PHI 311 Formal Logic	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry I OR PHY 101 College Physics I	4
<i>Social Sciences</i>	3

Department of Mathematics and Physical Sciences

Course	Credits
Any Social Sciences Course	
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • CHE 102 General Chemistry II OR PHY 102 College Physics II • MAT 303 Geometry (recommended) • MAT 290 Technology for Math (recommended) 	13
Required Major Courses	30
MAT 272 Discrete Mathematics	3
MAT 281 Calculus I	3
MAT 282 Calculus II	3
MAT 341 Linear Algebra I	3
MAT 351 Abstract Algebra I	3
MAT 381 Calculus III	3
MAT 382 Calculus IV	3
MAT 400 Mathematical Modeling	3
MAT 461 Statistical Analysis I	3
MAT 406 Differential Equations	3
Related Electives	12
<i>MAT Category I</i> (select one): <ul style="list-style-type: none"> • MAT 451 Abstract Algebra II • MAT 481 Real Analysis I • MAT 474 Complex Analysis 	3
<i>MAT Category II</i> (select two): <ul style="list-style-type: none"> • MAT 441 Linear Algebra II • MAT 462 Statistical Analysis II • CSC 424 Numerical Analysis 	6
<i>MAT Category III</i> (select one): <ul style="list-style-type: none"> • MAT 419 Math Internship • PHY 341 Math Methods of Physics • MAT 304 History of Math • MAT 468 Field Experience in Math • CSC 475 Theory of Languages • MAT 496 Senior Research Project 	3

Department of Mathematics and Physical Sciences

Course	Credits
Approved Minor*	18 to 21
Free Electives	15 to 18
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any MAT Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** MAT 400 Mathematical Modeling AND MAT 461 Statistical Analysis I
- **Laboratory Course (1 course required):** CHE 102 General Chemistry II OR PHY 102 College Physics II

* Must declare minor with the dean of the Eberly College of Science and Technology.

Accelerated Bachelor's-to-Master's Program

An accelerated bachelor's-to-master's (B.A. in Mathematics to PSM in Applied Math) program is also available to undergraduate students who qualify. Curriculum requirements are listed under the "Accelerated Programs" section of this catalog.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/mathematics/index.aspx>

B.A. in Physics

Program Description

The Bachelor of Arts in Physics degree program at Cal U creates a strong foundation in physics; stimulates intellectual growth; promotes critical thinking and leadership skills; and builds character in students. A foundational natural science degree, this program is designed to assist students in developing a deep understanding of concepts and problem-solving skills, preparing them for a broad range of career opportunities. The Physics program encourages and leads students in outreach service and aims to produce graduates who can:

- Acquire factual and theoretical knowledge of physics.
- Develop laboratory knowledge and skills while sustaining a commitment to safety.
- Employ technology to obtain and utilize physics principles and current discoveries.
- Communicate effectively.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	42

Department of Mathematics and Physical Sciences

Course	Credits
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> CSC 120 Problem Solving and Programming Constructs	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> CHE 101 General Chemistry I	4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • CHE 102 General Chemistry II (4 credits) • Additional General Education Courses (two courses) 	13
Required Major Courses	39
MAT 282 Calculus II	3
MAT 381 Calculus III	3
MAT 382 Calculus IV	3
MAT 406 Differential Equations	3
PHY 101 College Physics I	4
PHY 202 College Physics II	4
PHY 203 College Physics III	4
PHY 321 Intermediate Mechanics	4

Department of Mathematics and Physical Sciences

Course	Credits
PHY 301 Intermediate Elect. & Mag.	4
PHY 331 Modern Physics I	3
PHY 495 Physics Seminar	1
Adviser-approved 300- or 400-level PHY Elective	3
Free Electives	39
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** PHY 301 Intermediate Electricity and Magnetism AND PHY 495 Physics Seminar
- **Laboratory Course (1 course required):** PHY 101 College Physics I

Program Notes: 42 total credits must be at the 300 level or above. At least 18 credits of "General Education" and "Free Electives" must be at the 300 level or above to meet this requirement.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/physics/index.aspx>

B.S. in Chemistry

Program Description

The Bachelor of Science in Chemistry is a foundational natural science degree that incorporates knowledge bases in chemistry, physics, mathematics and other related subjects, allowing students to develop the necessary theoretical and practical skills for a successful career in the private or public sectors as well as professional and graduate study. The program creates an educational environment that encourages independent and critical thinking; collegial exchange of ideas; effective reasoning; and communication skills and high ethical standards.

The program aims to produce graduates who can:

- Acquire factual and theoretical knowledge of chemistry.
- Develop laboratory knowledge and skills while sustaining a commitment to safety.
- Employ technology to obtain and utilize chemical information.
- Communicate effectively.

Delivery Mode

Traditional (on campus)

Accreditation

The B.S. in Chemistry degree is accredited by the American Chemical Society (ACS).

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 101 College Physics I	4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 102 Composition II • Additional General Education Courses (two courses) 	12
Required Major Courses	52
CHE 101 General Chemistry I	4
CHE 102 General Chemistry II	4
CHE104 Intro to Exp Chemistry	3
CHE 306 Inorganic Chemistry	3
CHE 320 Analytical/Instr. Method	3
CHE 331 Organic Chemistry I	4
CHE 341 Organic Chemistry II	3

Department of Mathematics and Physical Sciences

Course	Credits
CHE 415 Biochemistry I	4
CHE 461 Physical Chemistry I	3
CHE 462 Physical Chemistry II	3
CHE 371 Intermediate Lab I	1
CHE 372 Intermediate Lab II	1
CHE 471 Advanced Lab I	1
CHE 472 Advanced Lab II	1
CHE 491 Research I	2
CHE 492 Research II	2
MAT 282 Calculus II	3
MAT 381 Calculus III	3
PHY 202 College Physics II	4
Related Courses	6 or 7
Select two courses from the following: <ul style="list-style-type: none"> • CHE 381 Environ Chemistry (4 credits) • CHE 420 Adv. Analytical Chemistry (3 credits) • CHE 421 Adv. Inorganic Chemistry (3 credits) • CHE 433 Adv. Organic Chemistry (3 credits) • CHE 497 Special Topics (3 credits) 	6 or 7
Free Electives*	20 or 21
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any Special Experience Course
- **Writing-Intensive Component Courses (2 courses required):** CHE 472 Advanced Laboratory II AND CHE 492 Research II
- **Laboratory Course (1 course required):** CHE 101 General Chemistry I

* Your chemistry coursework is strengthened by taking additional courses in science and technology. Students are encouraged to enroll in additional courses in biology (BIO), chemistry (CHE), computer science (CSC), earth science (EAS), electrical engineering technology (EET), environmental science (ENS), industrial technology (ITE),

Department of Mathematics and Physical Sciences

mathematics (MAT) or physics (PHY). Students should work with their adviser to explore possible options for a minor.

Program Notes: 42 total credits must be 300 level or above. At least one elective course (3 credits) must be 300 level or above.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/chemistry/index.aspx>

B.S. in Earth Science: Climate Science Concentration

Program Description

The climate science concentration of the Bachelor of Science in Earth Science degree builds skills and knowledge related to collecting, analyzing and interpreting climate data and understanding long-term trends. Through this program, students explore atmospheric processes, climate change issues and factors that influence climate systems.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> CIS 120 Application Programming I	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 101 College Physics I	4
<i>Social Sciences</i>	3

Department of Mathematics and Physical Sciences

Course	Credits
GEO 222 Geography of North America	
<i>General Education Options</i>	12
<ul style="list-style-type: none"> • EAS 469 Global Climate Change • MAT 215 Statistics • MAT 282 Calculus II • PHS 137 Environmental Chemistry 	
Required Major Courses	39
EAS 104 Introduction to Meteorology	4
EAS 142 Introduction to Climate Science	3
GLG 150 Introduction to Geology	4
EAS 163 Intro to Oceans and Climate	3
EAS 245 Weather Analysis and Forecasting I	4
EAS 300 Natural Hazards	3
EAS 369 Climate Dynamics	3
EAS 414 Synoptic Climatology	3
EAS 419 Applied Climatology	3
EAS 431 Digital Media for Weather and Climate Apps	3
EAS 452 Atmos Thermodynamics and Radiation	3
EAS 465 Seminar in Atmos. Science	3
Related Electives	7
GIS 311 Geographic Information Systems	3
PHY 202 College Physics II	4
Recommended Electives	12
Select at least 12 credits from the following: <ul style="list-style-type: none"> • BIO 248 General Ecology (3 credits) • GLG 200 Historical Geology (3 credits) • GLG 303 Hydrology (3 credits) • EAS 323 Atmos Instrument and Measurement (3 credits) • EAS 342 Dynamic Meteorology I (3 credits) • EAS 346 Tropical Meteorology and Climate (3 credits) 	12

Course	Credits
<ul style="list-style-type: none"> • EAS 442 Dynamic Meteorology II (3 credits) • EAS 453 Cloud Physics (3 credits) • ENS 101 Introduction to Environ Science (3 credits) • ENS 399 Conservation Biology (3 credits) • ENS 440 Environ Pollution Control (3 credits) • GIS 350 Remote Sensing of Environment (3 credits) • GIS 413 Environmental Applications GIS (3 credits) • MAT 360 Non-Parametric Statistics (3 credits) 	
Free Electives	21 or 22
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** EAS 431 Digital Media for Weather and Climate Apps
- **Writing-Intensive Component Courses (2 courses required):** EAS 323 AND EAS 465
- **Laboratory Course (1 course required):** EAS 104 Intro to Meteorology

Program Notes: 42 credits of advanced coursework at the 300 or 400 level are required.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/climate-science/index.aspx>

B.S. in Earth Science: Meteorology Concentration

Program Description

The meteorology concentration of the Bachelor of Science in Earth Science builds weather analysis and forecasting skills. Concentration courses comply with recommendations from the American Meteorological Society (AMS) and the National Weather Association.

Delivery Mode

Traditional (on campus)

Curriculum

Course	Credits
General Education Courses	41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> CSC 124 Computer Programming	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> PHY 101 College Physics I	4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • EAS 469 Global Climate Change • ENG 217 Scientific and Technical Writing • CSC 120 Problem Solving and Programming Constructs • MAT 282 Calculus II 	12
Required Major Courses	45
EAS 104 Introduction to Meteorology	4
EAS 142 Introduction to Climate Science	3
EAS 245 Weather Analysis and Forecasting I	4
EAS 323 Atmos Instruments and Measurements	3
EAS 342 Dynamic Meteorology I	3
EAS 365 Radar and Satellite Meteorology	3

Department of Mathematics and Physical Sciences

Course	Credits
EAS 369 Climate Dynamics	3
EAS 431 Digital Media for Weather and Climate Apps	3
EAS 442 Dynamic Meteorology II	3
EAS 445 Weather Analysis and Forecasting II	4
EAS 449 Mesoscale Meteorology	3
EAS 452 Atmos Thermodynamics and Radiation	3
EAS 453 Cloud Physics	3
EAS 465 Seminar in Atmos. Science OR EAS 419 Applied Climatology	3
Related Electives	13
MAT 381 Calculus III	3
MAT 382 Calculus IV	3
MAT 215 Statistics	3
PHY 202 College Physics II	4
Recommended Free Electives	21
<p>The following are recommended free electives:</p> <ul style="list-style-type: none"> • EAS 105 Extreme Weather (3 credits) • GLG 303 Hydrology (3 credits) • CIS 120 Application Programming I (3 credits) • COM 106 Introduction to Mass Communication (3 credits) • COM 336 Broadcast Reporting (3 credits) • CSC 306 Fortran (3 credits) • CSC 308 Python (3 credits) • CSC 420 Artificial Intelligence (3 credits) • ENS 440 Environmental Pollution Control (3 credits) • GIS 311 Geographic Information Systems (3 credits) • MAT 406 Differential equations (3 credits) • MAT 462 Statistical Analysis I (3 credits) 	21

Department of Mathematics and Physical Sciences

Course	Credits
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** EAS 431 Digital Media Meteorology
- **Writing-Intensive Component Courses (2 courses required):** EAS 323 AND EAS 465
- **Laboratory Course (1 course required):** EAS 104 Intro to Meteorology

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/meteorology/index.aspx>

B.S. in Statistics and Data Science

Program Description

The Bachelor of Science in Statistics and Data Science degree prepares students to analyze, manage and present data. Through coursework, students learn how to use statistical software and programming languages.

Delivery Mode

Traditional (on-campus program with some online courses)

Curriculum

Course	Credits
General Education Courses	40
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 281 Calculus I	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> CSC 120 Problem Solving and Programming Construction	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3

Department of Mathematics and Physical Sciences

Course	Credits
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • ENG 217 Science and Technical Writing • Additional General Education Courses (two courses) 	12
Required Major Courses	45
MAT 207 Data Preparation and Cleaning	3
MAT 213 Data Visualization	3
MAT 215 Statistics OR MAT 225 Business Statistics	3
MAT 251 Big Data Tools	3
MAT 261 Big Data Analytics	3
MAT 272 Discrete Mathematics	3
MAT 282 Calculus II	3
MAT 341 Linear Algebra I	3
MAT 353 Intermediate Mathematical Statistics	3
MAT 376 Applied Linear Regression	3
MAT 391 Statistical Packages	3
MAT 401 Data Analytics Capstone Project	3
MAT 491 Statistical Packages II	3
Select two of the following: <ul style="list-style-type: none"> • MAT 361 Nonparametric Statistics • MAT 371 Applied Categorical Data Analysis • MAT 373 Time Series and Stochastic Processes • MAT 471 Applied Multivariate Statistics 	6
Related Coursework	15
CSC 124 Computer Programming I	3
CSC 265 Object-Oriented Programming	3
CSC 308 Python	3

Department of Mathematics and Physical Sciences

Course	Credits
CSC 328 Data Structures	3
CIS 322 Database Application Development	3
Free Electives*	20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** MAT 401 Data Analysis Capstone Project
- **Writing-Intensive Component Courses (2 courses required):** MAT 261 Big Data Analytics AND MAT 401 Data Analysis Capstone Project
- **Laboratory Course (1 course required):** MAT 376 Applied Linear Regression

* May need MAT 181 and MAT 191.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/data-science/index.aspx>

Certificate in Data Science

Program Description

The data science sub-baccalaureate certificate program was created in partnership with SAS. Coursework hones students' data analysis skills.

Delivery Mode

Global Online (100% online)

Curriculum

Course	Credits
MAT 207 Data Preparation and Cleaning	3
MAT 213 Data Visualization	3
MAT 251 Big Data Tools	3
MAT 261 Big Data Analytics	3
MAT 401 Data Analytics Capstone Project	3
Total	15

Program Webpage

<https://www.calu.edu/academics/undergraduate/certificate/sas-data-certificate/index.aspx>

Minor in Chemistry Curriculum

Course	Credits
Required Courses	12
CHE 101 General Chemistry I	4
CHE 102 General Chemistry II	4
CHE 331 Organic Chemistry I	4
Chemistry Electives*	8
CHE 306 Inorganic Chemistry	3
CHE 320 Analytical/Instrumental Methods	3
CHE 341 Organic Chemistry II	3
CHE 342 Organic Chemistry II (lab)	1
CHE 381 Environmental Chemistry	4
CHE 415 Biochemistry	4
CHE 433 Advanced Organic Chemistry	3
CHE 461 Physical Chemistry I	3
CHE 462 Physical Chemistry II	3
Total	20

* Selected through consultation with adviser.

Program Note: A minimum of 6 credits must be taken at Cal U.

Minor in Mathematics Curriculum

Course	Credits
Required Courses	15
MAT 272 Discrete Mathematics	3
MAT 281 Calculus I	3
MAT 282 Calculus II	3
MAT 341 Linear Algebra I	3

Department of Mathematics and Physical Sciences

Course	Credits
MAT 381 Calculus III	3
Electives <i>(Select two, maintaining pre-requisite structure)</i>	6
MAT 290 Technology for Mathematics	3
MAT 303 Geometry	3
MAT 351 Abstract Algebra I	3
MAT 382 Calculus IV	3
MAT 400 Mathematical Modeling	3
MAT 406 Differential Equations	3
MAT 441 Linear Algebra II	3
MAT 461 Statistical Analysis I	3
Total	21

Minor in Meteorology Curriculum

Course	Credits
Required Courses	14
EAS 104 Introduction to Meteorology	4
EAS 105 Extreme Weather	3
EAS 142 Climatology	3
EAS 245 Weather Analysis and Forecasting I	4
Electives <i>(Select 6 credits from the following)</i>	6
EAS 323 Atmospheric Instruments and Measurements	3
EAS 342 Dynamic Meteorology I	3
EAS 369 Climate Dynamics and Modeling	3
EAS 469 Global Climate Change	3

Course	Credits
Total	20

Minor in Physics Curriculum

Course	Credits
Required Courses	15
PHY 101 College Physics I (pre-requisite: MAT 281)	4
PHY 202 College Physics II (pre-requisites: PHY 101, MAT 282)	4
PHY 203 College Physics III (pre-requisite: PHY 202)	4
MAT 381 Calculus III (pre-requisite: MAT 282)	3
Suggested Electives*	6
PHY 301 Intermediate Electricity and Magnetism (pre-requisites: PHY 203, MAT 381)	4
PHY 321 Intermediate Mechanics (pre-requisite: PHY 202 / co-requisite: MAT 381)	4
PHY 331 Modern Physics (pre-requisites: PHY 203, MAT 381)	3
PHY 341 Mathematical Methods of Physics (pre-requisites: PHY 203, MAT 381)	3
PHY 405 Quantum Mechanics (pre-requisites: PHY 331 and/or MAT 406)	3
PHY 455 Solid State Physics (pre-requisites: PHY 202, MAT 282)	3
Total (minimum)	21

* Remaining two courses must be 300 or above level PHY courses.

Program Note: A minimum of 6 credits must be taken at Cal U.

Minor in Statistics Curriculum

Course	Credits
Required Courses	15

Department of Mathematics and Physical Sciences

Course	Credits
MAT 215 Statistics OR MAT 225 Business Statistics	3
MAT 281 Calculus I	3
MAT 282 Calculus II	3
MAT 376 Applied Regression	3
MAT 461 Statistical Analysis I	3
Electives <i>(Select two courses from the following)</i>	6
MAT 360 Nonparametric Statistics	3
MAT 371 Applied Categorical Data Analysis	3
MAT 373 Time Series and Stochastic Processes	3
MAT 391 Statistical Packages	3
MAT 462 Statistical Analysis II	3
MAT 471 Applied Multivariate Statistics	3
Total	21

Department of Nursing and Allied Health

Faculty

Dr. Robin Weaver (chair) | Dr. Donna Caruthers | Dr. Nicole Evanick | Dr. Kathleen Morouse | Suzanne M. Palko | Dr. Linda Pina

For faculty bios, visit: <https://www.calu.edu/inside/faculty-staff/profiles/index.aspx>

Program

Cal U's Department of Nursing and Allied Health offers undergraduate programs in radiologic technology and nursing.

Associate and Bachelor's Degree Programs

Degrees offered through this department include:

- A.S. in Technical Studies: Radiologic Technology/Science
- BSN in Nursing (RN-to-BSN program)

Accreditation

The nursing program is accredited by the Commission on Collegiate Nursing Education.



The baccalaureate degree program in nursing and master's degree program in nursing at California University of Pennsylvania is accredited by the Commission on Collegiate Nursing Education (<http://www.ccneaccreditation.org>).

A.S. in Radiologic Technology/Science

Program Description

The Associate of Science in Radiological Technology/Science degree covers anatomy, patient positioning, examination techniques, equipment protocols, radiation safety, radiation protection and basic patient care. Upon successful completion of the program, graduates are eligible to apply for the national certification examination of the American Registry of Radiologic Technologists. Graduates passing the certification examination are recognized as registered technologists.

Delivery Mode

Traditional

Department of Nursing and Allied Health

The clinical education is competency-based and utilizes the Radiology Department, offsite facilities, evenings, weekends and specialty areas of CT, MRI and Interventional Radiology for achievement of the skills and proficiency that are required in the profession of radiography.

Accreditation

This program is accredited by the Joint Review Committee on Education in Radiologic Technology (www.jrcert.org).

Curriculum

Course	Credits
General Education Courses	23
<i>Building a Sense of Community</i> UNI 200 Career Readiness	1
<i>Composition or Public Speaking</i> ENG 101 English Composition I OR CDC 101 Public Speaking	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> HSC 115 Current Health Issues	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities or Fine Arts</i> Any Humanities or Fine Arts Course	3
<i>Natural Sciences</i> HSC 110 Anatomy and Physiology I* (also a Required Major Course)	4
<i>Social Sciences or Humanities</i> PSY 100 Intro to Psychology OR SOC 100 Intro to Sociology	3
Required Major Courses	64
HSC 110 Anatomy and Physiology I* (Credits for this course are counted toward the general education requirement.)	Listed above
HSC 120 Anatomy and Physiology II*	4
RAD 100 Radiography Theory and Lab I	5
RAD 110 Radiography Clinical I	6
RAD 101 Radiography Theory and Lab II	5
RAD 120 Radiography Clinical II	6

Department of Nursing and Allied Health

Course	Credits
RAD 130 Radiography Clinical III	4
RAD 140 Radiography Clinical IV	4
RAD 200 Radiography Theory and Lab III	5
RAD 210 Radiography Clinical V	6
RAD 201 Radiography Theory and Lab IV	5
RAD 220 Radiography Clinical VI	6
RAD 230 Radiography Clinical VII	4
RAD 240 Radiography Clinical VIII	4
Total	87

* Required pre-requisite courses.

Program Notes: This program has a handbook, which can be obtained from the department chair. RAD courses are taught at Washington Hospital.

Program Webpage

<https://www.calu.edu/academics/undergraduate/associate/radiologic-technology/index.aspx>

BSN in Nursing (RN to BSN)

Program Description

The Bachelor of Science in Nursing degree is an RN-to-BSN program.

Delivery Mode

Global Online (100% online)

Academic Passport, Portfolio Evaluation and Transfer Credits

Students are able to apply credits from previous coursework to their bachelor's degree through an Academic Passport. Upon admission, the following will be accepted as the Academic Passport: 30 credits from the RN's basic nursing program lower-division coursework, along with 30 credits (as appropriate) for completed General Education courses such as English Composition I and II, the natural sciences (e.g., Anatomy and Physiology I and II, Microbiology), social sciences, etc. An additional 12 credits will be awarded through completion of an entry-level portfolio evaluation to be completed during the first semester in the program.

Students with more General Education credits completed may transfer the additional coursework per the University's transfer credit policy to meet the RN-BSN program requirements. Students who already have another bachelor's degree are exempt from meeting the General Education requirements, with the exception of public speaking and statistics, which are required by the nursing program.

Curriculum

Students must consult with an academic adviser to determine courses needed for graduation. It is recommended that all General Education courses be completed prior to entering the nursing courses due to the accelerated

Department of Nursing and Allied Health

nature of the program; however, general education courses may be taken with, or following completion of, nursing courses. Students will not graduate until nursing and general education requirements are all met.

Course	Credits
General Education Courses	40
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	Waived
<i>Composition</i> <ul style="list-style-type: none"> • ENG 101 English Composition I • ENG 102 Composition II 	6
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Statistics Course (recommended: MAT 205, 215 or 225)	3
<i>Technological Literacy</i> Any Computer Science Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> BIO 226 Basic Microbiology OR BIO 126 Introductory Microbiology OR BIO 326 General Microbiology	4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education by Entry-Level Portfolio</i> <ul style="list-style-type: none"> • Natural Sciences Course • Ethics and Multicultural Awareness Emphasis Course • Communications Course • Health and Wellness Course 	12
Required Major Courses	41
NUR 330 Philosophy of Professional Nursing	3
NUR 361 Nursing Research	3
NUR 375 Leadership and Change in Nursing	6
NUR 420 Nursing Informatics	3
NUR 430 Evidence-Based Practice in Nursing	3

Department of Nursing and Allied Health

Course	Credits
NUR 450 Trends and Issues in Nursing	3
NUR 465 Nursing Assessment and Health Promotion of Individuals and Families	6
NUR 475 Community Health Nursing	6
BIO 230 Anatomy and Physiology I OR HSC 110 Anatomy and Physiology I	4
BIO 260 Anatomy and Physiology II OR HSC 120 Anatomy and Physiology II	4
Transfer Credits*	30
Free Electives	9
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** NUR 475 Community Health Nursing
- **Writing-Intensive Component Courses (2 courses required):** NUR 375 Leadership and Change in Nursing AND NUR 465 Nursing Assessment and Health Promotion of Individuals and Families
- **Laboratory Course (1 course required):** BIO 260 Anatomy and Physiology II OR HSC 120 Anatomy and Physiology II

* 30 transfer credits are allowed for lower-division nursing courses, and additional credits may transfer per University policy. 12 credits are awarded through a required entry-level portfolio evaluation.

Program Notes:

- This professional BSN program is for RNs who are graduates of diploma or associate degree basic nursing programs.
- A pre-requisite of NUR 361 is required for NUR 430.
- A minimum grade of C is required for completion of each nursing course. Additionally, all of the University's graduation requirements apply to the RN-to-BSN program.

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/nursing-rn-bsn/index.aspx>

B.S. in General Education

Program Description

The Bachelor of Science in General Education degree provides a flexible program of study. It equips students with essential skills and knowledge that can be used in multiple workforce areas.

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> Any Mathematics and Wellness Course	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Additional General Education Courses (three courses) 	12
Special Experience Course	3
Select any 300- or 400-level Course in ATE, CMD, EDE, EDU, ELE, ELM, ESP, FIT, GTY, HSC, TED, SEC, SOW, SPT	3

General Education Degree Program

Course	Credits
Writing-Intensive Courses	6
Select any two writing-intensive courses in ATE, CMD, EDE, EDU, ELE, ELM, ESP, FIT, GTY, HSC, TED, SEC, SOW, SPT	6
Laboratory Course	3
Any Natural Sciences Lab Course	3 or 4
Required Major Courses	12
Select 12 credits from the following options: <ul style="list-style-type: none"> • Option 1: EDE, EDU, ELE, ESP, TED, SEC • Option 2: ATE, GTY • Option 3: FIT, HSC, SPT • Option 4: CMD • Option 5: SOW 	12
Required Related Courses	48
Select 48 credits related to major: <ul style="list-style-type: none"> • Option 1: EDE, EDU, ELE, ESP, TED, SEC • Option 2: ATE, GTY • Option 3: FIT, HSC, SPT • Option 4: CMD • Option 5: SOW 	48
Free Electives	9
Total	120

Program Notes: In order to be admitted into the general education degree program, the student must have completed at least 48 credits in a declared major. At least 42 credits must be at the 300-400 level. At least 21 credits must be upper-division courses to qualify for graduation.

Honors Program

Honors Advisory Board

Arrigo-Nelson (biological and environmental sciences); Aune (English), director; Fox (philosophy), associate director; Gould (chemistry and physics); Hess (exercise science and sport studies); Hettler (business and economics); Lyles (health science); McClintock-Comeaux (women's studies); Cormas (childhood education); Hackett (psychology)

Purpose

The Honors Program at California University of Pennsylvania provides an opportunity for an enhanced educational experience to our most talented students and faculty. Honors Program students desire to pursue intellectual and creative growth beyond the usual requirements of their major field of study and intend to cultivate their individual and personal aspirations to learn. Honors Program students and faculty expect to explore and participate in scholarly, professional and artistic exercises outside the classroom; they engage in community service activities, which complement their academic studies and nurture their personal sense of commitment and communal responsibility. Honors students anticipate exercising leadership while at California University of Pennsylvania; they prepare to become leaders while students in our program, and they expect to continue as leaders when they graduate.

Membership

Membership in the University Honors Program is by invitation only. However, the Honors Program promotes outstanding intellectual achievement throughout the University, and undergraduate students in any program or division of the University may participate in the Honors Program. Each year, the applications of all incoming first-year and transfer students are reviewed, and those students with the very highest indicators of past and future academic success are invited to apply to participate in the Honors Program.

Programs

Each summer (since 1985), two Honors Program students receive scholarships to participate in the PASSHE Summer Honors Program. This program is noted for its academic quality and its opportunity, typically, to study abroad in such places as:

- Egypt (2010)
- Oxford, England (2012)
- London, Salzburg, Vienna, Venice and Rome (2013)
- Canada (2014)
- Norway (2015)
- Spain (2016)
- Belize (2017)
- Vienna and Sarajevo (2018)
- Poland (2019)

Honors students have the opportunity to live in Smith Honors Hall, which gives them easy access to educational, social and recreational programming. The Honors Program maintains a computer lab in Smith Hall for the exclusive use of honors students and faculty. All honors courses are held in the Smith Hall classroom as well. Honors students are encouraged to be active scholars and present their work at local, regional, national and international conferences as well as in international publications.

Awards

Currently, the Honors Program annually presents the following awards:

- Senior Thesis Project Award
- Outstanding Honors Program Graduating Senior Award

Honors Program

- Outstanding Honors Program Service Award

Curriculum

Courses designated as honors courses are restricted to members of the Honors Program and are offered at all class levels. In such courses, enrollment is kept low to encourage and ensure close interaction between student and professor. Additionally, most regular University course offerings at all levels may have an honors component. In such courses (called addenda), honors students fulfill the same requirements as other students in the class, but honors students perform certain independent work, which is designed to enhance the regular departmental courses and which is agreed upon in writing by the student, the professor and the Honors Program. In all such courses, the successful completion of the course and its honors component is indicated on the student's transcript.

Honors Program students are expected to maintain a minimum grade-point average sufficient to achieve the dean's list and to graduate with honors. Additionally, students must complete a minimum of 24 credits, including addenda and thesis project, within the Honors Program.

Inquiries about the Honors Program may be made of the director at:

California University of Pennsylvania

250 University Avenue

Box 100

California, PA 15419

Phone: 724-938-4535/1544

Fax: 724-938-5710

Email: honors@calu.edu

Military Science (ROTC)

Leadership That Lasts a Lifetime

The Army Reserve Officers' Training Corps (ROTC) is an elective curriculum you take along with your required college classes. It gives you the tools, training and experiences that will help you succeed in any competitive environment.

Along with great leadership training, Army ROTC can pay for your college tuition. (Because Army ROTC is an elective, you can participate your freshman and sophomore years without any obligation to join the Army.) You will have a normal college student experience like everyone else on campus, but when you graduate, you will be commissioned as an Officer in the Army, Army National Guard or Army Reserve. At that point, you will have a wide range of interest areas you can specialize in called branches.

ROTC is traditionally a four-year program consisting of basic and advanced programs. The basic program is usually taken in the freshman and sophomore years. The student incurs no military obligation. Students may discontinue the basic program at any time. It consists of four semesters of training and instruction on areas of national defense, land navigation, small-unit leadership, military history and leadership development. Uniform, necessary textbooks and equipment are furnished without cost to the student.

To be eligible for the basic program, a student must be enrolled as a full-time student at California University of Pennsylvania and not be a conscientious objector. Students who have taken Junior ROTC or have military experience (Active Duty, National Guard or Reserve) may receive advanced placement credit for the basic program.

Who We're Looking For

Those who succeed in the Army ROTC program are students who excel and want something more out of the college experience. Generally, these students are scholars who keep their grades up, athletes who are physically fit and leaders who have a great desire to learn.

Your Commitment

Army ROTC students who receive an Army ROTC scholarship or enter the Army ROTC Advanced Course must agree to complete a period of service with the Army.

You can serve full time in the Army, or those who qualify may choose to serve part time as a member of the Army National Guard or Army Reserve while pursuing a civilian career.

It's an experience that you can't get anywhere else. Your leadership skills will be challenged every day. Contact your campus Military Science department for more specific details on your Army ROTC service commitment.

The Army ROTC program at California University of Pennsylvania is a satellite program delegated by the University of Pittsburgh Military Science Program; classes take place on the California University of Pennsylvania campus.

For additional information not covered above, contact the Military Science Department at 724-884-3727 or 724-938-1679, or visit our office located in The Military and Veterans Center or Excellence, Residence Hall E, rooms 146 and 157.

* Enrolling in the Army ROTC Basic Course does NOT involve a commitment of service to the Army unless you have received an Army ROTC Scholarship.

The Basic Program

ROTC is traditionally a four-year program consisting of a basic and an advanced program.

Military Science (ROTC)

The basic program is usually taken in the freshman and sophomore years. The student incurs no military obligation. Students may discontinue the basic program at any time. It consists of four semesters of training and instruction on areas of national defense, land navigation, small-unit leadership, military history and leadership development. Uniform, necessary textbooks and equipment are furnished without cost to the student.

To be eligible for the basic program, a student must be enrolled as a full-time student at California University of Pennsylvania and not be a conscientious objector. Students who have taken Junior ROTC or have military experience (active duty, guard or reserves) may receive advanced placement credit for the basic program.

B.S. in Science and Technology: Multidisciplinary Studies

Program Description

The Bachelor of Science in Science and Technology: Multidisciplinary Studies degree offers students a means to design a program of study that reflects current business, industry, government, education/training development and technology needs. Through the flexibility of this program, students are able to build a unique skill set that focuses on two or more distinct disciplines integrated around a unifying theme that cannot be subsumed by a single area of study.

Delivery Modes

- Traditional (on campus)
- Global Online (100% online)

Curriculum

Course	Credits
General Education Courses	40 or 41
<i>Building a Sense of Community</i> UNI 100 First-Year Seminar	1
<i>Composition</i> ENG 101 English Composition I	3
<i>Public Speaking</i> Any Public Speaking Course	3
<i>Mathematics and Quantitative Literacy</i> MAT 181 College Algebra	3
<i>Health and Wellness</i> Any Health and Wellness Course	3
<i>Technological Literacy</i> Any Technological Literacy Course	3
<i>Humanities</i> Any Humanities Course	3
<i>Fine Arts</i> Any Fine Arts Course	3
<i>Natural Sciences</i> Any Natural Sciences Course	3 or 4
<i>Social Sciences</i> Any Social Sciences Course	3
<i>General Education Options</i> <ul style="list-style-type: none"> • Any Ethics and Multicultural Awareness Emphasis Course • Additional General Education Courses (three courses) 	12

Science and Technology Multidisciplinary Studies Degree Program

Course	Credits
Professional Program Core*	60
STEM Area Courses	24
Capstone Area Course	3
Discipline Program Areas Courses	33
Free Electives	19 or 20
Select free electives that build the B.S. in Science and Technology: Multidisciplinary Studies degree	19 or 20
Total	120

Additional requirements, not counted toward the General Education requirements, include:

- **Special Experience Course (1 course required):** Any approved Upper-Division Special Experience Course from the Eberly College of Science and Technology program disciplines: BIO, CET, CHE, CIS, CSC, DMT, EAS, EET, ENS, GEO, GET, GIS, GLG, IST, ITE, MAT, NMT, MTR, PHY, REC, RET, TOU and WFD
- **Writing-Intensive Component Courses (2 courses required):** Any approved Upper-Division Writing Courses from the Eberly College of Science and Technology program disciplines: BIO, CET, CHE, CIS, CSC, DMT, EAS, EET, ENS, GEO, GET, GIS, GLG, IST, ITE, MAT, NMT, MTR, PHY, REC, RET, TOU and WFD
- **Laboratory Course (1 course required):** Any approved Laboratory Course from the Eberly College of Science and Technology program disciplines: BIO, CET, CHE, CIS, CSC, DMT, EAS, EET, ENS, GEO, GET, GIS, GLG, IST, ITE, MAT, NMT, MTR, PHY, REC, RET and WFD

* Requires students to develop an approved academic plan of study with a faculty adviser and/or department chair from the student's selected professional program core. The "Professional Core" is derived from two or more distinct programs and is integrated around a unifying theme or topic that cannot be subsumed under a single discipline or occupational field.

- Select from these professional program core discipline codes: BIO, CET, CHE, CIS, CSC, DMT, EAS, EET, ENS, GEO, GET, GIS, GLG, IST, ITE, MAT, MTR, NMT, PHY, REC, RET, TOU, UAS and WFD.
- The "Professional Core" will have a minimum of 6 credits of Science, 6 credits of Technology, 6 credits of Mathematics and 3 credits from a Capstone experience course. ("General Education" requirements that overlap with these requirements can count toward the "Professional Core" requirement; however, students will still need to meet the 120-credit graduation requirement.)
- Students must complete a minimum of 15 credits in a special area of interest (300- or 400-level courses from one of the following disciplines): BIO, CET, CHE, CIS, CSC, DMT, EAS, EET, ENS, GEO, GET, GIS, GLG, IST, ITE, MAT, MTR, NMT, PHY, REC, RET, TOU, UAS and WFD. This applies to the "Professional Core" and advanced-standing course requirements.

Additional Program Notes:

- Students are required to take 42 minimum credits of advanced-level classes.

Science and Technology Multidisciplinary Studies Degree Program

- Articulates up to 90 transfer semester hours from accredited institutions of the 120 hours required for graduation. Thirty (30) of the last 45 credits have to be taken at Cal U. In addition, students must complete at least 50% of the major coursework within their department from Cal U, with the exception of intra-system transfer students.
- Permits up to 30 earned credits of prior learning assessment (PLA) work and other applicable nontraditional learning experiences. All credit awarded for work and other non-traditional experience is called "college-equivalent" credit and is transcript as "P" credits. Portfolios describing these experiences and their relationship to the learning objectives of course(s) being challenged are required. Additional fees may apply.
- Students are required to meet every semester with their adviser to tailor their program of study to their own personal/professional interests, needs or occupational employment demands/projections.
- Requires students to have at least 42 credits of their overall coursework be advance-standing courses; 120-credit graduation requirement; and must have a minimum 2.0 GPA to qualify for graduation.

Program Webpages

<https://www.calu.edu/academics/undergraduate/bachelors/science-technology/index.aspx>

<https://www.calu.edu/academics/undergraduate/bachelors/science-technology/online.aspx>

TRIO and Academic Development Services

Faculty

Lisa Driscoll (chair) | Jeanne Fazekas | Laura A. Giachetti | Nathan Knopp | Marnie Hall Martin | Eron M. McMillen | Jennifer Ramsey

Purpose

The mission of the department is to foster students' academic, social, cultural and career success through programming, support and academic services. The department provides services to University and TRIO college students as well as eligible high school students from nine target high schools that participate in three federal TRIO grant-funded programs: Student Support Services and two Upward Bound Programs: Fayette and Monongahela Projects.

Services

TRIO Student Support Services (SSS)

Instruction

Faculty course offerings include:

- **EDU 210** Critical Thinking and Reading
- **XCP 194** Career Planning
- **UNI 100** First-Year Seminar
- **UNI 200** Career Readiness

Counseling and Supports

TRIO Counselors provide educational career counseling and academic advisement to students from their first year until graduation. New program students are interviewed and receive an orientation and academic plan. Counselors help students select and register for courses; monitor each student's academic performance; and provide students with information concerning academic resources, policies, procedures and practices. Program students receive priority registration, financial literacy and planning (including scholarship), personal development workshops, tutoring, mentorship, learning communities, graduate school planning, and grant aid (for those that meet criteria). Students may also participate in cultural enrichment opportunities offered on/off campus. Any student interested in services should contact the TRIO SSS office at 724-938-4230.

Literacy and Academic Support

A faculty member is dedicated to:

- Work 1:1 with students in all aspects of literacy and support the development of reading at the college level.
- Assess students' reading needs, implement strategies and evaluate instruction.

TRIO SSS will provide linkage to the Vulcan Learning Commons (VLC), which offers face-to-face and online tutoring support, including:

- Supplemental instruction that improves student performance in historically difficult courses.
- Connect with a student who has been successful in the course.
- Teaches skills in a supportive environment for academic success.
- Reviews lecture notes, textbooks and other course materials.
- Teaches test-taking skills.

TRIO Club

The club is open to all students and has a focus on supporting TRIO-eligible students through both on- and off-campus events, providing students with an opportunity to stay connected and involved with their peers.

TRIO and Academic Development Services

TRIO Mentor Program

Students can select from faculty, staff or administrative mentors on campus. The mentor program helps students build relationships with faculty/staff/administrators who share similar experiences. Students will have the opportunity to meet with their mentors regularly and participate in campus events, including the #IAMFIRST campaign.

TRIO Upward Bound (UB) Programs

Cal U is committed to community outreach for local students in the surrounding high schools. TRIO Upward Bound is a federally-funded TRIO program that helps to prepare eligible high school students for success in postsecondary education. The program is available to students meeting TRIO eligibility and offers year-round support and services through Saturday, after-school and summer college preparatory activities.

Cal U hosts two TRIO Upward Bound programs, Fayette and Monongahela.

- The **Fayette Project** serves as many as 93 high school students per year in the [Albert Gallatin Area](#), [Brownsville Area](#), [Connellsville Area](#), [Laurel Highlands](#) and [Uniontown Area](#) school districts.
- The **Monongahela Project** serves up to 63 high school students per year in [Carmichaels Area](#), [Jefferson-Morgan](#), [Waynesburg Central](#) and [California Area](#) schools.

Upward Bound (UB) helps high school students prepare for and succeed in college after high school. The program offers a wide array of services that include academic and career guidance; college tours; exposure to college majors/careers; tutoring and study skills; applications for college and financial planning; fee waivers and college planning workshops; cultural exposure; and field trips. Students can also earn up to nine college credits prior to high school graduation that will transfer to a desired post-secondary institution.

Anyone interested in learning more about this opportunity should contact the TRIO Upward Bound office at 724-938-4470.

Exploratory Studies

Exploratory Studies is a major for students who are investigating career options before selecting a major program of study. TRIO faculty assist students in discovering a career path that best fits their individual values and interests. Whether working with TRIO faculty to identify courses that may align with a potential career or meeting with a career coach to discuss various occupations, students are supported through the decision process.

Additionally, students in First-Year Seminar explore career options through the use of the FOCUS 2 Career Assessment and the development of Career Advantage Plans offered by the CPDC. A special course, XCP 194 (Career Planning) is offered to assist students in confirming and/or clarifying career objectives.

Moreover, TRIO and the Office of Career and Professional Development are integral resources for students with questions about their majors, the types of careers in specific majors, the future availability of jobs in an area or simply what they want to do in life.

General Education Courses

California University of Pennsylvania believes that a liberal education is essential for all students, regardless of the profession for which they may be preparing. The purpose of the General Education program is to provide the foundation on which a student's education rests and can continue to expand throughout life. The goals, objectives and courses that comprise the General Education program are designed to provide students with the knowledge, understanding and skills they will need to pursue their careers and to lead productive and rewarding lives.

As stated in the Pennsylvania State System of Higher Education Board of Governors Policy 1993-01, "The most important outcomes [of the General Education Curriculum] consist not so much in the mastery of particular bodies of knowledge as in the acquisition of skills, values, awareness, understanding, perspective and appreciation needed for continuing professional and personal growth in a rapidly changing world."

General Education includes broadly defined essential skills and knowledge needed to live healthy, ethical, fulfilling and productive lives in the modern world. However, General Education goes beyond simply fostering a particular set of skills, but additionally aims to place those skills in a wider context so that students develop the ability and habit of applying them to every aspect of their lives. General Education ensures that our graduates' education is comprehensive, introducing a wide variety of experiences, worldviews and methodologies by sampling diverse academic disciplines.

At Cal U, the General Education curriculum follows naturally from the core values of the University: integrity, civility and responsibility. Students experience these values not only in their chosen area of specialization, but also more broadly in their exposure to the arts, humanities, and social and natural sciences. This liberal education provides the essential basis for building character and careers in an increasingly dynamic world.

Students are required to complete 40-41 credits of General Education coursework. This requirement is achieved by taking courses in a series of different "menus," each of which is designed to address a particular set of educational goals. Each menu has a list of courses that satisfy the menu goals. Students may select any course from the menu, unless their major program of study mandates a particular choice. Students should always consult with an academic adviser or their department chair regarding program-specific requirements.

Building a Sense of Community (1 Cr.)

Overview

Students will have a common core of integrated educational experiences, learning how to become excellent students; how to survive and thrive in a college environment; and how to achieve their educational, personal and career goals. Students will develop the skills necessary to adjust to University life; they will sense that the curriculum is organically related and holistic, not a collection of courses.

Educational Goals:

- To foster academic success through understanding the University;
- To establish a foundation of knowledge on resources and skills necessary to be a successful college student;
- To cultivate campus connections and supportive networks of faculty, staff and students;
- To increase awareness of career choices and opportunities available for professional growth and development; and,
- To develop and enhance critical-thinking skills.

Note: As of publication of this catalog, UNI 100 will not be required for incoming students in the Fall of 2021; however, students must still complete the total number of credits required by their program (generally 60 for an associate degree and 120 for a bachelor's degree) to graduate.

Composition (3-6 Crs.)

Overview

Students will have the ability to develop and present ideas clearly in writing. Communication skills include "those required for effective reading, writing, speaking and listening" and "awareness of the challenges of cross-cultural communication" (PASSHE BOG Policy 1993-01).

Educational Goals:

Knowledge and Comprehension

- To demonstrate a capacity to carry out the planning, drafting, revising and editing stages of the writing process;
- To construct, explain and illustrate the interpretations of readings; and
- To recognize both what a text says and how it works (its rhetorical strategies).

Application and Analysis

- To analyze the elements of the writing situation (subject, purpose, audience) as a foundation for writing, and
- To apply rhetorical strategies in writing.

Intermediate Composition

Intermediate Composition is not required for all academic majors. Please consult with your adviser or department chair to determine the specific requirements for your program.

Educational Goals:

Application and Analysis

- To produce prose that is clear, coherent, convincing and correct; and
- To apply strategies for effective cross-cultural communication.

Synthesis and Evaluation

- To write papers that formulate original positions on a problem or issue in the context of a synthesis of multiple primary and/or secondary sources;
- To assess the usefulness and reliability of potential print, electronic and primary research for a proposed research report; and
- To plan, develop and write appropriately documented and formatted academic and/or professional texts.

NOTE: "Effective cross-cultural communication" here entails writers paying attention to how their texts might best be crafted for particular audiences, whether those audiences be professional or general.

Composition Course Menu

Introductory Composition Courses

- **ENG 101** Composition I
- **HON 150** Honors Composition I

Intermediate Composition Courses

- **ENG 102** Composition II
- **ENG 211** Business Writing I
- **ENG 217** Scientific and Technical Writing

General Education Courses: Composition

- **HON 250** Honors Composition II

Ethics and Multicultural Emphasis List (EMEL)

Overview

All academic programs are required to devote at least 3 credits of the General Education Options category to the Ethics and Multicultural Emphasis List (EMEL), a list of courses focused on values, ethics or multiculturalism. Programs may choose to require a specific course (or subset of courses) from the list. Students should check their advisement sheet or consult with an adviser to be sure of any specific requirements.

All EMEL courses are General Education menu courses that have a particular focus and primary emphasis on (at least) one of these two areas:

Multicultural Awareness

Students will become knowledgeable about cultural similarities and differences. Students will gain an "understanding of how people's experiences and perspectives are shaped by gender, ethnicity, culture and other factors that distinguish groups of people, coupled with recognition of common elements within human experiences that transcend time, space, race and circumstance" (PASSHE BOG Policy 1993-01).

Multicultural awareness assists individuals, regardless of ethnicity, gender, disability, social class or race, to understand and appreciate events and people from various points of view. The primary focus of a course on this list must be one or more of the following: gender or gender expression, sexual orientation, ethnicity, racial diversity, world religious belief systems or cultural diversity.

Educational Goals:

- To recognize one's own cultural background and views, including biases and prejudices toward other groups, while comparing and contrasting them with the values, beliefs and practices of other cultural groups;
- To outline diversity, either historically or cross-culturally, for the population(s) under study;
- To explain how cultural groups define social constructs (e.g., gender roles, gender attribution, gender ideology and gender identity) and how these are expressed;
- To identify and explain the social behavior of the population(s) under study; and
- To explain why tensions exist between cultural groups and how such tensions are expressed, such as attribution and ideology.

Values

Students will gain an "understanding of the role of values in personal, professional and civic life; experience in recognizing and analyzing ethical issues" (PASSE BOG Policy 1993-01). The study of ethical values includes the acts, customs and institutions regarded in a particular, usually favorable, way by a group of people. Ethical and moral values must be the primary focus of the course, not just a topic. The phrase "ethical values" here should be understood in contrast to values applicable only to limited contexts, such as personal or professional success, or adherence to laws and regulations.

Educational Goals:

- To apply bodies of knowledge to form the basis for an analysis of ethical values;
- To explain how ethical values are developed within diverse human frameworks;
- To analyze, synthesize and evaluate how ethical concepts are formed;
- To apply an analysis of ethical values to other branches of knowledge or to issues of universal human concern; and
- To adhere to ethical standards in the world at large and within professional settings.

Ethics and Multicultural Emphasis List Course Menu

EMEL Courses

- **ANT 231** Medical Anthropology
- **ANT 280** Indians of North America
- **ANT 300** Cultural Views of Women
- **ARB 203** Intermediate Arabic I
- **ART 243** Introduction to Asian Art
- **ART 270** Art History Today
- **CHD 350** Family and Community Collaboration Partnerships
- **CIS 352** Global, Economic and Social Ethical Issues in Computing
- **EAS 469** Global Climate Change
- **EDU 310** Teaching in a Multicultural Society
- **ENG 112** Myth, Magic and Mysticism
- **ENG 127** Woman as Hero
- **ENG 135** Re-Reading Harry Potter
- **ENG 136** Women's Memoirs
- **ENG 137** Northern Appalachian Literature
- **ENG 148** Horror in Literature
- **ENG 155** Introduction to African American Literature
- **ENG 156** Introduction to Native American Literature
- **ENG 179** Introduction of the Animated Film
- **ENG 181** Cultures of American Humor
- **ENG 306** Press Law and Media Ethics
- **ENG 325** World Literature to 1600
- **ENG 326** World Literature from 1600
- **GEO 100** Introduction to Geography
- **GTY 200** Aging in American Society
- **HIS 317** African American History to 1877
- **HIS 318** African American History since 1877
- **HIS 322** History of Religious Persecution in the US
- **HIS 324** The History of Women, Gender and Sexuality in the Modern World
- **HIS 325** Women in U.S. History
- **HIS 347** History of Race and Ethics in the U.S.
- **HIS 352** Native American History to 1850
- **HIS 353** Native American History from 1850
- **HIS 380** Readings in African American Studies
- **JUS 415** Multiculturalism and the Criminal Justice System
- **MAT 202** Math around the World
- **MUS 300** Jazz: History, Form and Analysis
- **MUS 305** African American Gospel and Caribbean Music
- **PHI 200** World Religions
- **PHI 220** Ethics
- **PHI 307** Medical Ethics
- **PHI 308** Bioethics
- **PHI 320** Ethical Theory
- **PHI 326** Social and Political Philosophy
- **POS 315** Constitutional Law: Civil Liberties & Civil Rights
- **POS 322** Politics of the Middle East
- **POS 325** Politics of Asia
- **POS 330** American Political Ideas
- **POS 340** The Politics of Empires

General Education Courses: Ethics and Multicultural Awareness

- **POS 347** Development of Political Thought: Classical and Medieval
- **POS 348** Political Thought: Medieval and Modern
- **PSY 211** Social Psychology
- **PSY 320** Black Psychology
- **REC 361** Parks and Recreation for Diverse Populations
- **SOC 205** Contemporary Social Problems
- **SOC 290** Gender and Work
- **SOC 325** Sociology of the Family
- **SPN 304** Spanish for Law Enforcement
- **SPN 305** Spanish for Business
- **SPT305** Ethics in Sport
- **THE 140** Script Analysis
- **THE 404** Cultural Studies in Theatre
- **WST 200** Introduction to Women's Studies
- **WST 300** Special Topics in Women's Studies
- **WST 320** Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) Studies
- **WST 330** Examination of Gender, Race, Sexuality and Class in Media
- **WST 340** Violence against Women: A Global Perspective
- **WST 400** Advanced Women's Studies

Fine Arts (3 Crs.)

Overview

Students will have an "appreciation of and experience with ... the arts" (PASSHE BOG Policy 1993-01). Fine arts courses are those that present organized values, beliefs or emotions using the senses and physical expression as the creative vehicle, and include courses in art, dance, music and theater.

Educational Goals:

- To present, critique or analyze human values, beliefs and emotions as they are conceptualized, formulated and expressed through verbal, aural and physical action and artifacts and perceived through the senses; and
- To attend and react to a performance or exhibit related to the discipline studied.

Additionally, a fine arts course must demonstrate *at least one* of the following goals:

- To compare and contrast the artistic expression of different cultural groups (where culture is defined broadly to include issues such as gender, ethnicity, racial diversity, religious belief, lifespan, etc.); and/or
- To recognize how values, ethics or social norms impact artistic expression; and/or
- To apply the tools of critical thinking to the fine arts (for example, compare opposing critiques of a work of art and ask probing questions about the sources of any difference of opinion).

Fine Arts Course Menu

Courses

- **ARB 343** Images of Islam Spain to Iran
- **ART 106** Art Appreciation
- **ART 109** Landmarks of World Art
- **ART 110** Drawing I
- **ART 112** Introduction to New and Emerging Art Media
- **ART 119** Design 2-D
- **ART 120** Design 3-D
- **ART 215** Digital Painting I
- **ART 233** Natural Science Drawing
- **ART 243** Introduction to Asian Art
- **ART 270** Art History Today
- **ART 295** Surface Design
- **ART 310** Advanced Drawing
- **ART 323** Women in Art
- **ART 326** Contemporary Art
- **ART 328** Italian Renaissance Art
- **ART 350** Printmaking: Relief
- **ART 351** Printmaking: Intaglio
- **ART 352** Printmaking Processes
- **ART 376** Jewelry/Metals: Casting
- **ART 377** Jewelry/Metals: Fabrication
- **ART 382** Ceramics Studio
- **ART 383** Painting Studio
- **ART 385** Sculpture Studio
- **ART 388** Critical Writing in Art
- **ART 410** Teaching Visual Art in Pre-K through Grade 8
- **ART 411** Teaching Art in Grades 9-12
- **ART 438** Figure Drawing

General Education Courses: Fine Arts

- **ART 448** Figure Modeling
- **ART 458** Figure Drawing and Modeling
- **ART 493** Advanced Ceramics
- **ART 496** Advanced Painting
- **ART 498** Advanced Sculpture
- **CDC 252** The Art of Film
- **DAN 132** Ballet Technique I
- **DAN 133** Jazz Technique I
- **DAN 134** Tap Dance Technique I
- **DAN 232** Ballet Technique II
- **DAN 301** Theater Dance I
- **DAN 302** Theater Dance II
- **DMT 101** Time-Based Media
- **ENG 110** Introduction to Creative Writing
- **ENG 179** Introduction to the Animated Film
- **HON 225** Introduction to Disciplinary Research in Fine Art
- **HON 230** Introduction to Disciplinary Research in Humanities
- **MUS 100** Introduction to Music
- **MUS 104** Voice Class I
- **MUS 186** Clavinova Ensemble
- **MUS 187** Guitar Ensemble
- **MUS 188** String Ensemble
- **MUS 191** University Choir
- **MUS 192** California Singers
- **MUS 193** University Gospel Choir
- **MUS 196** Jazz Ensemble
- **MUS 198** Marching Band
- **MUS 199** University Concert Band
- **MUS 211** Keyboard Class
- **MUS 215** Comprehensive Musicianship I
- **MUS 300** Jazz: History, Form and Analysis
- **MUS 304** American Musical: History, Form and Analysis
- **MUS 305** African-American Gospel and Caribbean Music
- **MUS 306** Opera
- **MUS 307** Special Music Project
- **MUS 310** Music in Media
- **MUS 313** Rock and' Roll: History, Form and Analysis
- **MUS 314** The Music Industry: History, Form and Analysis
- **MUS 315** Comprehensive Musicianship II
- **MUS 372** Creative Arts for Elementary Education and Early Childhood
- **PHI 335** Aesthetic Theory
- **PHI 336** Philosophy of Film
- **THE 100** Introduction to Theatre
- **THE 101** Voice and Speech
- **THE 126** Makeup
- **THE 131** Fundamentals of Acting
- **THE 201** Voice and Interpretation
- **THE 203** Music Theatre Performance I
- **THE 221** Theatrical Foundations
- **THE 231** Intermediate Acting
- **THE 309** Reader's Theatre
- **THE 328** Scene Painting
- **THE 340** Advanced Theatrical Design

General Education (9-12 Crs.)

The General Education Options category exists so that colleges, departments and programs can tailor the allocation of General Education credits to best meet their students' educational goals and needs. Students should consult their advisement sheet, academic adviser or department chair to determine the exact requirements for the General Education Options credits for their program.

General Education Options account for 9-12 credits of the General Education program. Departments/programs requiring an Intermediate Composition course will have 9 credits of General Education Options, while those not requiring Intermediate Composition will have 12 credits.

All students are required to complete 3 credits (one course) from the Ethics and Multicultural Emphasis List. The remaining General Education Options credits are allocated based on the student's major field of study. (See individual program advisement sheets.)

Health and Wellness (3 Crs.)

Overview

Students will have an understanding of the various means by which they may fulfill their potential as healthy people living in healthy communities across the lifespan. Wellness is the result of individuals making intelligent decisions concerning the various factors that can affect their physical, emotional, social, spiritual, intellectual and environmental health. Courses must include one or more of the following emphases: eating and exercising toward a healthy active lifestyle; building healthy relationships; understanding and preventing disease; explaining alcohol and drug use and abuse; making healthy choices; and building healthy communities.

Educational Goals:

- To compare and contrast healthy and unhealthy (relationships, drug use, choices, etc.) lifestyle factors that influence health;
- To assess one's level of health and wellness, and develop skills for behavioral change;
- To assess one's own sense of self (emotional health) and identify qualities of good emotional/mental health;
- To analyze, design and assess culturally competent health and wellness promotion plans for individuals and communities; and
- To determine barriers to achieving optimal health and wellness among all populations, including those which experience health disparities.

Health and Wellness Course Menu

Courses

- **ATE 340** Sports Nutrition
- **BIO 112** Biology of Sexually Transmitted Diseases
- **BIO 117** Introduction to Human Biology
- **BIO 226** Microbiology
- **CHD 350** Family and Community Collaboration Partnerships
- **DAN 233** Jazz Technique II
- **DAN 260** Modern Dance
- **GEO 221** Geography of Drugs
- **GTY 380** Wellness and Aging
- **HON 245** Introduction to Disciplinary Research in Health and Wellness
- **HSC 115** Current Health Issues
- **HSC 250** Nutrition for Health and Wellness
- **HSC 315** First Aid and Personal Safety
- **PSY 222** Psychology of Stress Management
- **REC 165** Introduction to Recreation and Leisure
- **REC 195** Leisure and Wellness Recreation
- **SOC 405** Re-socializing the Deviant and the Marginalized
- **SOW 303** Human Sexuality and Society

Humanities (3 Crs.)

Overview

Students will have an "appreciation of and experience with literature" (PASSHE BOG Policy 1993-01), as well as with other traditional areas of the humanities. The humanities deal with human values, beliefs and emotions and the way these are expressed through human creations. Humanities courses present organized values, beliefs or emotions using language as the creative vehicle, and include literature, philosophy and foreign language study.

Educational Goals:

- To present, critique or analyze human values, beliefs or emotions regarding the human condition as they are conceptualized, formulated and expressed through language.

Additionally, a humanities course must demonstrate *at least one* of the following goals:

- To compare and contrast the human condition as expressed by different cultural groups (where culture is defined broadly to include issues such as gender, ethnicity, racial diversity, religious belief, lifespan, etc.); and/or
- To recognize and analyze values, individual or cultural attitudes about values, relations between values and attitudes about values, and/or relations between any of these and other aspects of human behavior; and/or
- To recognize how critical analysis and reasoning are used to address problems in the humanities.

Humanities Course Menu

Courses

- **ARB 101** Elementary Arabic I
- **ARB 102** Elementary Arabic II
- **ARB 203** Intermediate Arabic I
- **ARB 341** Contemporary Arabic Culture
- **CDC 200** Truth and Representation
- **CDC 351** Producing Media Messages II
- **CMD 350** Sign Language and Braille I
- **EDU 210** Critical Thinking and Reading
- **ENG 106** Introduction to Poetry
- **ENG 107** Introduction to Fiction
- **ENG 108** Introduction to Drama
- **ENG 112** Myth, Magic and Mysticism
- **ENG 127** Woman as Hero
- **ENG 135** Re-Reading Harry Potter
- **ENG 136** Women's Memoirs
- **ENG 137** Northern Appalachian Literature
- **ENG 148** Horror in Literature
- **ENG 152** The Lord of the Rings
- **ENG 155** Introduction to African American Literature
- **ENG 156** Introduction to Native American Literature
- **ENG 178** Literature and Film
- **ENG 180** Literature and Natural Environments
- **ENG 181** Cultures of American Humor
- **ENG 203** Great Books
- **ENG 301** British Literature I
- **ENG 306** Press Law and Media Ethics
- **ENG 315** Survey of American Women Writers
- **ENG 337** Survey of American Literature I (to 1865)

General Education Courses: Humanities

- **ENG 338** Survey of American Literature II
- **ENG 354** Media History
- **ENG 487** American Literary Genres
- **ESP 100** Social Contexts of Disability in Popular Media
- **ESP 210** Special Education Foundations and Collaboration
- **FRE 101** Elementary French I
- **FRE 102** Elementary French II
- **FRE 203** Intermediate French I
- **FRE 204** Intermediate French II
- **FRE 341** 17th Century and Classical Age
- **FRE 343** Age of French Romanticism
- **FRE 344** The Age of French Realism
- **FRE 345** Birth of Modern French Culture in the Arts 1900-World War II
- **FRE 346** Contemporary French Culture/Arts
- **HIS *** Any HIS Course
- **HON 230** Introduction to Disciplinary Research in Humanities
- **PHI 100** Perspectives in Philosophy
- **PHI 115** Logic and Language
- **PHI 200** World Religions
- **PHI 201** Ancient Philosophy
- **PHI 206** 16th-18th Century Philosophy
- **PHI 220** Ethics
- **PHI 305** Medieval Philosophy
- **PHI 307** Medical Ethics
- **PHI 308** Bioethics
- **PHI 311** Formal Logic I
- **PHI 312** Formal Logic II
- **PHI 320** Ethical Theory
- **PHI 326** Social and Political Philosophy
- **PHI 355** Philosophy of Religion
- **PHI 405** Epistemology
- **PHI 410** Metaphysics
- **PHI 415** Philosophy of Mind
- **PHI 426** Phenomenology and Existentialism
- **PHI 431** Analytic Philosophy
- **SOC 210** Social Inequality
- **SOC 211** Sociology Collective Behavior
- **SOC 225** Sociology of Aging
- **SOC 240** Social Institutions
- **SOC 300** Sociology of Deviance
- **SOC 309** Sociology of Sport
- **SOC 378** Charismatic Leaders
- **SPN 101** Elementary Spanish I
- **SPN 102** Elementary Spanish II
- **SPN 304** Spanish for Law Enforcement
- **SPN 305** Spanish for Business
- **SPT 305** Ethics in Sport
- **THE 140** Script Analysis
- **THE 271** Scene Design I
- **THE 304** World Drama
- **THE 305** Shakespeare in the Theatre
- **THE 306** Modern Drama
- **THE 404** Cultural Studies in Theatre
- **WST 200** Introduction to Women's Studies
- **WST 320** Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) Studies

General Education Courses: Humanities

- **WST 330** Examination of Gender, Race, Sexuality and Class in Media

Laboratory Component Courses (one course)

Overview

A Laboratory Component course must include at least 25% evaluation and assessment of student performance directly from activities and experiences that fulfill the Laboratory Component educational goals. A Laboratory Component course may be a course in the student's major field of study or may be a General Education menu course. Students should consult with their academic adviser or department chair to determine whether any required courses for their major fulfill this component.

Educational Goals:

- Use discipline-specific methodologies and practices to systematically investigate the world;
- Organize data into trends and patterns using quantitative and/or qualitative methods (spatial, graphical, symbolic, etc.) to sort, analyze and interpret natural phenomena;
- Effectively communicate results of a set of applied experiments or observations; and
- Assess differences between theory and experimental results during evaluation of experimental design.

Laboratory Component Course Menu

Courses

- **ANT 254** Introduction to Forensic Anthropology
- **ANT341** Research Laboratory in Archaeology
- **ART 130** Biological Illustration: Form and Function
- **ART 233** Natural Science Drawing
- **BIO 117** Introduction to Human Biology
- **BIO 130** Biological Illustration: Form and Function
- **BIO 215** Introduction to Cellular and Molecular Biology
- **BIO 232** Fundamentals of Biological Anthropology
- **BUS 381** Management Science II
- **CHE 101** General Chemistry I
- **CHE 102** General Chemistry II
- **DMT 100** Foundations of Print Media
- **DMT 180** Foundations of Digital Media
- **EAS 100** Introduction to Earth Science
- **EAS 104** Introduction to Meteorology
- **EAS 245** Weather Analysis and Forecasting
- **ECO 421** Applied Econometrics
- **EDU 375** Introduction to Integrative STEM Education
- **EET 110** Electrical Circuits I
- **FIT 115** Applied Anatomy and Physiology
- **GLG 150** Introduction to Geology
- **GTY 400** Adult Development and Aging
- **JUS 380** Crime Scene Imaging
- **JUS 487** Computer Forensics
- **MAT 213** Data Visualization
- **MAT 261** Big Data Analytics
- **MAT 376** Applied Regression
- **PHS 120** Basic Physical Science with Lab
- **PHS 137** Introduction to Environmental Chemistry
- **PHY 101** College Physics I
- **PHY 202** College Physics II
- **POS 319** Campaign Management
- **PSY 301** Sensation and Perception Lab

General Education Courses: Laboratory Courses

- **PSY 306** Cognitive Psychology
- **PSY 335** Psychology of Learning
- **PSY 340** Psychological Measurement Lab
- **PSY 420** Social Psychology Lab
- **SOC 417** Field Research Methods
- **SOW 201** Interviewing for the Human Services
- **TED 304** Design in Bio-related Technology
- **THE 255** Puppetry
- **THE 272** Properties Design in Theatre
- **THE 310** Dance Production
- **THE 311** Lighting II

Mathematics and Quantitative Literacy (3 Crs.)

Overview

Students will have the "ability to understand numerical data and use mathematical methods for analysis and problem solving" (PASSHE BOG Policy 1993-01). Mathematics is the science of numbers and their operations, interrelations, combinations, generalizations and abstractions and of space configurations and their structure, measurement, transformations and generalizations.

Educational Goals:

- To apply a variety of appropriate strategies to solve mathematical problems;
- To construct mathematical arguments and proofs;
- To express ideas precisely using the language of mathematics;
- To construct, analyze and interpret mathematical models of physical, social or other phenomena;
and
- To apply mathematics in contexts outside of mathematics.

Mathematics and Quantitative Literacy Course

Menu

Courses

- **HON 210** Introduction to Disciplinary Research in Mathematics and Quantitative Literacy
- **MAT 100** Survey of Mathematics
- **MAT 110** Applications of Mathematics
- **MAT 120** Elementary Topics in Mathematics I
- **MAT 130** Elementary Topics in Mathematics II
- **MAT 181** College Algebra
- **MAT 191** College Trigonometry
- **MAT 199** Pre-Calculus
- **MAT 202** Math Around the World
- **MAT 205** Statistics for the Health and Social Sciences
- **MAT 215** Statistics
- **MAT 225** Business Statistics
- **MAT 272** Discrete Mathematics
- **MAT 273** Applied Calculus
- **MAT 281** Calculus I
- **MAT 282** Calculus II
- **MAT 290** Technology for Mathematics
- **MAT 303** Geometry
- **PSY 331** Inferential Statistics in Psychology

Natural Sciences (3-4 Crs.)

Overview

Students will have a basic understanding of the natural sciences, which are concerned with people's relationship with the natural and physical world. The various branches of natural science seek to understand the processes, components and interactions of the natural world, encompassing physics (matter and energy and their interrelations and transformations), biology (living organisms and their essential processes), chemistry (the physical properties and composition of nature and its products) and other subdisciplines that connect the major branches of natural science.

Educational Goals:

- To identify major concepts in natural science disciplines, which provide insights into the breadth of those disciplines and their relationship to other disciplines;
- To explain the method by which the sciences seek to explain the natural world and the development of hypotheses, models, theories and laws;
- To identify and assess the basis of the numerous scientific issues that affect the society in which the students live;
- To apply concepts and knowledge as they relate to research, problem solving and effective decision-making in the natural sciences;
- To analyze and evaluate the limitations of collected data and to explore possible alternative interpretations; and
- To recognize that "good" science operates on the same set of "ethical values" that govern society to include, but not limited to, honesty, objectivity, openness and respect for others.

Natural Sciences Course Menu

Courses

- **ANT 232** Fundamentals of Biological Anthropology
- **ART 233** Natural Science Drawing
- **BIO 103** Contemporary Issues in Biology
- **BIO 130** Biological Illustration: Form and Function
- **BIO 232** Fundamentals of Biological Anthropology
- **CHE 101** General Chemistry I
- **CHE 102** General Chemistry II
- **CHE 103** Chemistry for the Everyday World
- **CMD 221** Speech Science
- **CMD 310** Anatomy and Physiology
- **EAS 100** Introduction to Earth Science
- **EAS 104** Introduction to Meteorology
- **EAS 105** Extreme Weather
- **EAS 142** Introduction to Climate Science
- **EAS 163** Introduction to Oceans and Climate
- **EAS 469** Global Climate Change
- **ENS 101** Introduction to Environmental Science
- **GLG 150** Introduction to Geology
- **HON 235** Introduction to Disciplinary Research in Natural Science
- **HSC 110** Anatomy and Physiology I
- **HSC 120** Human Anatomy and Physiology II with Lab
- **JUS 105** Introduction to Forensic Science
- **PHI 325** Philosophy of Science
- **PHS 120** Basic Physical Science with Lab
- **PHS 137** Introduction to Environmental Chemistry
- **PHY 101** College Physics I

General Education Courses: Natural Sciences

- **PHY 121** General Physics I
- **PHY 122** General Physics II
- **PHY 202** College Physics II

Public Speaking (3 Crs.)

Overview

Students will have the ability to develop and present ideas through oral communication.

Educational Goals:

- To be able to demonstrate the theory and application of public speaking;
- To construct and arrange arguments, evidence, information and appeals in speeches designed to accomplish informative and persuasive communication goals;
- To demonstrate the use of language in speeches designed to accomplish informative and persuasive communication goals;
- To prepare and deliver effective communication with audiences in the presentation of speeches;
- To make critical and ethical evaluation of public speeches; and
- To apply strategies for effective cross-cultural communication.

Public Speaking Course Menu

Courses

- **CDC 101** Public Speaking
- **CDC 201** Argumentation and Advocacy
- **EDU 350** Supporting English Language Learners
- **HON 240** Introduction to Disciplinary Research in Public Speaking

Social Sciences (3 Crs.)

Overview

Students will have a "basic understanding of ... the social sciences and their significance in contemporary society" (PASSHE BOG Policy 1993-01) and will have an "awareness of the social, economic, political and environmental interdependence of countries and regions of the world" (PASSHE BOG Policy 1993-01). The social sciences focus on human behavior, how people interact with each other in the past and present; how people interact with the environment; and how people organize, govern and trade among themselves.

Educational Goals:

- To discuss, explore or utilize the scientific method to understand human behavior and address the question of "why do people do what they do?";
- To identify major concepts in one or more social science disciplines and provide insight into the breadth of these disciplines and their relationship to other disciplines; and
- To recognize how critical analysis and reasoning are used to address problems in the social sciences.

Additionally, a social science course must demonstrate *at least one* of the following goals:

- To identify, explain, apply or evaluate the moral and ethical codes of a social science discipline; and/or
- To recognize, describe or analyze how cultural differences impact human behavior (where culture is defined broadly to include issues such as gender, ethnicity, racial diversity, religious belief, lifespan, etc.).

Social Sciences Course Menu

Courses

- **ANT 100** Introduction to Anthropology
- **ANT 231** Medical Anthropology
- **ANT 232** Fundamentals of Biological Anthropology
- **ANT 280** Indians of North America
- **ANT 300** Cultural Views of Women
- **BUS 100** Introduction to Business
- **CMD 100** Survey of Speech Pathology
- **CMD 105** Language and Speech Development
- **CMD 108** Nature of Language
- **CMD 220** Communication across the Lifespan
- **ECO 100** Elements of Economics
- **ECO 102** Economics for Elementary Education
- **ECO 201** Principles of Microeconomics
- **ECO 202** Principles of Macroeconomics
- **EDU 310** Teaching in a Multicultural Society
- **GEO 100** Introduction to Geography
- **GEO 102** Geographic Systems for Elementary Education
- **GEO 217** Demographic Analysis
- **GEO 220** Geography of North America
- **GEO 360** Emergency Management
- **GTY 100** Introduction to Gerontology
- **GTY 200** Aging in American Society
- **HON 220** Introduction to Disciplinary Research in Social Science
- **JUS 101** Introduction to Criminal Justice Studies
- **JUS 361** Court Systems

General Education Courses: Social Sciences

- **JUS 415** Multiculturalism and the Criminal Justice System
- **LEA 100** Introduction to Leadership Studies
- **POS *** Any POS Course
- **PSY 100** General Psychology
- **PSY 211** Social Psychology
- **PSY 320** Black Psychology
- **REC 361** Parks and Recreation for Diverse Populations
- **SOC 100** Principles of Sociology
- **SOC 205** Contemporary Social Problems
- **SOC 290** Gender and Work
- **SOC 311** Sociology of Crime
- **SOC 312** Sociology of Organizations
- **SOC 315** Social Minorities
- **SOC 316** Urban Sociology
- **SOC 317** Substance Use and Abuse
- **SOC 318** Sociology of Addiction, Excess and Exploitation
- **SOC 320** International Women's Movement
- **SOC 324** Child Abuse and Neglect
- **SOC 325** Sociology of Family
- **SOC 380** Society and the Sociopath
- **SOC 395** Sociology of Elite Deviance
- **SOC 400** Structural and Institutional Violence
- **SOC 411** Symbolic Interaction
- **SOW 150** Introduction to Social Work
- **SOW 201** Interviewing for the Human Services
- **SOW 215** HBSE: The Life Course
- **SOW 316** HBSE II: Groups, Organizations and Communities
- **SOW 330** Child Welfare
- **SOW 364** Juvenile Delinquency
- **TOU 101** Introduction to Tourism Studies
- **WST 300** Special Topics in Women's Studies
- **WST 340** Violence against Women: A Global Perspective
- **WST 400** Advanced Women's Studies

Special Experience Component Courses (one course)

Overview

The Special Experience Component provides students with opportunities to demonstrate the application of the knowledge and skills developed through both the major discipline of study and the General Education program.

Special Experience Component courses are characterized by reflective thinking and the ability to synthesize information and ideas, to integrate knowledge and to express ideas acquired throughout the college experience. These courses reinforce the overall General Education experience by emphasizing ethics, values and norms, and multicultural awareness as broadly defined.

NOTE: Many departments and programs designate specific courses (either within or outside their major/program) to fulfill the Special Experience Component requirement. Students should consult with their academic adviser or department chair regarding specific requirements for their program of study.

Educational Goals:

- Examine interrelationships within and across disciplines;
- Apply problem-solving and/or critical analysis skills using a variety of methods and tools;
- Demonstrate information literacy skills, including the ability to access, evaluate, interpret and use information from a variety of sources; and
- Address issues in the community, or consider community or social implications of the course (i.e., multicultural issues, values, ethics).

Special Experience Component Course Menu Courses

- **ACC 320** Volunteer Income Tax Assistance
- **ACC 491** Account Internship
- **ANT 455** Anthropology of Death and Dying
- **ANT 499** Senior Seminar in Anthropology
- **ART 490** Senior Studio Thesis
- **ATE 405** Athletic Training Clinical Education IV
- **BIO 418** Biological Research Investigations
- **BIO 492** Biological and Environmental Science Internship
- **BUS 492** Business Internship
- **CDC 498** Senior Project in Communication, Design and Culture
- **CHD 322** Professional Education Internship
- **CIS 492** System Development and Implementation
- **CMD 450** Intro to Clinic Procedures
- **CSC 492** Senior Project II
- **DMT 485** Senior Seminar
- **DMT 495** Internship
- **EAS 431** Digital Media for Weather and Climate Applications
- **ECO 460** Global Economic Perspectives
- **ECO 492** Economic Internship
- **EET 450** Senior Project
- **ELE 461** Student Teaching and School Law PreK-4
- **ELM 461** Student Teaching and School Law Grades 4-8
- **ENG 499** English Studies Capstone Class
- **ENS 480** Topics in Field Biology
- **ESP 461** Student Teaching Practicum

General Education Courses: Special Experience Component

- **FIN 420** Securities Industry Essentials Exam Prep
- **FIN 492** Finance Internship
- **FIT 410** Wellness Seminar II
- **GEO 360** Emergency Management
- **GEO 479** Geography Internship
- **GLG 391** Geology of the Northwestern U.S. Field Course
- **GLG 392** Geology of the Southwestern U.S. Field Course
- **GLG 393** Geology of the Eastern U.S. Field Course
- **GLG 492** Field Course in Geology
- **GTY 440** Gerontology Internship
- **HIS 491** Readings in History
- **HRM 492** Human Resource Management Internship
- **JUR 310** Medieval Jurisprudence
- **JUS 499** Seminar in Criminal Justice Studies
- **LAW 410** Law and Ethics
- **LEA 399** Selected Topics in Leadership
- **LST 490** Seminar in Liberal Studies
- **MAT 400** Mathematical Modeling
- **MAT 401** Data Analysis Capstone Project
- **MAT 419** Math Internship
- **MDI 300** Dialogue and Differences
- **MFL 460** Modern Languages and Cultural Internship
- **MFL 481** Modern Languages Internship
- **MGT 492** Management Internship
- **MIS 492** Management Information Systems Internship
- **MKT 492** Marketing Internship
- **MUS 482** Music Technology Practicum – Marketing
- **MUS 483** Music Technology Practicum – Post Production
- **MUS 484** Music Technology Practicum – Sound Engineer
- **MUS 485** Music Technology Practicum
- **MUS 488** Music Technology Internship
- **MUS 499** Senior Project/Recital
- **NUR 475** Community Health Nursing
- **PGM 425** Senior Internship in Professional Golf Management
- **PHI 325** Philosophy of Science
- **PHI 335** Aesthetic Theory
- **POS 450** Seminar in Politics
- **PSY 469** Psychology Internship
- **SEC 461** Student Teaching
- **SOC 379** Special Problems in Sociology
- **SOC 429** Sociology Internship
- **SOC 495** Seminar in Sociology
- **SOW 435** Field Education Seminar
- **SPT 430** Sport Management Senior Seminar
- **TED 436** Engineering Design and Development
- **THE 450** Senior Thesis
- **TOU 385** Dark Tourism and Extreme Topics
- **VET 492** Specialty Internship
- **WST 350** Finding our CHEA

Technological Literacy (3 Crs.)

Overview

Students will have a basic understanding of the current and potential significance of technology, as well as its impact on contemporary society. Technological literacy means knowing how to use tools, resources, processes and systems to change or to control the natural and artificial environment, thus altering the human condition. (International Technology Education Association)

Educational Goals:

- To explain major concepts in technology, providing insights into its breadth and into its relationship to other areas of study;
- To use technologies as they apply to systems designed to meet human needs;
- To design, produce, test and analyze possible solutions to technological problems; and
- To critically evaluate the implications and varying interpretations of technological changes as they relate to and determine impacts on individuals, society, the environment and the future.

Technological Literacy Course Menu

Courses

- **BIO 201** Survey of Biotechnology
- **CDC 151** Producing Media Messages
- **CIS 110** Introduction to Information Systems
- **CIS 120** Application Programming I
- **CIS 220** Application Programming II
- **CIS 352** Global, Economic and Social Ethical Issues in Computing
- **CSC 101** Personal Productivity Software
- **CSC 120** Problem Solving and Programming Constructs
- **CSC 124** Computer Programming I
- **CSC 201** Internet Concepts
- **CSC 306** FORTRAN
- **DMT 100** Foundations of Print Media
- **DMT 180** Foundations of Digital Media
- **DMT 220** Digital Photography
- **DMT 225** Digital Page Layout
- **DMT 240** Vector Based Graphics
- **DMT 250** Digital Imaging
- **DMT 350** Motion Graphics
- **EAS 245** Weather Analysis and Forecasting I
- **EDU 333** Technology in Teaching and Learning
- **EDU 335** Teaching in an Online Environment
- **GCM 410** Digital Portfolio
- **GET 130** Introduction to Engineering Technology
- **GIS 222** Geo-Business
- **GIS 303** Crime Mapping and Spatial Analysis
- **GIS 311** Geographic Information Systems
- **GIS 350** Remote Sensing of the Environment
- **HON 215** Introduction to Disciplinary Research in Technological Literacy
- **ITE 341** Quality Control
- **JUS 220** High Technology Crime Investigations
- **JUS 380** Crime Scene Imaging
- **JUS 405** Cyber Security
- **JUS 487** Computer Forensics
- **JUS 488** Cyber Crime Investigation

General Education Courses: Technological Literacy

- **MIS 301** Management Information Systems
- **SEC 360** Technology Integration in Secondary Education
- **TED 111** Information Systems
- **TED 302** Energy and Control Systems
- **TED 316** Structural Design
- **TED 426** Manufacturing Enterprises
- **THE 141** Stagecraft I
- **THE 150** Introduction to Theatrical Design
- **THE 211** Lighting I
- **THE 341** Stagecraft II
- **THE 480** Digital Performance
- **VET 230** Digital Diagnostic Imaging

Writing-Intensive Component Courses (two courses)

Overview

Students must complete two Writing-Intensive Component courses in, and as specified by, their major discipline of study. Writing-Intensive Component courses emphasize professionally oriented writing within a particular discipline. The Writing-Intensive Component gives students the opportunity to practice and demonstrate the skills of written communication as they are specifically applied to their major field of study. The Writing-Intensive Component courses require at least 20 pages, or the equivalent thereof, of formal writing that has undergone significant revision based on peer or instructor feedback. The 20-page total may be attained through multiple assignments of varying page length.

Educational Goals:

Application and Synthesis

- To produce prose that is clear, coherent, correct and convincing for readers within the writer's major discipline of study; and
- To apply strategies for effective cross-cultural communication.

Synthesis and Evaluation

- To write papers that formulate original positions on a problem or issue *within the writer's major discipline of study* in the context of a synthesis of multiple primary and/or secondary sources;
- To assess the usefulness and reliability of potential print, electronic and primary research for a proposed research report *within the writer's major discipline of study*; and
- To plan, develop and write *discipline-appropriately-documented* academic and/or professional texts *within the writer's major discipline of study*.

NOTE: "Effective cross-cultural communication" here entails writers paying attention to how their texts might best be crafted for professional audiences (the usual case in discipline-specific writing) or general audiences (the occasional case).

Writing-Intensive Component Course Menu

Courses

- **ANT 355** Prehistoric American Indians
- **ANT 421** Anthropological Thought
- **ANT 446** Advanced Forensic Anthropology
- **ARB 350** Advanced Arabic I
- **ARB 351** Advanced Arabic II
- **ARB 480** Selected Topics in Arabic Language and Culture
- **ART 345** Methods of Art History
- **ART 422** Art History: The Art World After Modernism
- **ART 490** Senior Studio Thesis
- **BIO 326** General Microbiology
- **BIO 410** Developmental Biology
- **BIO 414** Plant Ecology
- **BIO 478** Evolution
- **BIO 480** Cell Biology
- **BIO 488** Water Pollution Biology
- **BUS 499** Integrated Strategic Capstone
- **CDC 304** Communication Research
- **CET 360** Microprocessor Engineering

General Education Courses: Writing-Intensive Component

- **CHD 322** Professional Education Internship
- **CHE 472** Advanced Chemistry Lab II
- **CHE 492** Chemistry Research II
- **CIS 352** Global, Economic and Social Ethical Issues in Computing
- **CIS 490** Systems Analysis II
- **CIS 492** Systems Development and Implementation
- **CMD 321** Common Organic Disorders
- **CMD 322** Technical Writing in Health Care and Education
- **CSC 352** Global, Economic and Social Ethical Issues in Computing
- **CSC 490** Senior Project I: Software Engineering
- **CSC 492** Senior Project II
- **DMT 445** Digital Media Project Planning
- **EAS 323** Atmospheric Instrumentation and Measurement
- **EAS 465** Seminar in Atmospheric Science
- **EAS 542** Applied Climatology
- **ECO 402** Games and Behavior
- **ECO 421** Applied Econometrics
- **EET 450** Senior Project
- **ELE 410** Pre-K-4 Field Experience
- **ELE 411** Field Experience K-4
- **ELM 411** Field Experience 4-6
- **ELM 412** Field Experience 7-8
- **ENG 334** Reporting
- **ENG 337** Survey of American Literature I (to 1865)
- **ENG 372** Advanced Composition
- **ENG 406** Advanced Study in Literature
- **ENG 410** Advanced Study in Creative Writing
- **ENG 425** Shakespeare
- **ENG 448** Practical Criticism
- **ENG 450** Advanced Study in Journalism
- **ENG 452** Advanced Study in Comprehension and Rhetoric
- **ENG 478** Advanced Study in Film and Media
- **ENG 499** English Studies Capstone Class
- **ENS 420** Principles of Wildlife Management
- **ENS 424** Fisheries Management
- **ENS 425** Principles of Aquaculture
- **ENS 475** Wetlands Ecology
- **ESP 339** Special Education Field Experience I
- **ESP 349** Special Education Field Experience II
- **FIT 425** Evaluating Research in Fitness and Wellness
- **FIT 430** Applications in Fitness and Wellness Research
- **GEO 474** Developing the Master Plan
- **GLG 427** Tectonics
- **GLG 438** Computer Applications in Earth Science
- **GLG 441** Advanced Environmental Geology
- **GLG 448** Watershed Evaluation
- **GTY 410** Research Methods in Gerontology
- **GTY 430** Seminar in Gerontology
- **HIS 491** Reading in History
- **HIS 495** Seminar in History
- **HSC 310** Special Populations and Pathology of Disease
- **HSC 360** Holistic and Alternative Medicine
- **JUR 300** Classical Jurisprudence
- **JUR 310** Medieval Jurisprudence
- **JUS 376** Criminal Procedure

General Education Courses: Writing-Intensive Component

- **JUS 496** Criminological Theories
- **LAW 310** Legal Research and Writing
- **LAW 410** Law and Ethics
- **MAT 400** Mathematical Modeling
- **MAT 461** Statistical Analysis I
- **MGT 450** Management Research
- **MKT 431** Marketing Research
- **MUS 375** Music and Recording Technology II
- **MUS 477** Music and Recording Technology V
- **NUR 375** Leadership and Change in Nursing
- **NUR 465** Nursing Assessment and Promotion
- **PGM 210** Golf Shop Management
- **PGM 410** Teaching of Golf II
- **PHI 335** Aesthetic Theory
- **PHI 336** Philosophy of Film
- **PHI 405** Epistemology
- **PHI 410** Metaphysics
- **PHY 301** Intermediate Electricity and Magnetism
- **PHY 495** Physics Seminar
- **POS 301** Research Methods in Political Science
- **POS 450** Seminar in Politics
- **PSY 345** History and Systems of Psychology
- **PSY 365** Research Methods in Psychology
- **REC 412** Recreation Program Planning and Evaluation
- **REC 415** Challenges and Trends in Parks and Recreation
- **SEC 420** Assessment and Interventions
- **SEC 460** Professional Practices in Secondary Education
- **SOC 410** Social Theory and Society
- **SOC 415** Social Science Research Methods
- **SOW 370** Policy Practice in Social Work
- **SOW 405** Social Work Research Methods
- **SPN 311** Spanish Conversation, Composition and Phonetics I
- **SPN 312** Spanish Conversation, Composition and Phonetics II
- **TED 450** Teaching Technology in the Secondary School
- **TED 451** Teaching Technology in the Elementary School
- **TOU 460** Comprehensive Tourism Planning
- **VET 301** Contemporary Issues in Veterinary Medicine
- **VET 492** Specialty Internship
- **WST 400** Advanced Women's Studies

ACC-Accounting

ACC200 - Financial Accounting

The fundamentals of accounting concepts and procedures for sole proprietors, partnerships and corporations. The interpretation and use of financial statements and other relevant accounting information will be emphasized.

ACC202 - Accounting II

A continuation of basic accounting principles with an emphasis on partnership and corporate accounting.

ACC218 - Federal Income Tax I

This course provides an analysis of the federal income tax structure and procedures. The emphasis is on the federal law as it applies to individuals.

ACC301 - Intermediate Accounting I

In-depth treatment of basic accounting principles and concepts. A preparation for advanced courses in accounting and for the theory and practice sections of the uniform CPA examination.

ACC302 - Intermediate Accounting II

A continuation of the in-depth treatment of basic accounting principles and concepts with the emphasis on corporations. A preparation for advanced courses in accounting and for the theory and practice sections of the uniform CPA examination.

ACC318 - Federal Income Tax II

Advanced topics in federal taxation. Partnerships, decedents, estates, trusts, corporations, pension and profit-sharing plans, foreign income, securities, transactions, etc.

ACC320 - Volunteer Income Tax Assistance

The focus of this class is service learning. Students will be afforded the opportunity to receive IRS certification while making a difference in their community. Students will prepare annual income tax returns for low income tax payers who qualify for the volunteer income tax assistance program (VITA). Before doing so, students must pass certification exams on tax law, as well as software usage. All returns prepared as part of this class will be subject to a quality review prior to being filed with the appropriate government agency.

ACC321 - Managerial Accounting

For non-majors; emphasizes the use of accounting data in the decision-making process of a business enterprise. Topics covered are cost-volume relationships; manufacturing costs and analysis; relevant cost analysis; budgeting and variance analysis; responsibility accounting and cost allocation; job and process product costing.

ACC331 - Cost Accounting

An introduction to basic cost-accounting principles, cost-volume, profit analysis, standard costing, process and job order costing, and departmental budgeting.

ACC341 - Nonprofit Accounting

The student will explore the foundation of governmental and non-profit accounting theory. Students will analyze and apply the generally accepted accounting principles established for governmental and non-profit organizations. Additionally, students will learn the unique accounting and reporting requirements for non-profit entities. Topics

Course Descriptions

examined include those related to financial position, operating results, cash flow, and financial strength. Students will be shown how various accounting alternatives for recording transactions impact the usefulness of the information provided for decision making.

ACC401 - Advanced Financial Accounting

Special topics in accounting. Mergers and acquisitions, consolidated financial reports, fiduciaries, etc.

ACC441 - Auditing

Internal control evaluation and financial compliance, professional ethics, auditing standards and procedures, statistical sampling, and EDP auditing.

ACC450 - Introduction to Accounting Fraud Investigation

This class provides an introduction into fraud investigation from the perspective of an accounting professional. Coverage includes defining fraud, introduction to various fraudulent accounting schemes, reflection upon high profile fraud cases, quantitative and qualitative investigative techniques, understanding and testing internal controls over financial reporting, and professional ethics considerations.

ACC451 - Advanced Accounting Fraud Investigation

This class provides an advanced review of the strategies relevant to fraud investigation. Furthermore, students will have the opportunity to apply these skills within the context of an actual forensic investigation and valuation.

ACC491 - Accounting Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing accounting tasks. The internship experience offers a practical training ground for students that supplements

Course Descriptions

academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

ACC735 - Emerging Issues in Accounting

This class integrates accounting theory with the current practices being conducted in the field. This class will provide the student with the opportunity to witness how accounting professionals today are responding to the foundational issues in the field.

Advisor Approval

ADVAPR - Advisor Approval Required

This course requires that a Course Substitution Form be signed by your advisor and department chair. The form should then be submitted to the Dean of your college for final approval and processing.

ANT-Anthropology

ANT100 - Introduction to Anthropology

This course is an introduction to biological anthropology (primatology, hominid evolution, variation in modern humans), archaeology (methods, evidences of the evolution and diffusion of culture), anthropological linguistics, and cultural anthropology (methods of participant observation, comparative data from non-Western societies, diversity and unity of culture).

ANT101 - Archaeology Field School

An introduction to archaeological procedures by participation in the excavation of a site, this course provides the opportunity for students to be involved in all phases of an archaeological excavation, from initial preparation of the site for excavation through the processing of artifacts at the campus archaeological laboratory.

ANT220 - Aztecs, Mayas and Incas

An introduction and survey of pre-conquest Latin America with special emphasis on the Culture History and Archaeology of Mesoamerica and the Andean Culture areas. The overall purpose of this course is to develop a context for understanding the complex origin of civilizations in Mesoamerica and the Andean Culture areas and the origins of agriculture in the Americas.

ANT231 - Medical Anthropology

. This introductory course emphasizes the contributions from biological anthropology, archaeology and cultural anthropology to the study of human sickness and health.

ANT232 - Fundamentals of Biological Anthropology

This course for both majors and non-majors introduces students to the field of biological anthropology, including the study of evolutionary theory, modern human populations, the behavior and ecology of nonhuman primates, and the primate (human and nonhuman) fossil record. Special emphasis will be directed toward human form and behavior as a result of the complex interplay of biology and culture acting over millions of years of evolutionary change.

ANT245 - Human Osteology

This lab-intensive course is designed to give students a thorough understanding of the complexity and usefulness of the study of human teeth and bones. Osteology is the study of human skeletal remains and is a crucial part of the physical anthropology curriculum. It has applications in archaeology, anatomy, paleontology and forensic science. Students will learn the entire human skeleton and be able to identify bones and teeth from fragments; determine qualities such as sex, age and pathology from osteological remains; and prepare a professional report on these topics. The application of such knowledge and training is extended into the medical profession, forensic investigation and paleoanthropology/archaeology.

ANT254 - Introduction to Forensic Anthropology

This course teaches the basic analysis of human remains for the medico-legal profession, covering the development of the field of forensic anthropology, how the biological profile of an individual is determined from the skeleton, how skeletal traumas are evaluated, estimation of the interval since death, and how far these assessments can be supported. The course includes discussion of investigation of crime scenes, the legal role of the physical anthropologist as an expert witness, and the importance of report preparation. Case studies of documented individuals are used. While the practical aspects of this field will be the primary focus, attention will also be drawn to the incorporation of anthropological approaches to dealing with death and the handling of human remains.

ANT280 - Indians of North America

This course is a Holistic study (historical, cultural and environmental) of selective Native American cultural groups from cultural areas in North America, with an emphasis upon populations living in the United States and Canada. In addition, a brief overview of the prehistory of each cultural area is provided in order to help develop an historical context for each of the cultural groups to be examined.

ANT290 - Introduction to Archaeology

Students are introduced to the subject of Archaeology by focusing upon what archaeologists try to accomplish, how they conduct their work, and why. More specifically, the course focuses on the methods employed by archaeologists to locate, recover and to study cultures and peoples ways of life using the shreds of evidence recovered during excavation and from museum collections.

ANT300 - Cultural Views of Women

This discussion-based course is structured around the theme of how various world societies have viewed women. The cross-cultural perspective is the means by which American students learn to appreciate other cultural points of view and become more self-aware of their own cultural views about women.

ANT329 - Anthropology Internship

Learning new ideas and skills, as well as applying those already learned in class, is the objective of an internship. Internships are conducted under the guidance of both an on-site and a campus supervisor. Internships are a means for exploring career opportunities.

ANT340 - Research Laboratory in Physical Anthropology

This course will provide the student practical, hands-on experience in the cleaning/conservation, cataloging process and basic analysis (classification and description) of specimens commonly used in physical anthropology and how to report the results of laboratory analysis. It shows also how analysis and theory are inescapably linked. Hands-on projects use skeletal elements, dental, biological and paleontological specimens. Students will apply the scientific method in their analysis of data and will report the results in a professional manner within the classroom.

ANT341 - Research Laboratory in Archaeology

This course will provide the student practical, hands-on experience in the cleaning/conservation, cataloging process, basic analysis (classification and description) of artifacts from archaeological contexts, and how to report the results of laboratory analysis. It shows also how analysis and theory are inescapably linked. Hands-on projects use faunal, lithic, ground stone and ceramic collections recovered from Late Prehistoric sites from southwestern Pennsylvania. Students apply the principles of hypothesis testing to artifact assemblages from sites that are part of ongoing research into the prehistory of southwestern Pennsylvania and the lower upper Ohio River Valley.

ANT345 - Cultural Politics of Food and Eating

An advanced interdisciplinary course on the cross-cultural study of cultural differences and similarities in the display, exchange and consumption of food both prehistorically and historically. Since food serves more than just a dietary need, studying how it is manipulated can shed light on the political, social and economic agendas of individuals, groups and governments. The course draws from the fields of psychology, sociology, political science, history and anthropology.

ANT355 - Prehistoric American Indians

The course provides an overview of North American Prehistory, with a special emphasis on the eastern United States. Using the traditional chronology developed for the eastern United States in the 1950's, the social, economic, subsistence and political systems of these populations will be examined in some detail using archaeologically recovered remains, beginning with the initial occupation sometime prior to 15,000 B.C. and concluding during the 17th century.

ANT360 - Historical Archaeology

The course provides an introduction to the field of historical archaeology. It uses a combined lecture/discussion format and is divided into two main parts. The first half is descriptive and covers the definition of the field, its history, and methodology. The second half used a topical approach and provides an introduction to some of the ways that historical archaeologists have examined our historic past.

ANT370 - Forensic Archaeology

Forensic Archaeology is an interdisciplinary course designed to introduce archaeology, forensic anthropology, and criminal justice majors to the procedures associated with the location, identification, recovery and documentation of buried human remains. The course contains three main components: identifying human remains, strategies of locating human remains, and procedures for the recovery and documental of those remains. Students will obtain practical, hands-on training in each of the three areas.

ANT379 - Special Problems in Anthropology

Special Problems in Anthropology is a topics course. Areas not covered by the existing curriculum can be explored in a focused study on a topic identified by a faculty member.

ANT385 - Primate Societies and Behavior

This course is an advanced study of the nonhuman primates, including classification to the generic level.

ANT390 - Human Origins

Contemporary biological study of human origins, emphasizing evolutionary theory, genetics, non-human primates, and Paleoanthropology. The importance of technology and the emergence and development of culture are also emphasized.

ANT400 - Fundamentals of Archaeological Theory

The course is devoted to an examination of how archaeologists know what they know and how validity of archaeological interpretation is assessed. The course reviews major theoretical and methodological approaches and issues in the discipline from the 18th century to modern times. Topics that may be addressed include: examination of settlement patterns, identity and affiliation, sample bias and its impact on interpretation, interdisciplinary approaches in archaeology, research design, and applied archaeology.

ANT421 - Anthropological Thought

Within a seminar context, the history of anthropological thought is examined from the period of the Enlightenment to modern times. Particular emphasis is placed on the emergence of the various schools of anthropology that have developed and waned over the past 100 years.

ANT445 - Advanced Methods in Archaeology

A study of applications of technology to the study of archaeological remains, this advanced course focuses on geophysical reconnaissance, GIS, microscopic study of use-wear patterns on bone and stone tools, aerial photography, and other analytical techniques for the study of specific categories of archaeological remains. This course allows the students to acquire hands-on experience that is not available in any other course.

ANT446 - Advanced Forensic Anthropology

Forensic anthropology is an applied area of physical anthropology. Students in this lab-intensive and lecture course will become familiar with the use and limitations of the most important osteological methods currently used by forensic anthropologists. This course employs methods developed in osteology, skeletal biology, bioarchaeology and paleopathology to the recovery and identification of human remains in a medico-legal context.

ANT455 - Anthropology of Death & Dying

This seminar course explores death and dying from multiple cultural perspectives, utilizing both scientific and humanistic approaches in anthropology and related fields. This course investigates varied cultural views on the causes, meanings, and impacts of death and dying on humans, from the earliest archaeological evidence to modern times.

ANT497 - Seminar in Physical Anthropology

This is an advanced course for studying a specific theoretical and/or methodological issue in physical anthropology. Examples of topics include primatology, classification and systematics, dental anthropology, and paleopathology. The selection of the topic or topics to be examined will vary in accordance with the research interests of the instructor and the students.

ANT498 - Seminar in Archaeology

An advanced course for studying a specific theoretical and/or methodological issue in archaeology. Examples of topics include settlement pattern archaeology, evolutionary archaeology, household archaeology, classification, systematics and cultural history units such as the Late Prehistoric and the Late Woodland. The selection of the topic or topics to be examined will vary in accordance with the research interests of the instructor and students.

ANT499 - Senior Seminar in Anthropology

All seniors are required to take this course. The senior seminar is an in-depth examination of issues relevant to the health, vitality and practice of anthropology. Some of the topics to be discussed include epistemology, paradigms, interdisciplinary research, discipline goals, professional ethics, publication and careers.

ARB-Arabic

ARB101 - Elementary Arabic I

This is the beginner level in Arabic. This course covers and emphasizes the development of the basic skills of the Arabic language and includes instruction in basic pronunciation, comprehension, communication, and grammar. Students will also become acquainted with the culture of the Arab world and establish a solid foundation for more advanced courses in Arabic.

ARB102 - Elementary Arabic II

Elementary Arabic II is the continuation of Elementary Arabic I. This course continues to introduce students to the people and culture of the Arabic-speaking world. Students will become familiar with Arabic grammar and language structure. They will have maximum opportunity to use the different language skills: listening, speaking, reading, and writing in Modern Standard Arabic (MSA). Students will develop greater competency in understanding MSA in both its written and spoken forms and in producing the language in writing and speech. This course will have a greater emphasis on active vocabulary learning, proper grammatical application and on developing the ability to use the language in real-world everyday situations.

ARB203 - Intermediate Arabic I

Intermediate Arabic I is the continuation of Elementary Arabic II. Prior to this course, students must have basic background knowledge in Modern Standard Arabic (MSA) vocabulary and syntax at the elementary level; they should have basic ability to communicate, using simple sentences and have the ability to comprehend simple written and spoken instructions and conversations in basic MSA. In this course, students will acquire additional vocabulary and a greater understanding of more complex grammatical structures. There will be an increased use of Arabic language at this level in instructions and communication. This course will provide the students with a strong foundation at the intermediate level in reading, writing, speaking, and listening. There will be a continued

Course Descriptions

emphasis on the acquisition of more complex grammatical structures, expanding vocabulary and discourse skills, and developing competence in a wide range of communicative situations using all language skills.

ARB204 - Intermediate Arabic II

Intermediate Arabic II is the continuation of Intermediate Arabic I. This course provides additional practice to help students attain a higher level of skill development (e.g., listening, speaking, reading and writing) and linguistic accuracy. This course adopts a skills-based approach in which students gain mastery of the language through the use of authentic materials taken from various sources (books, periodicals, videos and radio documentaries). The selection of the materials is based on the complexity of the tasks and the students' professional and personal interests. Teaching vocabulary and grammar is integrated to the skills-based activities, and is incorporated in the class activities as an aid to overcome any communication problems. Teaching techniques are student-centered, with the instructor as the facilitator. Instructions will be conducted mostly in Arabic.

ARB311 - Arabic Conversation

Arabic conversation is designed for students who want to acquire a speaking knowledge of the language with a focus on communication, comprehension, and cultural information about Arabic customs. In this course, students will engage in "real-time" discussions, debate, presentations, and reporting activities.

ARB341 - Contemporary Arabic Culture

This course will engage students in the study of a variety of artistic and socio-cultural aspects of the modern Arab world. There will be an emphasis on representative cultural artifacts (from literature and other arts) that have come to define the region, as well as on culturally specific constructions of gender, ethnicity, race, and diversity. Special attention will be given to the characteristics of the Arabic language, family, gender relations, the Arab experience in the U.S., Arab-American relations, the role of the past, social change, Arab literature, art and music.

Course Descriptions

It promotes tolerance and understanding by providing students with a realistic view of the cultural contours of the modern Arab World and the richness of the Arab cultural heritage.

ARB342 - The Culture of Islam

This course will engage students in the study of the culture of Islam. There will be an emphasis on the identifying preconceived notions relating to Islam. This course will compare and contrast the history, essential tenets, and central practices of Islam to Judaism and Christianity. The context in which Islam began and the role of Muhammad (PBUH) on Islam will also be discussed. The Five Pillars of the Islamic faith and the split in Islam into the two major sects, Sunni, and Shi'a, will be explained. Due to the current events in the Middle East and the great number of social media users, this course will help students to understand a culture where secularism, capitalism, and materialism have no value.

ARB343 - Images of Islam: From Spain to Iran

This course discusses the influence of Islam on art and architecture from select countries from Spain to Iran. It provides an accessible and appealing examination of the significant artistic, architectural, and cultural dimensions of the Islamic World and their influences on the West.

ARB350 - Advanced Arabic I

Advanced Arabic I is the continuation of Intermediate Arabic II. In this course, students will acquire a genuine command of the Arabic language with proficiency and the ability to communicate by listening, speaking, reading and writing. There is intense practice in conversation, composition and phonetics based on modern prose, as well as on natural spontaneous speech models. This course will be conducted in Arabic.

ARB351 - Advanced Arabic II

This course is a continuation of Advanced Arabic I; it is intended to further develop students' proficiencies in speaking, writing, listening and reading so that they can be at a level necessary to communicate with flexibility, knowledge and ease in the language. Emphasis will mainly be placed on composition and oral discussion as well as concepts necessary for a sophisticated appraisal of literature and culture in Arabic. This course will be conducted in Arabic.

ARB401 - Introduction to Arabic Linguistics

This course will focus on the study of Arabic as “a language system” in terms of modern linguistic analysis. Students will study the language’s sound system (phonology), word structure (morphology, particularly roots and patterns), phrase and sentence structure (syntax), and meaning at the word and sentential level (semantics). The history of Arabic and the issue of diglossia in Arabic-speaking countries will be discussed. The linguistic features of both Standard Arabic and the modern Arabic dialects of today will also be covered.

ARB402 - Arabic Translation

This course introduces students to the basic techniques of Arabic-English translation. Students will work on stylistic, syntactic, technical, and cultural problems encountered in the Arabic-English translation process. It focuses on the process and quality of translation with emphasis on cultural differences. Exercises will provide translation practice with different types of texts and documents.

ARB421 - Arabic Literature in Translation

This course is a survey of Arabic literature in translation with a focus on continuity and change, influence, and major trends, themes, and genres. It will provide students with a foundation in Arabic literature. Students will be introduced to short stories, novels, essays, poetry, and plays.

ARB480 - Selected Topics in Arabic Language and Culture

This course provides students the opportunity to explore and research Arabic language and culture-related topics of interest that are not available as regular course offerings of the University.

ART-Art

ART106 - Art Appreciation

This course provides a very approachable and easy-to-understand guide to the key visual design building blocks, materials, processes, styles and history of the whole of Western Art. Students will also gain reference knowledge of the key timeline of the major artists, artworks and art processes from the past and present, and why art developed the way it did.

ART109 - Landmarks of World Art

Landmarks of World Art is an introduction to the defining moments of world architecture from prehistory to the present.

ART110 - Drawing I

A beginning course in drawing skills and techniques stressing line, contour and value studies, and the study of linear perspective, this course stresses rendering techniques and the visual skills necessary for students to draw what they see.

ART118 - History of Making

This course studies the history of making art from antiquity to the modern period. It includes major artists, groups, and stylistic developments of specific time periods, exploring artists and works in their historical, cultural, and

Course Descriptions

social contexts. It focuses on several forms of visual art/culture, including sculpture, painting, prints, ceramics, jewelry, and includes on-site visits to museums and galleries, as well as the making of artistic objects.

ART119 - Design 2-D

This is an introduction to the creative and practical foundations of seeing, thinking, making, and communicating via 2-D space. Students become more aware of the design—the organization and application of visual language. Design awareness is structured by focusing learning on the identification and thoughtful manipulation of the specific basic elements and principles of visual language. Students learn by solving, and professionally presenting, many minor and several major visual problems in 2-D design.

ART120 - Design 3-D

This course is an examination of elements and principles of three-dimensional visual composition. These include all the elements and principles used in two-dimensional design, as well as the concepts of mass and volume.

ART127 - Introduction to Graphic Design

The course will introduce the student to the Macintosh as a production tool. It will provide the student with an understanding of the major concepts in the field of graphic design and how design relates to advertising and marketing.

ART130 - Biological Illustration: Form and Function

An introductory course in Biology and Drawing with an emphasis on the relation between form and function. Working with plants and animals, and using a combination of macroscopic and microscopic specimens, students will focus on the careful observation and interpretation of biological forms. Drawing instruction will focus on a variety of techniques commonly used in the biological sciences. Biology instruction will introduce students to basic

Course Descriptions

scientific methodology, the diversity of living forms, the variety of ecological strategies related to those forms, and their scientific classification.

ART212 - Art History I

Art History I introduces students to the historical unfolding of the earliest significant ideas, images, events, artists and personalities involved with the visual arts - from cave art to the dawning of the Renaissance. The textual focus is upon these earliest visual arts from Europe, Asia and Northern Africa. Through lectures, visual aids and opportunities for study in the field, students with or without any prior knowledge of visual art will learn how to make the art of the period accessible and useful.

ART214 - Art History II

This course introduces students to the major monuments of art history from 1300 to the present. Significant artistic developments in painting, sculpture and architecture from the Renaissance through the present are examined within their historical and cultural contexts. The course thus provides a lens through which to understand the formal characteristics, subject matter and meaning of art as it relates to its social-historical context.

ART215 - Digital Painting I

This is a first level digital painting studio course. It utilizes Photoshop and introduces basic principles and techniques towards using digital painting in the CGI fields. The focus will be on matte painting bases, art theory, and criticism used to produce successful digital art images.

ART227 - Graphic Design Studio 1

In this course the student will develop a thorough working understanding of QuarkXPress, to develop skills in creative, visual problem solving for the purpose of communication using the elements and principles of design.

ART233 - Natural Science Drawing

An introductory course in observational drawing from biological specimens and outdoor field studies. Working with plant, animal, and landscape subjects, students will focus on the careful observation of natural forms and phenomena. Students will practice methods of scientific illustration through detailed renderings of organisms from direct observation supplemented by visual research. Through slide lectures, students will be introduced to masterworks of natural science drawing, as well as the work of great landscape painters and animal artists. Outdoor field trips will include specimen-gathering and the sketching of landscapes with clouds, water, waves, and land forms. Advanced art students will have the option of working in color with oils or watercolor. Upper level science students may concentrate on drawing subjects that relate to their particular areas of interest. The course is repeatable.

ART243 - Introduction to Asian Art

This course is an introduction to the major artistic traditions of East Asia from prehistory to the present. Works of art from India, China, and Japan are considered in relationship to their social-historical contexts. The course material includes archeological sites such as tombs; images and architecture of Buddhism, Hinduism, and Islam; and issues of modernism in East Asian art.

ART244 - Black Art

This course will give students a unique focus to Black Art. The course is designed to connect art, community cultural development, and Black Art throughout the world. Through artist profiles and discussions that provoke a variety of views, students will be challenged to write and present their answers to how racial and cultural links are visually portrayed. When given the opportunity to compare and contrast international Black Art, students can make connections to subject matter and a variety of techniques.

ART261 - Typography

This course is designed to teach effective use of typography as it relates to graphic design. The course covers, in detail, fundamental studio elements along with historical perspectives to give the student deeper insight and understanding.

ART262 - Color Theory

The course is designed to teach the effective use of color across the areas of art and design. The course covers in detail fundamental studio elements along with historical perspective.

ART270 - Art History Today

Art History Today is an introduction to the study of art history that emphasizes the global context in which art historians understand and study art history today. The relevance of art history beyond the classroom will be emphasized.

ART295 - Surface Design

Surface designs are everywhere we look: from clothing, to the interior and exterior coverings of where we live and work. In this course students discover how to identify and use the elements, principles in a variety of applications of surface design. Students also will explore a cursory history of materials and processes from around the world as they are applied to unique and patterned surface designs. Students will see what they are learning applied to several "field trips" to real-life places to identify and deconstruct specific surface design applications and design strategies.

ART308 - Art History: Ancient to Medieval

This course introduces students to the historical unfolding of the earliest significant ideas, images, events, artists and personalities involved with the visual arts — from cave art to the dawning of the Renaissance. The textual focus is upon these earliest visual arts from Europe, Asia and Northern Africa. Through lectures, visual aids and opportunities for study in the field, students with or without prior knowledge of visual art will learn how to make the art of this period accessible and useful.

ART310 - Advanced Drawing

This advanced drawing course explores expressive drawing techniques and drawing media and is a continuation of work to improve performance of academic drawing skills. Emphasis is placed on drawing from a model to develop a knowledge of human anatomy and to understand its effects on the surface information of the human form. Basic drawing skills are required.

ART312 - New & Emerging Digital Art Media.

Many traditional mediums are offered in art. This course open to all focuses on new and emerging digital art media from the late 19th century to the present dealing with themes such as collaboration, identity, appropriation, open sourcing, telepresence, surveillance, corporate parody, intervention and hacktivism, and social justice. These new art forms include digital painting, projection, animation, virtual art, interactive art, video games, 3D printing, and biotechnology. The students will produce, present, and critique individual and group projects utilizing these concepts from new and emerging art media.

ART315 - Digital Painting I

This is a first level digital painting studio course. It utilizes Photoshop and introduces the most important principles and techniques towards using digital painting in the CGI fields. The focus will be on matte painting bases, art theory, and criticism used to produce successful digital art images, individually and collaboratively.

ART323 - Women in Art

This course focuses on women both as the subject and the creators of art with a particular emphasis on the 19th and 20th centuries. The course is thematically organized while at the same time retaining a sense of chronology. Among those artists that we will consider are: Artemisia Gentileschi, Berthe Morisot, Mary Cassatt, Alice Neel, Lee Krasner, Judy Chicago, and Shirin Neshat. In addition to women in art, the course also explores the development of and debates amongst feminist approaches to art history.

ART326 - Contemporary Art

This course will consider developments in art objects and theory from the 1950s to the present with an emphasis on understanding examples of contemporary art within their specific social-historical contexts. The period is marked by dramatic changes in art and society that necessitate a consideration of art beyond the Western world to a global context. Artists including Robert Mapplethorpe, Jeff Koons, Cindy Sherman, Chris Ofili and Ai Weiwei, among many others, will be discussed.

ART327 - Graphic Design Studio II

This course will provide the student with an understanding of graphic design history, theory and criticism. The student will demonstrate this knowledge through projects utilizing previous computer skills while developing an advanced knowledge of Adobe Illustrator.

ART329 - Art Internship

This course will provide the student with supervised experience in applied settings. Students gain experience in setting up exhibits, cleaning and repairing of art works, graphic arts production techniques, organizing and promoting arts and cultural events.

ART345 - Methods of Art History

Methods of Art History is an introduction to the history of the art historical discipline and its research and interpretive methods. Rather than discuss the what of art history – that is, the major works and their histories - as most art history courses do, this course addresses the how of art history. We will consider various ways in which art historians interpret a work of art according to its specific and unique characteristics, the place and time period in which the work is created, and the changing nature of viewers' responses to it.

ART350 - Printmaking: Relief

This is a hands-on introduction to, and continued development of, the fundamental ideas, processes, practices, styles, methods, techniques and professional presentation of relief printmaking as an art form. The history, aesthetics and critical frontiers of relief printmaking as an art form will also be addressed throughout the course. Repeatable.

ART351 - Printmaking: Intaglio

This is a hands-on introduction to, and continued development of, the fundamental ideas, processes, practices, styles, methods, techniques and professional presentation of intaglio printmaking as an art form. The history, aesthetics and critical frontiers of intaglio printmaking as an art form will also be addressed throughout the course. Repeatable.

ART352 - Printmaking Processes

Printmaking Processes is a repeatable course that exposes students to all the major printmaking processes. Students learn to create in all the major “green” (safe) printmaking processes, at least half that can be made safely at home or in school. Students will be able to identify all of the major types of prints and printmaking processes used from the 1500's until now. Students will also be able to specifically design and create images for

Course Descriptions

at least 5 different areas of printmaking processes, and professionally present their best work in an exhibition they organize at the end of the semester.

ART372 - Creative Arts for Elementary Education and Early Childhood

This course provides a survey of concepts, theories, and experiences for integrating arts education into the elementary classroom curriculum. Students will have practical experiences in art, music and theatre along with arts and education theories. This course will enable future teachers to develop arts experiences and lesson plans for children.

ART376 - Jewelry/Metals: Casting

This course is designed to give the student a thorough introduction to the materials and processes used in the jewelry/metals medium with a specific emphasis on the casting process. Design issues as well as technical processes will be addressed through a variety of studio exercises and problems. Creativity, problem solving skills and craftsmanship will all be emphasized as well as an understanding of the cultural and historical aspects of this expressive medium. Repeatable.

ART377 - Jewelry/Metals: Fabrication

This course is designed to give the student a thorough introduction to the materials and processes used in the jewelry/metals medium with a specific emphasis on the fabrication process. Design issues as well as technical processes will be addressed through a variety of studio exercises and problems. Creativity, problem solving skills and craftsmanship will all be emphasized as well as an understanding of the cultural and historical aspects of this expressive medium. Repeatable.

ART382 - Ceramics Studio

Beginning Ceramics is an introductory exploration of clay through hand building techniques and the potter's wheel. Students will examine the various forms and functions of the ceramic vessel. The course will focus on forming processes and the glazing and firing of pieces made in the studio.

ART383 - Painting Studio

An introduction to the fundamentals of painting, this course places emphasis on fundamental techniques of rendering, including the study of light and shadow, color, intensity control and projection, and recession of objects in space. Work and exercises are done primarily in oil paints. Work in watercolor or acrylic may be done with prior approval of the instructor.

ART385 - Sculpture Studio

This course is an introduction to the basic language, elements, media, tools, techniques and principles of the organization of sculpture. The basic techniques of manipulation, subtraction, substitution and addition involving different media and tools is covered.

ART388 - Critical Writing in Art

This writing intensive course for Art and Design students prepares them for life as a professional artist or designer. Through analysis, deconstruction and personal investigation, students will develop necessary skills in writing about art and design.

ART410 - Teaching Visual Art in Pre-K Through Grade 8

This course is designed to prepare beginning teachers of visual art to effectively meet the diverse challenges of teaching at the Pre-K through grade 8 levels of learning. There is a distinct emphasis upon directing teachers of

Course Descriptions

visual art to establish a safe, efficient, creative, classroom driven by a student-centered/ developmentally sound / standards-based curriculum that accounts for no child being left behind. Ways of finding and exploiting traditional and non traditional techniques and technologies in the visual arts will be exposed if not explored. Students will be required to work in the classroom, visit and use community resources, and develop an art education portfolio.

ART420 - Contemporary Issues in Art

This course focuses on issues of contemporary concern in art history. The topics are faculty-selected and of contemporary consequence.

ART422 - Art History: The Art World After Modernism

This is a seminar in art theory: The Art World after modernism is a discussion-based course which considers the theoretical concerns informing and shaping artistic production and dialogue in the late 20th and 21st centuries. The study of primary sources in the form of critical writings addressing late modern, postmodern and contemporary art provides students with a thorough grounding in the bases for the development of the historical movements and the distinctive approaches to artistic production of the period. The course affords students the opportunity to integrate the knowledge of art history gleaned in survey courses with an extensive examination of salient art criticism and theory.

ART427 - Graphic Design Studio 3

In this course the student will create portfolio quality pieces which reflect current marketing and advertising strategies. Students will build upon their previous technical experience in QuarkXPress and Adobe Illustrator, while developing advanced technical experience with Adobe Photoshop.

ART428 - Graphic Design Studio 4

This course is designed to develop advanced graphic communication concepts and skills. Emphasis will be placed on client relationships and professional practices.

ART438 - Figure Drawing

This advanced-level drawing course is a repeatable course which focuses on drawing from a model from life. Students work from live nude and clothed models to develop a high level of skill in drawing the human figure while exploring a wide variety of drawing media and techniques.

ART490 - Senior Studio Thesis

This capstone course for B.F.A. students prepares them for life as a professional fine artist. This course culminates in a professional portfolio, including a resume, artist's statement, biography and website, a grant proposal, an action plan for employment or graduate studies, and a solo or two-person gallery exhibition.

ART493 - Advanced Ceramics

This advanced course in ceramics skills and techniques on the potter's wheel and in-hand forming methods places considerable emphasis on glazing and firing a body of work completed through an in-depth study in clay.

ART496 - Advanced Painting

This repeatable painting studio develops proficiencies in painting techniques, rendering skills and the visual analysis of forms. Students explore a variety of painting methods, subjects and themes toward the goal of having each student achieve a unique approach to form and content.

ART498 - Advanced Sculpture

This repeatable studio course in sculpture is designed to enable students who are seriously interested in sculpture to experiment with many types of media and to investigate other seasonable materials that can be used in sculpture. They will also be expected to impose on themselves problems which demonstrate critical thinking and analysis of materials.

ATE-Athletic Training

ATE150 - Introduction to Athletic Training

This course provides the students associated with Cal U an opportunity to learn and understand common injuries and illnesses associated with athletic participation. Additionally, the course introduces the student to introduction, rehabilitation, and treatment approaches for athletic injuries. The course also addresses the prevention and implication of athletic injuries. Lastly, the laboratory component of the course educates students with skills needed for entry into the professional phase portion of the undergraduate athletic training education program (ATEP). These skills can be applied in a clinical setting immediately and only after the student has been accepted into the professional phase of the undergraduate ATEP.

ATE215 - Evidence Based Practice

Students will be introduced to evidence based practice approaches to help in making educated clinical decisions once they become a certified athletic trainer. The course will provide the student with skills to differentiate between academic and non-academic literature with the intent to strengthen their knowledge for clinical practice, engage in academic writing, and interpret academic literature relating to statistical reporting.

ATE340 - Sports Nutrition

This course entails the study of basic concepts of nutrition and the effects of sound nutritional practices on everyday life and sports. The course is designed to allow students to apply nutritional concepts, thus enhancing athletic performance.

ATE445 - Pilates as Therapeutic Exercise

This course will teach the philosophy and methods of Joseph Pilates. Students will learn to lengthen and strengthen the Powerhouse (area from the pelvic girdle to the shoulder girdle) through the original exercises developed by Joseph Pilates. Participants will not only learn the exercises, but how to cue them effectively and adapt them to general fitness classes and personal training or rehabilitation clients. Following the course, students will have the option of sitting for the Powerhouse Pilates certification exam to obtain a certificate as a Pilates Mat Instructor.

ATE460 - Sports Medicine Research

Different types of research, particularly descriptive and experimental, are presented. Emphasis is placed on developing library research skills, critically analyzing research, and becoming a knowledgeable consumer of research in order to apply it in the clinical environment.

BIO-Biological Science

BIO103 - Contemporary Issues in Biology

An introduction to biology for non-science majors, with an emphasis on current socio-biological problems. Issues such as genetic engineering, health and disease, evolution, behavior, biodiversity and others will be discussed, along with their underlying biological principles. The course will address the social, political, economic and ethical

Course Descriptions

impact of biology on society, with and allow individuals to be better informed about how biology affects their daily lives.

BIO112 - Biology of Sexually Transmitted Diseases

A comprehensive review of the biology of sexually transmitted diseases. The course will cover the principles of disease and epidemiology, the biology and ecology of the microbial agents that cause STDs, the host response to disease, treatments, and preventative measures.

BIO117 - Introduction to Human Biology

This course is intended as an introduction to the human body systems and the disease states associated with these systems. Students will be introduced to each of the body's systems through a description of the structures that make up the organ system followed by a rudimentary explanation of its physiology and examples of diseases associated with that system. Emphases will be placed on homeostasis and the interrelatedness of the body systems.

BIO120 - General Zoology

A comprehensive survey of the animal kingdom, the course places an emphasis on evolutionary relationships and the interrelationships of animals with their environments. Laboratory study of representative members of the major phyla is included.

BIO125 - General Botany

This course is a survey of form and function of the major plant groups as well as the bacteria, algae, water molds, slime molds and fungi within the overall framework of a modern phylogenetic system of classification.

BIO126 - Introductory Microbiology Online

This course provides a completely online lecture and laboratory introducing the study of the prokaryotic and eukaryotic world of microorganisms. The medically important concepts of microbiology including microbial control, principles of infectious disease, disease prevention and control will be presented.

BIO130 - Biological Illustration: Form and Function

An introductory course in biology and drawing with an emphasis on the relationship between form and function. Working with plants and animals, and using a combination of macroscopic and microscopic specimens, students will focus on the careful observation and interpretation of biological forms. Drawing instruction will focus on a variety of techniques commonly used in the biological sciences. Biology instruction will introduce students to basic scientific methodology, the diversity of living forms, the variety of ecological strategies related to those forms and their scientific classification.

BIO201 - Survey of Biotechnology

A survey of the scientific principles, research methods, commercial applications, societal impacts, and business environment that impact and define the operation of biotechnology and pharmaceutical companies. Students will learn how genes, proteins and cells work, how biotechnologists study and manipulate living organisms, and how those methods are used to solve problems and create products in medicine, agriculture, industry, criminal justice and the environment. Students will examine ethical, social and economic issues affecting the use of biotechnologies, and the business and regulatory environment in which biotechnology companies operate. The course gives a detailed industry overview relevant to science, engineering, computer science, information management, and business majors considering technical or business careers in biotechnology and pharmaceutical companies or any student interesting in biotechnology's impact on the human condition.

BIO210 - Anatomy and Physiology of Domestic Animals I

This course begins to cover the fundamentals of comparative anatomy and physiology of domestic animals. An emphasis is placed on understanding anatomical terms of position and direction, histology, the integumentary system, the nervous system, the skeletal system, and the cardiovascular system.

BIO215 - Introduction to Cellular and Molecular Biology

This course is designed to introduce the student to the basic concepts of cell chemistry and biology as well as introduce the concepts and skills of molecular biology. It will cover topics such as cellular organization in both prokaryotic and eukaryotic cells including subcellular structures, metabolism, and genome organization. It will explore Mendelian and molecular genetics and gene expression. The lab portion will consist of exercises and experiments designed to demonstrate these topics.

BIO218 - Genetics

Genetics plays an important role in all aspects of biology, acting on molecules, cells, organisms and populations. Genetic analysis also provides a powerful approach to address biological questions, and its methodologies are employed in fields as diverse as biotechnology, forensics, medicine and conservation. This course introduces students to the principles of classical and molecular genetics. Emphasis is placed on understanding the basic concepts of genetics and on using genetic analysis to study biological problems, developing analytical and problemsolving skills. BIO 218 will provide students with a strong background in genetics, which will be useful for those interested in pursuing a career in the life sciences, conservation and population biology, health sciences, biotechnology or medical professions.

BIO220 - Anatomy and Physiology of Domestic Animals II

This course covers the fundamentals of comparative anatomy and physiology of domestic animals. An emphasis is placed on understanding the circulatory system, lymphatic system, respiratory system, the basic structure of the

Course Descriptions

peripheral and autonomic nervous systems, sensory receptors and special sense organs, the endocrine system, digestive system, urinary system, and reproductive system.

BIO226 - Basic Microbiology

This course provides a survey of the prokaryotic and eukaryotic world of microorganisms. The medically important concepts of microbiology including microbial control, acquisition of disease, disease prevention and control will be presented.

BIO230 - Anatomy and Physiology I

This course is a general survey of the basic anatomical terms of position and direction, relevant scientific units, chemical components of living organisms, homeostasis, animal cytology, histology, the integumentary system, rudiments of neurology, the skeletal system, and the cardiovascular system.

BIO232 - Fundamentals of Biological Anthropology

A course for both majors and non-majors to introduce students to the field of biological anthropology, including the study of evolutionary theory, modern human populations, the behavior and ecology of nonhuman primates, and the primate (human and non-human) fossil record. Special emphasis will be directed toward human form and behavior as a result of the complex interplay of biology and culture acting over millions of years of evolutionary change.

BIO248 - General Ecology

Ecology presents the biology or environmental science student with a holistic approach to the study of the biological environment. Emphasis is on the natural environments of organisms, particularly as biotic assemblages of these organisms interact with their environments from the concrete levels of organization up to the regional and biome levels.

BIO260 - Anatomy and Physiology II

This course is a general survey of the basic structure of the peripheral and autonomic nervous systems, sensory receptors and special sense organs, the endocrine system, the cardiovascular system, the lymphatic system, the respiratory system, the digestive system, the urinary system, the reproductive system, human embryonic development, and metabolism.

BIO266 - Cell and Tissue Culture

The course allows students to control the conditions required for the survival and proliferation of mammalian cells. Students will perform cell culture maintenance techniques, such as enzymatic tissue dissociation, hemocytometer cell counts and viability studies. They will also learn techniques for the detection and treatment of contamination, and for the cryopreservation of cultures cells.

BIO305 - Comparative Vertebrate Anatomy

A comparative study of the vertebrate organs and organ systems of animals in the phylum chordata, this course places emphasis on evolutionary changes.

BIO306 - Human Anatomy

A study of the structure of the human body, this course includes discussion of the 11 fundamental systems. Each system is described in terms of its gross anatomy, with some discussion of histology and physiology where appropriate.

BIO307 - Plant Anatomy

A detailed study of the form and function of the various cell and tissue types found in higher plants, this course also surveys how scientific knowledge of plant anatomy is applied within a diverse range of fields, including ecology, forensic science, archeology, climatology, the arts and engineering.

BIO320 - Molecular Biology

Molecular Biology is a field of biology that studies biological processes in cells and organisms at a molecular level. It is also a term used to describe techniques for isolating and studying biological molecules, and these approaches are widely used in research labs around the world, as well as in biotechnology, clinical analysis, and drug development. This course covers the structure, formation and function of DNA, RNA, and proteins, focusing on how genomic information is organized and maintained, and how genes are regulated and expressed.

Emphasis is placed on the techniques that are used to study biological molecules. The course provides students with hands-on experience in key molecular biology procedures, experimental design, and data analysis.

BIO322 - Methods in DNA Analysis

This course will cover the key principles of DNA analysis methods, from detecting basic sequence variation to manipulating genomes, and how these techniques are employed in fields as diverse as biotechnology, forensics, medicine, agriculture and conservation. Students will learn to apply these techniques in the laboratory to address scientific questions. Techniques covered will include nucleic acid purification, DNA restriction digestion and analysis, gel electrophoresis and gel-shift assays, in situ hybridization, polymerase chain reaction (PCR) and qPCR, transformation, CRISPR and DNA mutagenesis, and DNA sequencing and sequence analysis.

BIO325 - Animal Histology

This course is a study of cellular differentiations in tissue, tissue identification and special functions, especially in the mammals.

BIO326 - General Microbiology

A detailed study of bacteria and viruses, this course also places some emphasis on fungi, algae and protozoans. Special emphasis is given to medical aspects of bacteriology, immunology and virology. The cytology, physiology, microbiology and culture of microbes are pursued in the laboratory.

BIO327 - Parasitology

A comprehensive review of the biology of parasites and their interactions with their hosts and vectors. The course will cover principles of disease and epidemiology, the biology and ecology of the eukaryotic parasites causing disease in animals, the host response to infection, treatments, and preventive measures.

BIO328 - Human Physiology

The functions of the human body are covered. Basic physiological phenomena are studied with considerable emphasis on clinical and practical application.

BIO335 - Plant Physiology

This course will examine and explore the link between the form and function in plants. Plant Physiologists are people interested in learning about what plants do, and what chemical and physical factors cause plants to respond as they do in their environment. This course will explore several important processes which allow plants to survive in their environment and we will examine the ecological implications of the physiological processes under investigation. We will primarily examine this relationship at the whole organism level. Laboratory experiments will reinforce the lecture topics.

BIO336 - Plant Taxonomy

A study of relationships among the vascular plants, their classification and methods of identification. Plant families native to Western Pennsylvania are stressed.

BIO337 - Ornithology

The study of bird life, this course covers classification, anatomy, ecology, behavior and recognition of birds, with emphasis on local species and their relationships to people and the ecological balance with other organisms.

Please note: This course requires an earlier start time for 5 outdoor LAB trips which may begin as early as 5:30 AM.

BIO400 - Mammalogy

This course will provide an overview of the Class Mammalia. The lecture portion of the course will cover the evolution and classification of mammals, some basic physiology and behavior, and the ecology and conservation of mammals around the world. The lab portion of the class will involve a more in-depth study of mammal identification, focusing on the mammals of Pennsylvania.

BIO407 - Mycology

A detailed examination of mushrooms, molds, and human mycoses, including an introduction to fungal ecology and assessment of fungal classification, as well as molecular systematics and an overview of medical significance. The course utilizes hands-on, student-driven, inquiry-based practices. Students will use scientific processes and procedures, data analysis, and research tools to investigate fungal morphogenesis, molecular diagnostics, culture techniques, ecological relationships, and human pathogenesis.

BIO410 - Developmental Biology

This course provides an introduction to developmental biology. It will explore different modes of embryogenesis in invertebrates and vertebrates and examine the cellular and molecular mechanisms of animal development using a variety of model organisms and experimental techniques. Emphasis will be placed on the connection between development and disease, between developmental biology and evolution, and on the experimental approaches that have been used to shed light on developmental mechanisms. Current issues surrounding developmental biology, such as stem cells and reproductive technology, will also be discussed.

BIO414 - Plant Ecology

A consideration of the plant communities (and associated populations) which are influenced by both biotic and physical factors. The emphasis in this course is on the vegetation of Pennsylvania and the broader region. Laboratory work provides the student with the opportunity to become familiar with modern methods of vegetation analysis and community sampling.

BIO418 - Biological Research Investigations

This course is intended for advanced undergraduate students who wish to develop an independent research project within the biological and environmental sciences. Emphasis is placed on the use of various scientific instruments and biological procedures necessary for research investigations. Each research project is unique, and the data collected should ultimately be presented and or published.

BIO425 - Neurobiology

An examination of the structure and function of the nervous system. The course is designed to develop a detailed understanding of the nervous system structure and function from the molecular level to the level of complex circuits such as learning and memory. While the primary emphasis is the human nervous system, a central theme is the comparison of the neurological circuits across phyla to identify basic organizational principles.

BIO433 - Herpetology

A consideration of the amphibia and reptilia from taxonomical, morphological, evolutionary, behavioral and physiological viewpoints, this course emphasizes ecological relationships.

BIO435 - Ichthyology

An introduction to the morphology, taxonomy, ecology and distribution of the major groups of freshwater fishes, this course emphasizes the northeastern U.S. fauna.

BIO441 - Ethology

Ethology examines animal behavior within the framework of evolutionary biology, using the comparative methods (in both lecture and the laboratory) to examine similarities and differences in ecology, anatomy and physiology, genetics, and development patterns.

BIO442 - Forest Ecology & Dendrology

A study of the forest and its ecology and management, this course includes the identification of the major woody plants, their growth, structure and natural history. An emphasis is given to the forest communities and tree and shrub species common to the eastern United States.

BIO445 - Entomology

A specialized study of insects, this course covers identification and classification, development phases, physiological characteristics, economic importance, and disease vectors.

BIO450 - Immunology

A detailed study of the immune system of animals, this course covers nonspecific and specific host responses to foreign materials, the interaction between cells of the specific immune response, the nature and diversity of the immune response, the practical applications of the immune response, and disorders associated with the immune response.

BIO455 - Biology of Cancer

This course encompasses the cellular and molecular biology of cancer, providing a fundamental understanding of contemporary cancer research on the characterization, prevention and treatment of the disease.

BIO460 - Pathophysiology

This course introduces students to understanding how the body responds to diseases resulting from homeostatic imbalances. After completing this course, students will understand how a loss of homeostasis results in pathologies, how pathophysiological changes in the body progress, and how the body responds to those changes both at a local and systemic level. Topics include diseases and disorders related to cells and cell proliferation, as well as the nervous, endocrine, cardiovascular, respiratory, digestive, urogenital, and muscular systems.

BIO478 - Evolution

An advanced, writing intensive course, that examines the mechanisms resulting in biological evolution. Emphasis is placed on how these mechanisms operate at a variety of levels, from individual genes to distantly related species, and thereby produce the diversity of life observed on earth. The origin of life, speciation and hominid evolution are also studied in detail.

BIO480 - Cell Biology

This course studies the biology of the cell, with emphasis on the relationship of structure and function within the cell. It is a study of cell organelles, growth, division, macromolecules, membranes, synthesis and regulation.

BIO486 - Comparative Animal Physiology

A comparative approach to the study of physiological systems in the kingdom Animalia. Emphasis is on vertebrate organisms, but invertebrate examples are used where appropriate.

BIO488 - Water Pollution Biology

The purpose of this course is to convey a broad understanding of our freshwater aquatic ecosystems and the effects of the various types of environmental pollutants on these systems. We will review the basic concepts of limnology, freshwater ecology and freshwater biology covering both lotic and lentic systems with application to water quality, pollution, and aquatic system management and restoration. Aquatic system response will be analyzed in a lecture/laboratory format.

BIO492 - Biological and Environmental Science Internship

Student interns are placed with an organization or institution which most nearly approximates their goals for employment. The intent of the internship is to provide students with practical work experience in an environment in which they will be dealing with practical problems requiring real solutions in a relatively short time frame.

BUS-Business

BUS100 - Introduction to Business

This course provides background and insight into business organizations and is intended for non-business majors. It covers a variety of basic business concepts focusing on major issues that affect today's organizations, such as domestic and global environments, corporate social responsibilities and ethics, managing businesses, people in organizations, marketing principles, accounting and financial issues, and information technology. Students will learn the many areas involved in operating a business in today's society and explore how businesses influence and interact with the social, political, legal, economic, technical, cultural and global external environments.

BUS242 - Business Law I

This course is designed to introduce students to the American legal system, increase their understanding of legal issues and potential liabilities in business contexts, and equip them to meet their legal obligations with ethical integrity in a competitive marketplace. Topics will include the structure and function of the American legal system, contracts, torts, white-collar crime, business organizations, and intellectual property law, with emphasis on legal reasoning and policy implications.

BUS281 - Management Science I

This course is part of a sequence designed to teach mathematical methods of problem solving through their application to problems found in economics and the business disciplines. Topics covered will include applications of algebra, solving systems of linear equations, derivative and integral calculus, and derivative calculus of several variables. The core focus of the course is on the use of mathematical methods in business problem solving, not on deriving formulas or proving theorems.

BUS342 - Business, Government, and Society

This course uses the concept of social responsibility to address the role of business in society. Social responsibility is concerned with company values, responsibilities, actions, and outcomes that affect employees, investors, business partners, communities, and other stakeholders. We explore issues including workplace ethics, the natural environment, government regulation, information technology, diversity, corporate governance, philanthropy, and volunteerism to better understand the relationship between business and society. This course is highly practical and explores organizational best practices to improve social responsibility. We will explore organizational successes and failures using various case studies.

BUS343 - Corporate Social Responsibility

This course is designed to inform and stimulate thinking on the ethical concepts, processes, and best practices within business. It addresses the complex environment of ethical decision making and organizational compliance in organizations as well as enhancing the awareness and decision-making skills needed to contribute to responsible business conduct. The material covered will prepare students to recognize and manage ethical and social responsibility issues as they arise, and help them formulate their own standards of integrity and professionalism.

BUS345 - Business Ethics

The course provides a framework to identify, analyze and understand how business people make ethical decisions and deal with ethical issues. Using a case method approach, students will analyze real life business situations and gain insight into the realities and complexity of making decisions in a business environment.

BUS346 - Business Law II

This course is designed to allow students who have successfully completed Business Law I to build on their knowledge base by introducing them to more advanced topics in the American legal system. Thereby they will

Course Descriptions

increase their understanding of legal issues and potential liabilities in business contexts, and equip them to meet their legal obligations with ethical integrity in a competitive marketplace. Topics will include negotiable instruments, secured transactions, agency, bankruptcy and formation of business entities, with emphasis on legal reasoning and policy implications.

BUS379 - Special Topics in Business

This course allows for the examination of a particular problem, theme or issues viewed through the lens of accounting, economics, finance, management, marketing or related disciplines. The topic(s) address will vary from semester to semester. The course is repeatable with different topics.

BUS381 - Management Science II

This course introduces students to the use of various quantitative tools to inform complex decision-making situations. Emphasis is placed on the application of the tools. Whenever possible, concrete examples, real-world applications and case studies are used to practice concepts. Topics may include the application of linear and dynamic programming, inventory control models, regression, forecasting, and simulation models to problems in economics, finance, management and marketing such as demand and sales forecasting, new product development, financial planning, production planning, staff scheduling, advertising strategy, resource allocation, risk analysis, and process design. Spreadsheets are used extensively.

BUS479 - Field Studies in Business

This course includes an off-campus, residential component that allows for the examination of a particular problem, theme or issue viewed through the lens of accounting, economics, finance, management, marketing or related disciplines. The topic(s) address and location of the field study will vary from semester to semester. The course is repeatable with different topics/locations.

BUS492 - Business Internship

The student is placed with a business firm, bank, government agency or nonprofit organization for on-the-job and/or counseling experience. It offers a practical training ground for students that supplements academic training by permitting them to address actual problems in a real business environment.

BUS499 - Integrated Strategic Capstone

Strategic planning provides overall direction to the enterprise and involves specifying the organization's objectives, developing policies and plans designed to achieve these objectives, and then allocating resources to implement the plans. This is the capstone course for the Business Administration major. Students will apply what they have learned throughout their program of study to real-world and hypothetical case studies and simulation problems and effectively communicate their findings through written analyses, planning documents, and reports to internal and external stakeholders

CDC-Comm, Design, Culture

CDC100 - Communication Perspectives

This course will assist students in developing an understanding of human communication by creating, demonstrating and practicing the production and dissemination of messages; analyzing their effectiveness; and reflecting on the results. Emphasis will be placed on the significance of audience, context, and media in the production of messages. Students will begin building their identity as scholars and professionals and experience thinking, creating, succeeding, failing, reflecting, reworking, and audiencing as they integrate into the Communication, Culture and Design program.

CDC101 - Public Speaking

This course is designed to develop the knowledge and skill necessary for preparing and presenting extemporaneous speeches to accomplish informative and persuasive goals on issues of civil, political, or cultural importance. Course topics include audience analysis, research, organization, language use, and delivery that facilitate effective communication with audiences.

CDC120 - Visual Communication 1

An introduction to the creative process behind communication design. The focus is on visual thinking, experimentation, and exploring the relationship of word and image. Examination of the design process will develop skills in creating multiple solutions to a given problem. Core concepts and skills required to understand and control visual language and principles of design are introduced along with studio techniques required for visualization of communication problems.

CDC150 - Imagine, Design, Create

Introduces students to innovation, creativity & design as concepts & generative processes that affect their personal, social and professional potential in the communication field. Provides frameworks & initiates discussions that support independent learning & creative activity in the discipline while giving students the opportunity to learn through observation, challenge & application.

CDC151 - Producing Media Messages

D. Introduction to the skills & concepts of basic audio and video production. Attendance and presentation of work generated in the class at Departmental Festival Required. Students must register for both the lecture and the laboratory components in the same term.

CDC200 - Truth and Representation

An introductory course in theories of the nature of reality and what makes sentences true or false.

CDC201 - Argumentation and Advocacy

This course aims to cultivate students' critical understanding of forms of reasoning deployed by advocates in various situations. Students learn about argument form, structures and strategies used in supporting or undermining propositions. Students act as advocates for particular positions in a team debate and write critical analyses of advocates in debates, panel discussions, and argumentative essays.

CDC210 - Special Topics in Communication, Design, & Culture

This course title is reserved for special, experimental, or unique courses which are not be taught as part of the regular courses available to students.

CDC220 - Visual Culture

As an introduction to key issues in the field of visual culture, this course explores the ways that we make, understand, and communicate with visual images. We will consider various kinds of visual material culture from different historical and geographic areas, but especially the modern and contemporary U.S. context in relation to the global. Topics of study will include the politics of images, the modern history of visibility, the social role of images and visibility, the circulation of images through various media, and globalization as well as the cross-fertilization of images across various social arenas, such as art, advertising, design, popular culture, and science.

CDC230 - Strategic Professional Communication

This course examines some of the fundamental components of strategic communications—how to communicate, how to persuade, and how to do so ethically. Students' assumptions about communications will be challenged through an exploration of the intersections between information, communication, and meaning in today's social media world. Theories of persuasion will be examined in order to learn how persuasion works in changing our attitudes and behaviors, and we apply ethical reasoning to real-world strategic communications issues as we consider the effects of our communications on relevant stakeholders. Students will learn the basic concepts and principles of Public Relations, focusing on approaches, uses, tools, and methods while addressing theories of communication, persuasion and ethics. Students will practice their ability to write for multiple audiences, with each assignment presenting increasingly complex challenges to students.

CDC252 - The Art of Film

An introduction to the study of film. Covers fundamental concepts in the history, aesthetics, style, technique and critical interpretation of film. Emphasizes the filmmaker as a creative artist.

CDC302 - Persuasion

Methods of changing attitudes and behaviors through communication; analysis of individuals, audiences, occasions, and subjects for persuasive appeals. Study of logical and psychological arrangements and the ethics of persuading and being persuaded.

CDC304 - Communication Research

This course introduces students in Communication Studies to communication research and communication theory as these are used by communication scholars and professionals in their investigation of communication phenomena from social scientific perspectives. Special attention will be devoted to developing students' bibliographic research and writing skills as these are used by communication scholars and professionals.

CDC305 - Sports Communications and Media Relations

This course provides sports management training in sports public relations, publicity and marketing. It includes sports publicity writing for the media, managing the sports/media relationship, and using the media to obtain marketing objectives.

CDC310 - Seminar in Communication, Design & Culture

Although seminar topics will vary, the course instructor will assign appropriate readings, research topics, projects or reports. Topics include but are not limited to social media and identity, visual rhetoric and digital media, corporate events and organizational culture, narrative in images and words, visual design and organizational vision and mission. Students are expected to raise and answer questions, debate issues, critique ideas, and participate in the development of course. This class can be taken up to 3 times and is a Seminar/Conversation course.

CDC311 - Applied Experience Laboratory in Communication, Design, and Culture

This course provides students with opportunities to develop and apply their skills, knowledge and conceptual understanding to real-world problems or situations. Course instructors direct and facilitate learning in the classroom, laboratory, studio, or in the field, students through embedded activities such as case and problem-based studies, guided inquiry, simulations, experiments, or projects. Application contexts include organizations seeking public relations, graphic design, media, visual/image, or other communication help, event specific challenges, special media projects, or other projects created by students. This class can be taken up to 3 times and is a Lab/Experiential Learning course.

CDC312 - Area Studies in Communication, Design, and Culture

Theories help us to make sense of the world around us and shape how we make judgments about reality, relationships, circumstances, and decisions in our lives. This course exposes students to theories in the areas of Communication, Design and Culture. Upon completing this course, students will have a broad understanding of major theories and/or specialized knowledge in a content area of interest. This class can be taken up to 3 times and is considered an Area Studies course.

CDC330 - Introduction to Public Relations

Examines PR as the communication function that allows organizations to interface with their environments and publics. It describes the public relations process as well as its history, the guiding principles and concepts of organizational advocacy, and explores the various career opportunities in the field.

CDC331 - Public Relations Applications

This course seeks to develop the production skills necessary to function in an entry-level public relations position. Many assignments will help students develop: 1) proficiency using the host of vehicles PR practitioners use, and 2) a portfolio. Effort will be made to create an atmosphere similar to the first job in PR. The instructor will be the first PR supervisor—the boss—editing the work; criticizing style; asking for research; forcing the student to plan, analyze, write, rewrite, prepare, repair, organize and reorganize.

CDC350 - Image, Sound, Text

Human communication is formed and mediated in different ways that are, in turn, substantially and materially inflected with culturally specific values and ideologies. Some messages are highly visual while others are more auditory. Some messages are more immediate and physically “present” while others are highly mediated and transpire across complex terrains of time and place. Some messages are transient, informal and spontaneous

Course Descriptions

while others are contrived, crafted and meant to transcend time and place. Some messages are meant to be “merely” instrumental while others are highly “performative” and purposefully creative. In this course, students will learn various approaches to the critical interpretation and analysis of various communication forms and genres. The course aims to develop in students a “critical disposition” toward communication so that they are empowered to speak and write precisely and productively about various forms of human communication across formal, generic, technological and ideological contexts.

CDC351 - Producing Media Messages II

Audio/Visual Production in digital media offers instructional lessons for planning, filming, editing and viewing of quality digital video. This course is designed to enhance their technical skills and knowledge for the creation of video productions. Students whose career interests focus on any area of communication design or application will benefit from this in-depth production course.

CDC355 - Media Writing I

This course develops the basic knowledge and skills needed to design, plan and express original narrative media projects in a variety of formats.

CDC356 - Media Writing II

This course gives students the opportunity to design, prepare, write & revise original media projects as a means of developing core content development & expression competencies.

CDC357 - Media Management

Development of a working knowledge of the managerial structures of a broadcast organization.

CDC370 - Challenges in Communicating Science

This course explores both the social need for expert communicators of science as well as the key understanding and skills required to become a practicing science communicator.

CDC430 - Public Relations and Integrated Communication Practicum

The course requires students to demonstrate and deepen their understanding of the management of public relations campaigns by integrating communication theory and research with professional practice. Special attention is given to techniques for designing, implementing and evaluating effective campaign strategies for clients by creating a campaign proposal. Students will examine principles of integrated applied communication, create written and web-based products, and develop a full and executable campaign. Working in collaborative teams, students complete a project that demonstrates planning and managing communication for organizational goals.

CDC431 - Public Relations Cases and Problems

In this course students will analyze the methods of the public relations profession found in the case study literature and apply those methods to their own research, and through the investigation of public relations case studies come to understand the strategies and tactics of a public relations campaign. In addition, students will develop analytical skills so that graduates may function in the four primary roles of the public relations practitioner:

1. monitor of public opinion and change;
2. voice of organization's conscience;
3. advocate for organizations; and
4. monitor of organizational policies and programs.

CDC432 - Public Relations Campaign Management

This is the capstone course for students in the public relations concentration. The course seeks to increase understanding of the management of public relations campaigns by integrating communication theory and

Course Descriptions

research with professional practice. Special attention is given to techniques for designing, implementing and evaluating effective campaign strategies for clients by creating a campaign proposal.

CDC450 - Media, Society, Culture

This course examines the relationship between communication media, social formations, ideological belief systems and subjective experience. The course explores how media environments are constructed by prevailing (and transformative) technologies as well as ideological and material social systems.

CDC451 - Media Production III

Students plan and execute an original advanced media project suitable for inclusion in their portfolio. Attendance and presentation of work generated in the class at external outside of class presentation.

CDC455 - Media Writing III

This course gives students the opportunity to do advanced work suitable for a professional portfolio.

CDC460 - Philosophy in Art: History, Theory and Criticism

A focused course in the Philosophy of Art or Art Theory. Addresses topics of contemporary artistic/philosophical significance.

CDC461 - Communication and Social Meaning

Epistemology is the philosophical study of the nature of knowledge. Social epistemology focuses on knowledge as it is generated by, propagated through, or passed between social groups. Communication is central to the creation, dispersal and modification of social knowledge. An understanding of the generation and codification of

Course Descriptions

social knowledge enables students to understand the responsibilities and consequences inherent in all skilled communication practices.

CDC465 - Media Ethics

This course examines ethical controversies arising from media.

CDC490 - Theorizing Human Communication

A seminar in which the theories of human communication are analyzed, debated, and evaluated.

CDC497 - Communication, Design, & Culture Internship

Communication, Design, & Culture Internship. Opportunity for practical, professional communication work and field experiences in various off-campus settings. Internship are to be jointly administered by an on-site supervisor and a Departmental Internship Supervisor.

CDC498 - Senior Project in Communication, Design, and Culture.

This course provides a single opportunity or experience that serves as a summary and synthesis of courses in the student's undergraduate academic career. Students will use their knowledge and educational experience to plan, design and produce original projects that integrate various types of expression. Problem analysis, information sharing, creative solutions, and projects drive this course. Learning, not teaching, is at the center of such experiences.

CDC499 - Career Design Strategies

Students in their final year will apply their communication expertise to craft a coherent, persuasive professional identity and a focused picture of their professional goals for the next five years. Students will use the theory and knowledge from their courses in communication studies regarding verbal and visual information, technology, rhetoric and research in the recursive design of their own portfolios, oral presentations and in the application and interpretation of peer feedback and third party reviews.

CET-Computer Engineering Tech

CET235 - Digital Electronics Design

This is a first course in digital electronics dealing with the theory and practice of modern electronic computer circuitry. Major units of the course include logic gates, integrated circuits, latches, counters, shift registers, arithmetic circuits and memory elements. Laboratory exercises reinforce the theoretical concepts by providing hands-on experience with digital integrated circuits, logic system simulation software, and digital troubleshooting equipment.

CET270 - Introduction to Microprocessor Design

This course introduces the microprocessor from both the hardware and software viewpoints. It covers the stored program concept, addressing modes, the instruction set, bus operation and machine language implementation of software algorithms. Laboratory exercises are based on a microprocessor evaluation system and/or simulator to provide hands-on experience with course topics.

CET335 - Microprocessor Interfacing

This course deals with advanced concepts in the programming and the interfacing of microprocessors/microcontrollers to the outside world as demonstrated by a variety of application examples. It covers the

Course Descriptions

advanced architecture of modern processors and the many I/O peripherals now commonly found on-board the device. Detailed studies of computer I/O and interrupt techniques as applied to analog-to-digital, digital -to-analog, timers, parallel and serial interfaces are included. Laboratory activities provide the student with experience in developing the hardware and software required to incorporate microprocessors into systems that solve real-world interfacing problems.

CET350 - Technical Computing Using Java

This course enables the student to acquire a thorough understanding of the Java language and its application in solving engineering and real world problems. Both Java programs and Applets will be studied. Emphasis is placed on efficient software development using structured programming techniques. Students are required to design, write, test, and run programs using an appropriate version of Java.

CET360 - Microprocessor Engineering

This course examines the product development cycle of a typical microcontroller-based product. Methods of hardware and software development as well as their integration and debugging are studied. The student will design and implement a major term project utilizing these concepts plus various laboratory development tools as well as produce written documentation on the project, including both requirements/specification and final reports. Also included is a survey of recent developments in microcontroller technology.

CET440 - Computer Networking

This course involves the electronic hardware of networking systems such as those used to connect heterogeneous computers. Major topics include locality, topologies, media standards, Internet working devices and protocols. Hands-on application of network theory is provided via a laboratory-style term project involving a multiuser network computer system. The student will design and develop the hardware and communication software required to implement access to a network-available, shared resource.

CET485 - Special Topics in CET

This course allows current topics in computer engineering technology to be offered in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic; however, they are appropriate to a senior-level course. The course topic depends upon current trends in computer engineering technology, interests of the student, and the instructor. The student may take the course multiple times as long as each instance covers topics different than those already covered.

CET490 - Senior Project I: Software Engineering

This course introduces students to software engineering. They will study its history, terminology, requirements, specifications and design. Students will write requirements, specifications and design documents, and one or more papers on software engineering topics.

CET492 - Senior Project II

This course is a continuation of the Senior Project I software engineering course and the capstone course of the program. The project proposal developed and designed in the first senior project class will be implemented in this course. The student will produce a project users' manual and will demonstrate proficiency in the academic program through the development of the project.

CET495 - Computer Engineering Technology Internship

Student interns work with professionals in a computer engineering technology-related field to apply their understanding of computer hardware and software. The intent of the internship is to provide the student with practical work experience solving actual problems in a dynamic environment, yielding enhanced job opportunities upon graduation.

CHD-Childhood Education

CHD200 - Introduction to PreK to Grade 8 Education

This is an introductory course that emphasizes the knowledge, skills, and dispositions required to become a PreK to Grade 4 or Grade 4-8 educator. National and state professional standards provide a framework in the areas of planning & preparation, classroom environment, instructional delivery, professional conduct, assessment, and knowledge of diverse learners. A 30-hour field experience in a school setting is required.

CHD250 - Health and Physical Education Methods for Pre K-4th Grade

This course is designed to meet the Pennsylvania Department of Education (PDE) guidelines for the Pre K - grade 4 certification program. Topics covered include understanding the needs of the whole child, the role of play in health and physical activity needs, integrating physical activity throughout the curriculum, fitness, nutrition, and safety during activity and in the environment. More specifically, the Pennsylvania State and National standards for Health and Physical Activity for grades Pre K – 4 will be addressed and applied in the context of learning about developmentally, culturally and individually appropriate practices to support children’s healthy growth and development, both in and out of the classroom.

CHD312 - Instructional Leadership in Childhood Education

The goal of this course is to develop teacher leaders who advocate for all students in grades Prek-4, including students with exceptionalities and students of diverse populations. Objectives are aligned with Pennsylvania Department of Education Field competencies, Levels 1 and 2, and candidates are required to complete these competencies with 30-45 hours of observation and classroom experience under the guidance and observation of a mentor teacher in a Prek-4 setting. Based on field experiences in the assigned Prek-4 classroom, interviews with school personnel, and research of professional literature, candidates will examine current issues and trends in policy, ethics, organization and administration of Prek-4 learning environments. As a result, candidates will

Course Descriptions

develop a comprehensive plan for advocacy on a relevant and timely educational issue based on analysis of schoolwide and demographic data. Candidates will also become reflective practitioners, developing plans for their own professional development based on their self-identified strengths and weaknesses. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, the National Association for the Education of Young Children (NAEYC), and the Interstate New Teacher Assessment and Support Consortium (InTASC).

CHD322 - Professional Education Internship

The internship course provides students with the opportunity to apply their knowledge, skills, and dispositions to experiences outside or within the education field. In consultation with the department Advisor, students select an organization or agency that matches their career interests and goals. Students complete a minimum of 120 hours under the supervision of a university faculty member and an off-site supervisor at the internship site.

CHD350 - Family and Community Collaboration Partnerships

An exploration of the knowledge, dispositions, and skills required of professionals in order to respond to diverse family systems and needs. Emphasis is placed on: developing collaborative partnerships, effective communication, mobilizing community resources, ethical and research-based practices, and advocating for culturally, linguistically, developmentally, and socioeconomically diverse individuals and families.

CHD400 - Issues, Advocacy and Leadership in Childhood Education

The goal of this course is to develop teacher leaders who advocate for all children in early childhood and middle level grades. Candidates will examine current issues and trends in policy, ethics, organization and administration of early and middle level learning environments. Candidates will explore social, historical, and philosophical perspectives in the field of early childhood and middle level education (e.g. developmentally appropriate practice,

Course Descriptions

advocacy, ethical conduct, standards-based education). In addition, they will analyze and apply skills that demonstrate effective advocacy and leadership. This course provides candidates with the opportunity to develop a comprehensive plan for advocacy on a relevant and timely educational issue based on analysis of schoolwide and demographic data. The three-credit course involves fieldwork in an early childhood setting for Prek-4 majors and a or middle level setting for Grades 4-8 majors. Prek4/Special Education majors and Grades 4-8 /Special Education majors will complete the course for two credits with no field component included within this course. Candidates will also begin to be reflective practitioners, developing plans for their own professional development based on their self-identified strengths and weaknesses.

CHD412 - Field Experiences with Diverse Populations

This course is designed to provide students practical experiences in identifying and working with diverse populations in a K-8 classroom. The dimensions of diversity include race, ethnicity, gender, sexual orientation, language, culture, religion, mental and physical ability, class, and immigration status. Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in K-8 elementary classroom. Current teaching technology and strategies to meet the needs of children in grades K-8 will be researched, observed and discussed. Students will complete a diversity field project, in which they will complete an action research project to identify underrepresented groups in a K-8 classroom, areas of need, a plan of action, data analysis, conclusion, and recommendations. University classroom seminars and field classroom teaching experiences are combined to give students an opportunity to discover their aptitude and interest in working with K-8 school children. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, the National Association for the Education of Young Children (NAEYC), the Association for Middle Level Education (AMLE), and the Interstate New Teacher Assessment and Support Consortium (InTASC).

CHD413 - Content Area Literacy Field Experience

This course is designed to provide teacher candidates with practical experiences in a K-8 classroom.

Pennsylvania Department of Education Field Competencies, Level 3, provide the objectives of this course.

Teacher candidates are required to complete the field competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in a K-8 classroom. Teacher candidates will gain insights into the different ways in which literacy enables learning across the curriculum and will explore how to integrate literacy instruction into the content areas. Candidates will gain an understanding of language and literacy development and will examine the literacy needs and experiences of linguistically, culturally, and economically diverse students. Candidates will develop a diverse toolkit of instructional and assessment practices that can be used in a variety of classroom contexts to support literacy across the disciplines. Course content will help students in conceptualizing, designing, and implementing content specific literacy instruction. Candidates will complete a mini-action research based project in which learners in a K-8 classroom will be assessed to identify areas of need associated with a specific content area; then candidates will plan and implement developmentally appropriate lessons, using age-appropriate assessments to determine the overall impact on student learning. University classroom seminars and field classroom teaching experiences are combined to give students an opportunity to discover their aptitude and interest in working with K-8 school children across the content areas.

CHD450 - Assessment and Data Literacy for Teaching

This course is designed to provide teacher candidates with in-depth instruction and authentic experience to integrate assessment literacy and data literacy into instructional planning, implementation, and decision-making to improve teaching, learning, and school programs. The course includes methods for transforming information into actionable instructional knowledge and practices by collecting, analyzing, and interpreting various sources of data to determine instructional next steps and program revisions. Additionally, this course includes methods for planning assessments that are integrated with instruction, crafting assessment tools, grading and evaluating students, assessing higher-order thinking, interpreting state-mandated and other standardized tests scores

Course Descriptions

for classroom and school-wide purposes, and aligning assessment with state standards. Further, this course integrates a field-based component and requires work in a field placement.

CHE-Chemistry

CHE101 - General Chemistry I

This is an introductory course for majors and non-majors. Topics covered include atomic structure, chemical reactions, stoichiometry, the gaseous state, chemical bonding, phase changes, and enthalpy. Either five total classroom hours in the studio format, or three class hours and three laboratory hours, each week.

CHE102 - General Chemistry II

This course is a continuation of General Chemistry I and is for majors and non-majors. Topics covered include solutions, kinetics, thermodynamics, gaseous and ionic equilibrium, acids and bases, and solubility equilibrium.

CHE103 - Chemistry for the Everyday World

Chemical principles are introduced and applied to issues and problems facing society. The fundamental language and symbols of descriptive chemistry are covered and used as a means of describing the natural world. To promote science literacy, case studies of important current topics in science with an impact on society will be examined.

CHE104 - Introduction to Experimental Chemistry

This course is specifically designed for students who have declared a major in chemistry. The primary objective of this course is to prepare entering chemistry majors for successful study in the chemistry program. The course will introduce students to the experimental nature of chemistry, focusing on the methodology, tools, and techniques that chemists utilize in their work. Mathematical, scientific, laboratory, and ethical skills are developed.

CHE306 - Inorganic Chemistry

A foundation course for chemistry majors and minors. Topics covered include covalent, ionic, and metallic bonding, molecular symmetry, solid state structures, acid/base and oxidation reduction chemistry, as well as transition metal complexes.

CHE320 - Analytical/Instrumental Chemistry

This is a foundation course for chemistry majors and minors in which the principles of analytical chemistry are introduced. The course initially focuses on the traditional “wet” chemical technique of titrimetry and progresses to study of instrumental methods of analysis. Specific topics covered include acid/base, precipitation, and complexometric titrations as well as optical spectroscopy and chromatography.

CHE331 - Organic Chemistry I

An introduction to the basic principles that govern the reactions of carbon-based compounds. Particular emphasis is placed on introduction of the basic functional groups and their structural and stereochemical properties.

An introduction to reactions of functional groups, including alkanes, alkyl halides, alcohols, alkenes, alkynes and conjugated systems through study of reaction mechanisms, molecular modeling and synthesis. Students are introduced to and trained in important purification techniques and instrumentation used for characterizing molecules.

CHE341 - Organic Chemistry II

This is an in-depth course for chemistry majors and minors which continues the study of important functional groups including alcohols, ethers, carboxylic acids, esters, amides, aldehydes, ketones, amines, phenols and aryl halides. There is a special focus on reactions, mechanisms and synthetic strategies, and introduces and demonstrates the use of spectroscopy to further understand molecular structure.

CHE342 - Organic Chemistry II Lab

This is a laboratory section for non-chemistry majors to accompany Organic Chemistry II (CHE 341). Students continue experiments that study organic functional groups transformations using advanced techniques and instrumentation. There is a special emphasis on molecular structure analysis using spectroscopy.

CHE371 - Intermediate Chemistry Laboratory I

This is a foundation course for chemistry majors with an emphasis on synthesis and characterization of organic, inorganic, and organometallic molecules using higher level experimental protocols and spectroscopic methods. Topics in this integrated laboratory course include proper use of the experimental notebook, molecular modeling, and spectroscopic theory.

CHE372 - Intermediate Chemistry Laboratory II

This is a foundation course for chemistry majors with a continued emphasis on synthesis and characterization of organic, inorganic, and organometallic molecules. This second semester, integrated laboratory course will have an increased focus on using analytical techniques and spectroscopic instrumentation to achieve these goals. These experiences will culminate in an assigned individual research project.

CHE381 - Environmental Chemistry

This is an in-depth course in the chemistry curriculum. It is a comprehensive overview of major environmental problems based on origin, fate, toxicity and remediation of chemical pollutants. Modern environmental pollution issues such as: global warming, ozone depletion, photochemical smog, acid rain, fine particulate matter, pesticides, toxic metals and alternative energy are introduced. Chemical principles for understanding various air, water and soil pollution and relevant control strategies are also covered.

CHE410 - Chemistry Internship

This is an upper-division elective course intended for chemistry majors who wish to advance their academic growth through an external work environment. Designed to supplement classroom and laboratory studies, internships provide students with additional knowledge and skills and apply previously learned information to on-site situations. Student will work under joint supervision between the internship location and a department faculty member. Students are to complete the university internship training process before registration for the course.

(Var. 1-6 crs.)

CHE415 - Biochemistry I

A comprehensive survey of the properties, reactions and structure of amino acids, proteins, enzymes, carbohydrates, fats and lipids, and nucleic acids. Special focus on protein structure and nomenclature, enzyme catalysis and kinetics, mechanistic analysis, and in-depth study of important metabolic pathways.

CHE421 - Advanced Inorganic Chemistry I

This is an in-depth course for chemistry majors in which the topics of molecular orbital theory, symmetry and group theory and organometallic chemistry are presented. The course covers the theory, application, and instrumentation associated with advanced inorganic chemistry.

CHE433 - Advanced Organic Chemistry

Advanced study of organic compounds in terms of structure and chemical properties. The student is introduced to complex structure evaluation through interpretation of advanced spectroscopy applications. The student continues evaluation of organic functional group manipulation through study of reaction, mechanism and retrosynthetic analysis, culminating in literature organic synthesis analysis.

CHE461 - Physical Chemistry I

This is a foundation course for chemistry majors and it is the first of a two-semester sequence of physical chemistry. The laws of thermodynamics are introduced and applied to physical, chemical, electrochemical systems and solutions. Properties of gases, liquids and solids are reviewed. Phase stability, phase diagrams, chemical reaction kinetics and reaction mechanisms are also covered.

CHE462 - Physical Chemistry II

This is an in-depth course for chemistry majors and it is the second of a two-semester sequence of physical chemistry. Quantum mechanics is introduced and applied to the electronic, vibrational and rotational properties of molecules. Atomic and molecular structure is analyzed in great detail based on electronic, vibrational and rotational spectroscopy.

CHE471 - Advanced Chemistry Lab I

A foundation course for chemistry majors. The primary focus will be on use of instrumentation to obtain data, calculate and increase understanding of chemical phenomenon.

CHE472 - Advanced Chemistry Lab II

This is the second of a two-semester advanced laboratory sequence designed to expose students to advanced chemical laboratory techniques. Emphasis is given to physical chemistry aspects of a wide range of hands-on experiences including equilibrium thermodynamics, molecular spectroscopy, properties of macromolecules and chemical kinetics. This is an in-depth course for chemistry majors offering students an opportunity to excel in tackling open-ended chemistry problems. Great importance is given to the critical and effective analysis and discussion of experimental findings. This is a writing intensive course where students spend considerable time creating publication-quality reports of experimental work. This class meets three hours each week.

CHE483 - Adv Environmental Chemistry

This is an in-depth elective course in the chemistry curriculum. It focuses on the sources, transport, reactions, effects and fate of chemical species in the atmosphere, hydrosphere and geosphere. Transformation and interaction of chemical contaminants within and between the three environmental systems are covered. Advanced chemistry concepts such as thermodynamics, photolysis, catalytic reactions, chemical equilibria, and kinetics are emphasized in the course. Case studies and contemporary literature in the field are discussed.

CHE484 - Polymer Chemistry

This is an upper level chemistry course. It introduces nomenclature, classification, synthesis, chemical and physical properties, characterization, and processing methods of polymers. Polymerization reaction mechanisms, physical and chemical properties of polymer-based materials are discussed as well as their common industrial and technological applications. Various major classes of polymers are studied in detail. A look at the historical development of polymer based materials is provided with an emphasis on current and potential applications of polymers as blends, composites, and other superior materials for advanced technological applications.

CHE491 - Chemistry Research I

This is an in-depth course for chemistry majors. Under the direction of a faculty mentor, the student will focus on execution of a research project including a comprehensive literature review, project management, independent notebook maintenance, and experimental design and execution. This experience will culminate in a seminar presentation.

CHE492 - Chemistry Research II

This is an in-depth course for chemistry majors. Under the direction of a faculty mentor, the student will continue to focus on execution of a research project including a comprehensive literature review, project management,

Course Descriptions

independent notebook maintenance, and experimental design and execution. Using their laboratory activities, students will be expected to communicate their research findings in a professionally prepared written report.

CHE497 - Special Topics in Chemistry

This is an in-depth course for chemistry majors who have successfully completed CHE 461 (Physical Chemistry I). The specific advanced topics taught will be chosen by the instructor(s) for the given semester. The material presented in this course is unique and not found in any other courses offered in the chemistry program and the content will vary from semester to semester. This course will be “turn” taught by multiple faculty members, each appearing for a portion (module) of the class meetings. The course topics depend on the current trends in chemistry, instrumentation and the preference of the instructor.

CHI-Chinese

CHI101 - Elementary Chinese I

This is the beginner level in Mandarin Chinese and an introductory course for students who have not studied Chinese previously. This course covers and emphasizes the development of the basic skills of the Chinese language and includes instruction in basic pronunciation, comprehension, communication, grammar and Chinese characters. Students will become acquainted with the Chinese culture and establish a solid foundation for more advanced Chinese courses. The course also provides students with powerful online support, which presents an engaging online learning environment containing exercises and audio files. Students can record their responses and also work with partners via the Internet in order to practice speaking and listening skills.

CHI102 - Elementary Chinese II

This is a continuation of Chinese 101. Students will be familiar with Chinese grammar and language structure. Students have the maximum opportunity to use all four language skills: listening; speaking; reading; and writing.

Course Descriptions

The course will develop the ability to use Mandarin Chinese in real-world everyday life. The course also provides students with powerful online support, which presents an engaging online learning environment containing all of the exercises and audio files. Students will gain experience recording their responses via the Internet in order to practice speaking and listening skills.

CIS-Computer Info Systems

CIS110 - Introduction to Information Systems

This course is an introductory study of information systems. Major topics include: the role and value of information systems, hardware and software used in information systems, managing information and data resources, decision making, and developing information systems.

CIS120 - Application Programming I

This course provides students with an understanding of business problems that are typically solved by writing computer programs, problem solving techniques to enable students to design solutions, and programming skills learned in a traditional CS1 course. Emphasis is placed on efficient software development for business related problems. Students are required to write, test and run programs.

CIS207 - Data Preparation and Cleaning

This course provides students with an introduction to the need for and methods for data cleaning. The course presents methods for locating and handling invalid values, out-of-range values, and missing values along with methods for managing datasets. The course uses SAS software.

CIS213 - Data Visualization

This course explores techniques and tools for creating effective data visualizations. The course covers the creation and exploration of visualizations for categorical data, time series data, spatial and geospatial data. SAS software will be used for this course.

CIS220 - Application Programming II

This course provides students with advanced techniques for design and implementation of business solutions using object-oriented programming concepts. This course also covers the data structures that are typically learned in a traditional CSC course. Emphasis is placed on efficient software development for business related problems. Students are required to write, test and run programs.

CIS251 - Big Data Tools

This course covers an introduction to big data analysis tools. The course provides an overview of SAS, Hadoop and other big data tools. The course covers the structure and framework of data analytic tools and covers the use of these tools to perform various analyses.

CIS261 - Big Data Analytics

This course is intended to provide the student with an introduction to big data, big data analytics and several methods useful in big data analytics such as clustering, association rules and various forms of regression. SAS® statistical software will also be introduced and used to solve data problems.

CIS299 - Systems Analysis I

This project course introduces students to "systems thinking" and experientially introduces the students to some of the basic concepts and tools of systems analysis within the context of a real-life business problems. The

Course Descriptions

traditional SDLC waterfall approach to systems analysis and design is stressed in order to prepare students for any business type or size (some of which may not have modern analysis and design tools). Students entering into this course must have a basic understanding of business and the idea of using programs that are integrated into systems to solve business problems. This requisite knowledge is built upon in teaching students how to analyze a business's current information system; how to extrapolate user needs and the business's additional processing requirements; and then how to design a system that not only meets the stipulated requirements while remaining within the project's constraints, but remains in line with the entity's mission/vision and optimizes business processes to position the entity more competitively in the market.

CIS302 - Visual Programming

This course teaches Windows applications programming using the object-oriented event-driven programming paradigm, with the programming language VisualBasic.NET. It is designed as a beginning OOED programming course, but assumes students know Windows object vocabulary, have basic Windows file management skills, and are familiar with the generic procedural programming language constructs of decision structures and looping.

CIS304 - COBOL

This course introduces students to the essential elements of the COBOL language using well-structured programming techniques. Students will write and execute report programs, control break programs, data validation programs, programs that implement tables and sequential update programs. Good analysis, design and structure will be emphasized.

CIS308 - Python

This course enables the student to acquire a thorough understanding of the Python language and its application in solving real world problems. Emphasis is placed on efficient software development using structured programming

Course Descriptions

techniques, Object Oriented Programming, GUI interfaces, as well as a variety of Python modules and packages. Students are required to design, write, test, and run programs using an appropriate version of Python.

CIS321 - Data Base Management Systems and Data Base Design

This introductory course to DBMS (Database Management System) provides students with the theory and practice behind the use of modern DBMS. Database terminology and concepts covered include, but are not limited to, the logical and physical design of databases and the tables within them as determined through the analysis of information needs and modeling; the creation of ERD (Entity Relationship Diagrams) and their translation into relational schemas (logical and physical design); normalization techniques; DDL (Data Definition Language) and SQL (Structured Query Language) for database, table, view and index creation; and database performance and optimization.

CIS322 - Data Base Application Development

Building upon the conceptual understanding of a modern DBMS (Database Management System) and database and table design concepts gained in CIS 321 Database Management Systems and Design, this course provides students with the practice of applying database technology via the Oracle DBMS to the solution of business and other information-related problems. Experience is provided with database design and implementation based on a thorough analysis of requirements and information modeling. The use of Structured Query Language (SQL) for interaction with a working DBMS for data creation, manipulation and extraction is stressed as well as optimization techniques, such as view creation and indexing. PL/SQL and database triggers are introduced.

CIS325 - Introduction to Decision Support Systems

This course presents the concept of decision-making within the framework of a contextualized management information system that utilizes databases or spreadsheets as tools in the problem- solving process. The course

Course Descriptions

distinguishes between two logical components of a management information system: the transactional processing systems (TPS) and decision support systems (DSS), in which computer-based systems aid decision-makers in confronting problems through direct interaction with data and analysis models. Some of the topics covered include critical thinking problem-solving through decision support, information requirements diagramming and influence diagramming, modeling, decision-making, frames of references in decision-making, and decision-making techniques such as goal seeking, "What If" scenarios and graphic displays.

CIS330 - Web Programming I

This course is designed for the Computer Information Systems major. It provides the student with a thorough understanding of HTML, in order to enable the student to create Web pages and Web sites using HTML. It also provides the student with a thorough understanding of at least one client-side scripting language, in order to enable the student to begin creating data-base driven Web sites. Students are required to write and test Web pages and Web sites that use client-side scripts.

CIS332 - Web Programming II

This course introduces the student to server-side technologies. Students are required to write and test database driven websites that use both client-side and server-side scripts.

CIS341 - CISCO CCNA 1

This course is designed for the information systems major. It is the first in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of basic computer networking concepts.

CIS342 - CISCO CCNA 2

This course is designed for the information systems major. It is the second in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of the router basics involved in computer networking.

CIS343 - CISCO CCNA 3

This course is designed for the information systems major. It is the third in a series of four CCNA (CISCO Certified Networking Associate) courses. It provides the student with a thorough understanding of the switching basics and intermediate routing involved in computer networking.

CIS344 - CISCO CCNA 4

This course is designed for the information systems major. It is the fourth in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of wide area network (WAN) technologies and their role in computer networking.

CIS352 - Global, Economic and Social Ethical Issues in Computing

This course covers issues related to various global, economic and social frameworks and moves to topics specifically related to computers. Emphasis is placed on the study of ethical situations that arise as a consequence of the development and deployment of computers and related technologies, and also from parties with malicious intents toward prevalent technologies. Topics can include areas such as: security, economics of information systems, computer crime and hacking, computer software ownership, privacy, risks of computing, professional liability, internet freedom in computing and international laws and governance. The course is to be delivered in a writing intensive format, with treatise and arguments communicated effectively to a wide variety of audiences.

CIS354 - Systems Project Management

This course, taken from the latest Model Curriculum for Information Systems (IS 2002), is intended for CIS or CS majors. Building on the systems analysis and design concepts of CIS 299, this course focuses on the management and completion of a systems-software development project. Both technical and behavioral aspects of project management are applied within the context of an information systems development project.

CIS401 - Concepts in Enterprise Resource Planning

This course will provide students an overview of the fundamental business processes/systems used to run organizations and how the increase in their system integration adds value, improves productivity and increases growth. The basic functional areas of business and their related information systems are reviewed with emphasis on identifying opportunities for business process reengineering. ERP software, the latest trends and industry best practices in ERP implementations will be discussed.

CIS402 - Data Analysis Capstone Project

This course is designed for the certificate in Data Science to provide hands-on experience in the area of data science. This experience will enable students to apply their knowledge of data science and provide valuable experience in the application of methods studied within the program that should enhance their job opportunities upon graduation. Students will receive experience with real world data. Analysis will be completed using SAS®

CIS419 - CIS Internship

This course is designed for majors in the computing-disciplines who are seeking work experience in a related area. This intern experience will enable the student to apply her/his educational background in his/her field to a real work place. The internship will provide the student with the valuable experience that should enhance the student's job opportunities upon graduation. Prerequisite: Students should have completed 64 credits with a good grade-point average plus have sufficient background to meet the needs of the particular internship in which they

Course Descriptions

will be participating. Variable credits (1-15) depending on the length of the internship and the number of hours devoted to the internship.

CIS474 - Special Topics in Information Systems

This course allows current topics in information systems to be offered to the students in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic. The student is able to take the course several times as long as the course is covering topics different than those already taken. The course topic depends on the current trends in the field of information systems and the interests of the students and the instructor.

CIS490 - Systems Analysis II

This course introduces students to systems application development. They will study its history and terminology. The students will write requirements, specifications and design documents, and one or more papers on software development life cycles.

CIS492 - Systems Development and Implementation

This course is a continuation of the Senior Project I: Application Software Development course and the capstone course of the program. The project proposal developed and designed in the first Senior Project class will be implemented in this course. The student will produce a project users' manual and will demonstrate proficiency in the academic program through the development of the project.

CMD-Communication Disorders

CMD105 - Language and Speech Development

The purpose of this course is to introduce normal language and speech development in children. The course provides theoretical and practical frames of reference for students entering child-centered professions. The foundations of language and speech acquisition, developmental processes requisite to normal speech and language, and means of facilitating normal communicative abilities are all addressed. This course addresses the following content areas as mandated PDE (2005-2006 standards) and contributes to the skills and knowledge as outlined in the Course Matrix: IB, IC, ID, IE, IF, IG, IJ, IIIB. This course has been designed to ensure that students demonstrate required knowledge and skills as outlined in the 2005 ASHA Standards and Implementations for the Certificate of Clinical Competency in Speech-Language Pathology.

CMD108 - Nature of Language

This introductory course is designed for the student who seeks to understand communication in its broadest terms, and in a variety of settings, and including verbal, nonverbal, technological, and cultural communication. The course essentially describes the various forms of communication that occur in everyday life. The student will encounter communication as it occurs in many domains: male-female communication, development of communication in children, the effect of culture on language, the phonemic influence of one's native language on learning English, methods to assess communication skill, self -assessment of his own receptive and expressive vocabularies, animal "language", written language, language vs. codes and icons, technology and communication, language and literacy, non-standard vs sub-standard communication, and normal vs atypical communication. The student will learn about the professional area and responsibilities of the speech-language pathologist who works with individuals of all ages. Taught within a web format, the course provides the student with opportunities to research a multitude of diverse topics related to communication. Sharing his/her personal observations and online research with academic peers on a D2L platform provides an opportunity for first-hand communication with a large, diverse group of communicators.

CMD203 - Phonetics

Introduces practical phonology and phonetics as they apply to the communicative process. The student is required to learn and use the International Phonetic Alphabet. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychophysical bases, and (c) linguistic and psycholinguistic aspects. A major theme in this class is to learn about therapeutic intervention strategies, materials and resources used with the speech, language, and voice populations.

CMD216 - Articulation

This course will provide the student with traditional views toward articulation disorders and their assessment and treatment. Current management and assessment procedures will be presented.

CMD220 - Communication Across the Lifespan

This introductory course is designed for the student who seeks to understand communication in its broadest terms, across the lifespan. He/she will do an in-depth analysis of the disease processes and problems that attack individuals in the following age groups: prenatal, natal, post-natal, the 1 to 3 year old, the 3 to 6 year old, the 7 to 12 year old, the 12 to 17 year old, the 18 to 30 year old, the 30 to 55 year old, the 55 to 75 year old, the 75 to 100 year old, and finally the 100+ year old. The student will learn about the professional area and responsibilities of the speech-language pathologist who works with individuals of all ages. Taught within a web format, the course provides the student with opportunities to research a multitude of diverse topics related to communication across lifespan. Sharing his/her personal observations and online research with academic peer on a D2L platform provides an opportunity for first-hand communication with a large, diverse group of communicators. Individual research is primarily submitted through Discussions and Dropbox.

CMD221 - Speech Science

An introductory course in speech science: the study of the physical characteristics of speech, its perception, and its production.

CMD300 - Fundamental Language Disorders in Children

This course provides students with introductory knowledge of children with language and speech disorders. They will become aware of procedures and principles utilized by speech-language pathologists in the assessment and management of children with language and speech delays/disorders. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychophysical bases, and (c) linguistic and psycholinguistic aspects. A major theme in this class is to learn about therapeutic intervention strategies, materials and resources used with a variety of populations.

CMD301 - Fundamental Language Disorders in Adults

Primary emphasis is placed on several of the major speech and language disorders in adults including fluency disorders, head injury, learning disabilities, aphasia, dysarthria, apraxia, dementia, and autism/Asperger Syndrome. The student will begin to understand, and/or apply evidenced-based information to form therapeutic strategies related to cognition, communication, emotional/social development, motor development, sensory integration, and adaptation. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychosocial bases, and (c) linguistic & psycholinguistic aspects. A major theme in this class is to learn about the characteristics/symptoms of each diagnosis and the therapeutic intervention strategies, materials and resources used with adults with speech and language disorders. Federal entitlements that relate to the provision of specialized service, service options, and equipment for individuals with speech & language disabilities may be introduced as appropriate. Where appropriate, service delivery models (collaboration, co-treatment, integration, pull-out of individuals and groups) will be discussed.

CMD305 - Intro to Audiology

The course will provide the student with an understanding of the genetic and disease processes producing hearing loss in children and adults and the procedures used to assess hearing loss and rehabilitate persons with hearing impairment.

CMD306 - Acoustics/Psychoacoustics

A basic analysis of how sound is generated and measured. In addition, the manner in which the human auditory system encodes sound information and subsequently extracts meaning from it will be investigated.

CMD310 - Anatomy and Physiology

A deep understanding of the structure and function of the human body is critical to the individual who plans to teach, treat professionally or train others. This course addresses both normal and abnormal human anatomy and physiology, and relates variances to disorders and disease processes.

CMD320 - Assessment of Speech and Language

The student learns to select, administer, score, and interpret basic speech and language tests, conduct clinical interviews, and write diagnostic reports based on the results. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychophysical bases, and (c) linguistic and psycholinguistic aspects. A major theme in this class is to learn about intervention strategies, materials and resources used with the language, articulation, stuttering and voice.

CMD321 - Common Organic Disorders

This course provides an overview of cleft lip and palate, cerebral palsy, traumatic brain injury, cranio-facial and other syndromes, and autism in children and adults. Emphasis will be placed on identification of and differentiation

Course Descriptions

between the various disorders. Attention is given to speech and language development in children with these disorders, to the nature of the speech and language disorders they may exhibit, and to the differential diagnosis and clinical management by speech-language pathologists in conjunction with specialists from other disciplines. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psycho-physical bases, and (c) linguistic and psycho-linguistic aspects. Cultural differences in management of these disabilities will also be addressed. A major theme in this class is therapeutic intervention strategies, including materials and resources used with these populations. Federal entitlements that relate to the provision of specialized service, service options, and equipment for individuals with speech and language disabilities will be introduced as appropriate. Where appropriate, service delivery models (collaboration, co-treatment, integration, pull-out of individuals and groups) will be discussed.

CMD322 - Technical Writing in Health Care & Education

This course offers the opportunity for intensive study and practice of the various types of writing skills and responsibilities expected of educators and health care professionals. Areas covered in this course include: research papers, diagnostic report writing, informational letter writing, progress notes, summary reports, treatment plans, IEPs, behavioral goals.

CMD350 - Sign Language & Braille I

This is a course about the various communication codes or languages used (a) by the Deaf (i.e., finger spelling and American Sign Language), (b) the Blind (i.e., Braille) and (c) the deaf-blind (finger Braille). A major focus of this course is to develop the ability to communicate with these three populations by learning and using (a) finger spelling, (b) a minimum of 500 signs, (c) Braille code and (d) finger Braille. Within each of these codes, the student analyzes the various components of language: letter representations, word choices, grammars and conversational strategies. There are two main points of focus in this class: First, to help the student understand that the Deaf and the Blind are very specific subcultures that each hold their own language or code, beliefs, customs, arts, history and folklore. Secondly, to help the student recognize that American Sign Language is a

Course Descriptions

legitimate language, having its own vocabulary, grammar, syntax and pragmatics. This course is for the student who wants to learn entry-level sign language and entry-level Braille.

CMD352 - Sign Language & Braille II

This is a course about the various communication codes or languages used (a) by the Deaf (i.e., finger spelling and American Sign Language), (b) the blind (i.e., Braille), and (c) the deaf-blind (finger Braille). A major focus of this course is to develop the ability to communicate with these three populations which was learned in Sign Language and Braille I. Within each of these codes or languages, the student analyzes the various components of the system: letter representations, word choices, grammars, and conversational strategies. There are two main points of focus in this class: first, to help the student understand that the Deaf and Blind are very specific subcultures that each holds its own communication methods, beliefs, customs, arts, history, and folklore. Secondly, to help the student recognize Sign Language as a legitimate language having its own vocabulary, grammar, syntax, and pragmatics. This course is for the student who already knows entry-level sign language and entry-level Braille and who wants to expand his/her knowledge in both areas. If time permits, a field trip to a school for the deaf, blind, or deaf-blind may be scheduled.

CMD400 - Clinical Practicum: Video

This course provides introductory exposure to the clinical context in speech-language pathology through focused video observation. Students will critically appraise and discuss pre-recorded speech and language therapy and diagnostic sessions under the direction of faculty.

CMD401 - Clinical Practicum: Speech & Hearing Clinic

This course provides introductory exposure to the clinical context in speech-language pathology through “hands on”, face-to-face observation in the Speech & Hearing Clinic. Students are paired with graduate students, and

Course Descriptions

under the direction of a clinical faculty member, assist in evaluation or therapy with clients who present with various speech and language delays and disorders.

CMD402 - Clinical Practicum: Learning & Language Center

The class, resembling a lab experience, provides the undergraduate student with an introductory “hands-on” experience with typically-developing children, as well as children having speech, language, and /or other hearing disorders. Students participate in a guided study to facilitate knowledge of preschool children.

CMD450 - Intro to Clinic Procedures

This course is designed to give the senior-level Communication Disorders student his or her first in-depth view of actual clinical procedures. The major goal of the course is to consider all the issues related to basic/entry-level clinical interaction and to share information with classmates. Topics will include creating an appropriate clinical environment, professional behavior, motivating others, reinforcement principles, legalities of clinical interactions, record keeping, data collection, basic medical terminology, and administering basic speech and hearing screenings. A major focus is on basic human communication processes including (a) anatomical and physiological bases, (b) the physical and psychophysical bases, and (c) linguistic and psycholinguistic aspects. A major theme in this class is to learn about therapeutic intervention strategies, materials, and resources used with the language, articulation, and hard of hearing populations.

COM-Communication Studies

COM141 - Audio Production I

This course covers the fundamentals of radio production, including the theory and use of audio lab equipment, writing and producing various types of basic radio programs, and the study of FCC rules and regulations as they apply to radio broadcasters.

COM242 - Video Production II

This course is designed to prepare a student to perform in the various areas of single-camera electronic field production, including the fundamentals of scripting, planning and budgeting field shoots; gathering audio and video in the field; field lighting; skills and aesthetics of editing field produced video; and the understanding and reading of test equipment for video signals.

COM250 - Oral Communication: Management

Students will develop an awareness of, and an appreciation for, communication in the business world and preparing and presenting oral reports and speeches designed especially for persons who function in organizations, businesses or industries.

COM355 - Broadcast Management

Students will develop a working knowledge of the managerial structures of broadcast organization.

COM436 - Public Relations Cases and Problems

In this course students will analyze the methods of the public relations profession found in the case study literature and apply those methods to their own research, and through the investigation of public relations case studies come to understand the strategies and tactics of a public relations campaign. In addition, students will develop analytical skills so that graduates may function in the four primary roles of the public relations practitioner:

1. monitor of public opinion and change;
2. voice of organization's conscience;
3. advocate for organizations, and
4. monitor of organizational policies and programs.

CSC-Computer Science

CSC101 - Personal Productivity Software

This course provides a structured laboratory experience designed to develop and enhance a student's proficiency in using selected Windows microcomputer application software packages.

CSC120 - Problem Solving and Programming Constructs

This course will provide the student with a basic literacy of computers; present problem-solving heuristics and structured programming techniques; present language independent data types, operations, programming constructs and statements; introduce arrays and linked lists; and implement fundamental programs using an appropriate programming language.

CSC124 - Computer Programming I

This course builds on CSC 120. It gives the student a thorough understanding of the presently adopted language so that the student will develop the ability to program in the language. Emphasis is placed on efficient software development using structured programming techniques. Students are required to write, test and run programs.

CSC201 - Internet Concepts

This primarily hands-on course will review computer system concepts, will introduce the student to all facets of the Internet, and will develop a student's proficiency in Web page design and publishing.

CSC216 - Logic and Switching Theory of the Computer

This course provides the student with an in-depth study of the basis of digital computers. Number systems, arithmetic operations, codes, Boolean algebra, Boolean minimization techniques, state transition tables and state

Course Descriptions

transition graphs are discussed. Extensive emphasis is placed on the analysis and synthesis of synchronous and asynchronous combinational networks which form digital computers.

CSC265 - Object-Oriented Programming

Object Oriented Programming- This course teaches object-oriented programming. Object-oriented programming offers a natural method for designing software systems that build on the concepts of data abstraction, information hiding and modularity. Students will design and implement solutions to problems using an object-oriented programming language.

CSC302 - Visual Programming

This course teaches Windows applications programming using the object-oriented event-driven programming paradigm, with the programming language VisualBasic.NET. It is designed as a beginning OOED programming course, but assumes students know Windows object vocabulary, have basic Windows file management skills, and are familiar with the generic procedural programming language constructs of decision structures and looping.

CSC304 - COBOL

This course introduces students to the essential elements of the COBOL language using well-structured programming techniques. Students will write and execute report programs, control break programs, data validation programs, programs that implement tables and sequential update programs. Good analysis, design and structure will be emphasized.

CSC306 - Fortran

The FORTRAN language will be studied. Most of the major programming constructs of FORTRAN will be covered, including assignment statements, loops, decisions, subprograms, arrays, character manipulation and file processing. Comparisons with other languages will be made, and documentation of programs will be emphasized.

CSC308 - Python

This course enables the student to acquire a thorough understanding of the Python language and its application in solving real world problems. Emphasis is placed on efficient software development using structured programming techniques, Object Oriented Programming, GUI interfaces, as well as a variety of Python modules and packages. Students are required to design, write, test, and run programs using an appropriate version of Python.

CSC322 - Data Base Application Development

Building upon the conceptual understanding of a modern DBMS (Database Management System) and database and table design concepts gained in CIS 321 – Database Management Systems and Design, this course provides students with the practice of applying database technology via the Oracle DBMS to the solution of business and other information-related problems. Experience is provided with database design and implementation based on a thorough analysis of requirements and information modeling. The use of Structured Query Language (SQL) for interaction with a working DBMS for data creation, manipulation and extraction is stressed as well as optimization techniques, such as view creation and indexing. PL/SQL and database triggers are introduced.

CSC323 - Assembly Language Programming

In this course students will study assembly language. In doing so, students will develop some concepts related to the architecture and operations of the computer. Programs will be written and implemented using the instructions in this assembly language. Constructs such as selection, looping and subprograms will be implemented.

CSC328 - Data Structures

The design, use and programming of data structures, such as stacks, queues, linked lists and binary trees, will be discussed. Sorting and searching methods are also discussed in this course. The analysis of algorithms will be considered as well as the applications of the various data structures.

CSC352 - Global, Economic and Social Ethical Issues in Computing

This course covers issues related to various global, economic and social frameworks and moves to topics specifically related to computers. Emphasis is placed on the study of ethical situations that arise as a consequence of the development and deployment of computers and related technologies, and also from parties with malicious intents toward prevalent technologies. Topics can include areas such as: security, economics of information systems, computer crime and hacking, computer software ownership, privacy, risks of computing, professional liability, internet freedom in computing and international laws and governance. The course is to be delivered in a writing intensive format, with treatise and arguments communicated effectively to a wide variety of audiences.

CSC360 - Analysis of Algorithms

This course covers algorithm analysis theory and techniques. Students learn properties of both efficient and inefficient algorithms. The importance of analyzing algorithms before implementing them will be emphasized. This course will teach the skills necessary to determine the best algorithm for a given problem. We will investigate greedy, graph theoretic, divide and conquer, and distributed algorithms. We will cover both polynomial time algorithms and NP-completeness.

CSC378 - Computer Architecture

This course provides the student with an in-depth study of the organization of the central processing unit, arithmetic logic unit, control unit, instruction formats, and addressing schemes of digital computers. Extensive emphasis is placed on the translation of assembly language instructions into their micro-sequence operations within the control unit and the interconnection and control of registers, arithmetic logic units, memory units, and busses which form the central processing unit and the digital computer.

CSC400 - Operating Systems

This course involves an introductory study of the main elements of an operating system – memory management, process management, device management, and file management. An operating system defines an abstraction of hardware behavior with which programmers can control the hardware. It also manages resource sharing among the computer's users. This course investigates these concepts as well as issues that influence the design of contemporary operating systems, including management of processes, memory, devices, and files. Additional special topics may include scripting, security, fault tolerance, and real-time systems.

CSC419 - Internship

This course is designed for the computer science major who is seeking work experience in the computer science area. This intern experience will enable the student to apply her/his knowledge of computers in the real work-place. The internship will provide the student with the valuable computer experience that should enhance the student's job opportunities upon graduation.

CSC420 - Artificial Intelligence

This course offers a selective survey of key concepts and applications of artificial intelligence and an introduction to a language commonly used for building AI systems.

CSC424 - Numerical Analysis

Numerical Analysis-In this course, various mathematical algorithms and applications relating to the numerical computation are investigated. Topics include: roundoff errors and computer arithmetic; numerical instability; error analysis and estimation; approximation; Gaussian elimination and pivoting strategies for linear systems; numerical integration and numerical solution of differential equations; curve fitting, polynomial approximation; and regression.

CSC455 - Structures of Programming Languages

Students will study the four categories of programming languages: imperative, object-oriented, functional and logic. An in-depth discussion of the imperative languages will be followed by discussions of the other three paradigms. Students will be required to investigate at least one language.

CSC460 - Language Translation

This course studies the design and construction of compilers. Lexical analysis, syntactic analysis and code generation are investigated in detail. Language design, interpreters, semantic analysis, intermediate code generation and code optimization are also considered.

CSC475 - Theory of Languages

This course is an introduction to abstract machine theory, combinatorial systems, computable functions, and formal linguistics. Topics include finite-state machines, regular sets, Turing machines, Chomsky hierarchy grammars and languages. Emphasis is on surveying basic topics and developing an intuitive understanding in the theory of languages.

CSC490 - Senior Project I: Software Engineering

This course introduces students to software engineering. They will study its history, terminology, requirements, specifications and design. The students will write requirements, specifications and design documents and one or more papers on software engineering topics.

CSC492 - Senior Project II

This course is a continuation of the Senior Project I: Software Engineering course and the capstone course of the program. The project proposal developed and designed in the first Senior Project class will be implemented in

Course Descriptions

this course. The student will produce a project users' manual and will demonstrate proficiency in the academic program through the development of the project.

DAN-Dance

DAN131 - Foundations of Dance Technique

Foundations of Dance Technique is designed to provide accessibility to the world of dance for all students, novice or pre-professional. As this course is intended for students with little# no dance training, the class will use lecture, discussion, and studio work to introduce ballet, jazz, and tap, their history, and their aesthetics. The lecture and discussion will help the student recognize and articulate key terminology and criteria for aesthetic judgment in this form of expression. The studio work, including barre exercises and center and traveling sequences, will be performed in small groups as well as individually in order to help the student develop creativity in expressing themselves and a kinesthetic awareness for self-evaluation.

DAN132 - Ballet Technique I

Introductory instruction in the basic techniques applicable to ballet as practiced in western Europe and in the United States is covered. Basic techniques include barre exercises, port de bras and center practice with jumps, beats and turns.

DAN133 - Jazz Technique I

This is an introductory, entry level jazz technique class emphasizing American jazz dance style. The focus of instruction and performance is on developing flexibility, isolation techniques, as well as jazz jumps, kicks and turns necessary for most forms of jazz dance. This course is a 3 credit course and is required for dance minors.

DAN134 - Tap Dance Technique I

This course emphasizes instruction in the basic tap techniques practiced classically and in modern day. Basic techniques include a center warm ups for feet, floor progressions with tap technique and center practice encompassing rhythm and timing elements.

DAN232 - Ballet Technique II

Ballet II is a second level course designed for the development of strength and fluidity through an extension of techniques demonstrated in specialized study and drill. Emphasis is placed on quicker retention of complex combinations. Further emphasis is placed on center floor work to develop the student's artistry, technique, and physical ability in the dance form.

DAN260 - Modern Dance

Modern dance is an expressive form of movement which serves to enhance individual creativity and exploration. The class will emphasize creative problem solving through movement and modern dance technique. The development of movement quality, as well as the use of force, time and energy, will be explored while learning the rich history of modern dance.

DAN301 - Theatre Dance I

Introductory, entry-level instruction in the basic elements of period movement/style used in acting and musical theater, as well as social/ballroom, jazz and tap dance, will be presented in this course. Student presentations of these various styles and dance forms used in musical theater will be provided by the instructor and evaluated for credit.

DAN302 - Theatre Dance II

This course will help the dancer develop specific movement skill and style in the area of musical theater.

Emphasis will be placed on the basic techniques of American modern, jazz and tap forms including those used by Agnes DeMille and Jerome Robbins (American modern), Bob Fosse and Michael Bennett (jazz), as well as Gene Kelly and Gregory Hines (tap).

Graphic Design

DES327 - Visual Communication II

This class will analyze the 'tools' or basic building blocks that are used by graphic designers to communicate to any chosen audience. It will then explore how these tools are generally applied, and what to. Projects will utilize these tools and examine how they would be applied to various media concluding with an overarching project to end the class that would utilize a variety of tools applied across many media platforms, much like an advertising campaign.

DES328 - Branding Design I

Brands and branding have always been hugely influenced by graphic designers. The visual interpretation and translation of brands to an audience is a fundamental element of branding. It is the emotional cornerstone for both the organization and the product being sold. Design connects the audience to the brand. Graphic designers often view their role in branding as logo creation, starting and ending with the brand mark, yet the graphic designer's role is much more extensive and requires knowledge beyond that of how to make an attractive branding. Branding is about understanding the brand values and positioning, and developing an expression across various media.

DES361 - Typography I

This course is designed to teach effective use of typography as it relates to graphic design. The course covers, in detail, fundamental studio elements along with historical perspectives to give the student a deeper insight and understanding.

DES362 - Typography II

Students will build on the knowledge gained from the DES261 Typography class to further explore the potential of type as a communicative tool in graphic design. Focus will be put into more formal elements of typographic expression and control such as grid systems and typographic detail. Both the fundamental legibility of type and the expressive qualities inherent in letters will be addressed. Students will work in both print and screen-based motion design. An extended typographic project will be completed.

DES371 - Contextual Design

One of the most important but least recognized aspects of the design profession is the organization and presentation of information. Designers need to make information accessible and available to everyone. This design studio course will cover a broad spectrum of information design as students create original portfolio quality graphic design work.

DES381 - Interactive Media and Culture

This class gives students opportunities to create and think about contemporary media. Focusing on the Internet, this class teaches students content development, communication theory and practice, production and design skills and offers an overview of the ever-changing media landscape. As new media forms develop and evolve, students who are interested in working in communications fields need to understand each medium's particular communication requirements. It is crucial to develop online content that is relevant, usable, visually effective and creative, informative and manageable.

DES382 - Design for Interactivity

Web and app design is a crucial facet of graphic design. This studio course will focus on the process inherent in researching, designing and implementing design for interactivity. Elements of GUI and UX/UI will be covered, as will the area of information architecture.

DES429 - Branding Design II

Building upon knowledge and experiences from Branding Design 1, students will create professional, extensive, and integrated brand campaigns based on clear and appropriate communication objectives. Branding 2 emphasizes the importance of demographic research, consumer behavior, and target market analysis. Research will be applied in the development and design of comprehensive brand strategies resulting in the design of comprehensive Brand Standard Manuals for client presentation.

DES431 - Advertising Design

This studio course provides students with an introduction to the development of integrated advertising campaigns. Principles and strategies of visual communication, color theory, and creative problem solving will be reinforced as well an introduction to consumer behavior and a history of Advertising Design. In Advertising Design students will create original work from concept development through production.

DES497 - Senior Design Seminar

Within the framework of design thinking already explored, this class examines structure, formats, sequences and unities within books, publications, packaging and other graphic forms. Emphasis is upon expanding and developing ideas to their full potential, looking at options and rigorously examining design decisions. Projects are of a more comprehensive and extended nature. This class will be extremely intensive in terms of deadlines, and what is expected within those deadlines. The first two thirds of the class would involve the completion of set assignments (that go to start building and shaping the portfolio next semester.) These assignments would

Course Descriptions

be varied and challenging and would engage the students in areas that are new and fresh. The last third of the semester would be given over to a senior design project. This assignment would involve a sustained period of study spent researching and developing an ambitious, largely self-initiated and managed project.

DES498 - Senior Design Portfolio

The capstone course of the Graphic Design program. The semester revolves around preparing the students and their portfolios for the workplace or graduate study. Although some assignments are given, the onus is on the student to work and update new or existent projects required of a graduating student. Within this framework would be a series of lectures that are focused on professional development such as resume preparation and agency and freelance protocols. An important element of the semester is the preparation for the AIGA Portfolio Day that takes place in Pittsburgh in April. Students are required to attend this workshop and get valuable feedback on their books from working professionals.

DMA-Developmental Math

DMA092 - Introductory Algebra

For students whose understanding of algebra is minimal. It may be a terminal course for some, and a preparatory course for further mathematics for others. It starts with signed numbers, and emphasizes the relationship between general arithmetic and algebra. This is not an arithmetic course. This course does not earn credit toward graduation.

Digital Media Technology

DMT100 - Foundations of Print Media

This course offers students an opportunity to understand the practical applications of electronic file preparation as it relates to print production. It covers image design, file conversion, image carrier preparation, image transfer and finishing techniques. Two lecture-hours and three laboratory-hours per week.

DMT101 - Time-based Media

This course focuses on time as an element of design and communication. In design, time usually incorporates changes that can be in the form of an animation, an event, or an action taken by the viewer. This is an introductory-level course for all students who would like to explore the creative use of traditional time-based media and story telling. Students will use non-computer-based media to view, analyze, capture, and express the world around us.

DMT180 - Foundations of Digital Media

This course focuses on the fundamental concepts of digital media technology and typical components including hardware, software, peripheral devices, conventional photography/scanned images, digital photography, bit-mapped and vector based image creation and editing, web pages, video, animation, 3D images, and audio. The application of digital media in business, marketing, education, entertainment and training will be explored. Practical hands-on assignments will be used to reinforce learning.

DMT200 - Print Media Production Processes

This course offers additional experiences in the practical application of digital printing. The student is introduced to the use of digital media as an extension of print media for communications and marketing purposes. The integration and implementation of new printing and imaging technologies that affects day-to-day communication

Course Descriptions

is explained. Practical experiences are gained in digital printing reproduction through laboratory and computer based activities.

DMT220 - Digital Photography

This course emphasizes techniques involved in still photography utilizing a digital camera. It covers the basic aspects of digital camera operation, photographic composition, lighting, photo retouching, tonal correction, and digital output. Practical experiences are gained in the digital manipulation of images through computer-based activities.

DMT225 - Digital Page Layout

This course provides an in-depth study into the page layout - the arrangement of text and images on both printed and digital pages — as a primary tool used by graphic designers to communicate messages in a compelling and memorable way. The emergence of new media — from the Web to interactive eBooks, smartphones, and the iPad — has fundamentally changed the nature of page layout. While fitting static content on a finite page used to be a primary challenge for print layouts, today the task demands that designers incorporate scrolling Web pages, interactivity, sound, animation, movies, slide shows, and other elements that produce multiple dimensions and unlimited depth for a single page.

DMT240 - Vector Based Graphics

The world we live in is filled with all types of visual images whether it be electronically through TVs, computers, or mobile devices, but also through print in advertisements, vehicle wraps, and signage. This course focuses on the creation of artwork using vector-based graphics software typically used in the print and digital media industry. Students will learn how to create, edit, and output vector-based graphics and their integration with other software such as Photoshop and web applications.

DMT250 - Digital Imaging

The advanced study of the practical applications of digital editing through means of computer applications. This course emphasizes techniques involved in advanced picture taking, color imaging, and digital image manipulation by means of a computer. It will focus on developing the necessary skills to preparing images for a variety of output methods.

DMT302 - Commercial Print Techniques

An in-depth study of commercial printing applications focusing on the lithographic process incorporating line and halftone reproduction of graphic elements. Assigned projects require students to gain an understanding of the operations of a lithographic press through hands on activities and simulator exercises to reinforce lecture presentations. Production workflow is analyzed and evaluated through class projects. Substrates and inks are studied to show the effect on specific projects,

DMT312 - Specialty Graphics Printing Techniques

This course defines and analyzes the process of screen printing, pad transfer printing, printed electronics and other specialty printing processes. It is an introduction to the various specialty printing applications. Student designed activities are supported by exercises that provide quality and control for the printing process. Emphasis of the course is centered on establishing repeatability of the printing process by controlling variables; digital design and imaging; single and multiple color image design, conversion and transfer; manual and semi-automatic presswork; printing applications of simple and complex close register line images.

DMT320 - Digital Video

This course explores digital video from the inception of an idea to the delivery of the finished video. Students will develop and use their understanding of video concepts, storytelling, camera use, video editing, and exporting to create videos for the Internet, multimedia presentations and video broadcasts. Source footage comes from

Course Descriptions

photos, previously shot footage, or footage shot using the University's equipment or the student's camera and is edited on cross platform systems using commercial video editing software.

DMT330 - Package Printing Processes

This course provides an in-depth study of the processes and techniques involved in the printing and converting of packaging and labeling materials. Laboratory applications include the design, preparation and flexographic printing and converting of various paper, foil and plastic substrates. Emphasis is placed on establishing repeatability of the printing process by controlling variables. Methods and techniques of quality assurance are implemented as an integral part in the production of flexographic printed products.

DMT331 - Web Publishing

This course examines web publishing and what makes an accomplished web designer. Students will design, develop, evaluate, and validate web pages that include HTML language syntax and incorporate elements such as animations, sounds, and video. Students will learn in depth HTML syntax and apply CSS to a webpage's layout and style.

DMT340 - 3D Computer Animation

This course deals with the use of computers to create and animate three-dimensional appearing objects. Topics will include production strategies, basic modeling concepts, rendering, lighting, virtual cameras, and animation. Students will learn the fundamentals in the classroom and apply them in laboratory activities.

DMT342 - Cost Analysis for Digital Media

A critical examination of the operations involved in the production of commercially printed products for the purpose of determining costs of the operations. The procedures necessary to assemble this information to produce estimates of typical printing matter and digital media elements are discussed. The identification and study

Course Descriptions

of cost centers as they relate to the hourly costs and ultimately to the selling price are examined. Students are required to prepare a number of cost estimates for the course.

DMT350 - Motion Graphics

In recent years there's been an explosion of opportunities in the industry of motion graphics; they appear in just about every form of popular media today, whether it's online media, network television, video on your cell phone, iPod, DVD, video games. In this course students will gain knowledge and skills in color theory, composition, typography in relation to the motion. These skills will blend with skills traditionally covered in other disciplines like film, visual effects and animation.

DMT360 - Game Development

One of the education and entertaining applications of digital media is gaming and interactive applications. This course teaches students about game design and how to incorporate visual, audio, and character assets into the creation of a game. The course delves into the scripting, development tools, interfaces, and build process necessary to create a finished game.

DMT402 - Advanced Commercial Print Techniques

This course provides advanced, in-depth study of the processes and techniques involved in the printing, finishing and converting of packaging, labeling and commercial materials. Laboratory applications include the design, preparation, printing and finishing of various paper, foil and plastic substrates. Emphasis is placed on establishing repeatability of the printing process by identifying and controlling variables. Multiple-color tonal images such as duotones and process-color images are reproduced by various printing processes. Students learn the importance of accurate proofing and incorporate proofing steps into lab projects. Methods and techniques of quality assurance are implemented as an integral part in the production of advanced printed products.

DMT406 - Digital Workflow and Print Technology

This course will focus on the components and terminology of color reproduction and workflow technology as a basis for understanding applications in the field of digital printing. Through a series of research, laboratory and computer-based activities, the student will experience the interaction between software applications, image preparation techniques, and various computer peripherals used to support digital printing and color imaging. Variable data printing and multi-channel applications are investigated.

DMT420 - Emerging Technologies in Digital Media Technology

This course involves, but is not limited to, directed study, special projects, institutes, or workshops in Digital Media. Subject areas are organized according to student needs and will be designed to cover theory and/or practices going beyond the scope of regular coursework. Course content is planned cooperatively between the student(s) and the instructor. A course contract is prepared and will include: the objectives to be achieved, the procedures to be followed, any special conditions, the expected findings, and specifications for the evaluation of activities.

DMT431 - Advanced Web Publishing

This course examines web publishing and what makes an accomplished web designer. Students will design, develop, evaluate, and validate web pages that include HTML language syntax and incorporate elements such as animations, sounds, and video. Students will learn in depth HTML syntax and apply CSS to a webpage's layout and style.

DMT445 - Digital Media Project Planning

This course focuses on the application of production management and operations concepts and techniques related to the field of digital media. It is concerned with long-term issues of strategic importance such as

Course Descriptions

equipment investment, plant layout, and organizational structure. Basic concepts of project management methodology will be introduced to provide an understanding of the skills needed to manage teams, schedules and resources as well as to assess and manage risk. The course emphasizes items of day-to-day administrative importance: production planning, scheduling and control; inventory control and purchasing; production cost analysis and quality control.

DMT485 - Senior Seminar

This is an all-encompassing seminar-type course designed to provide seniors in Digital Media Technology (DMT) with opportunities to enhance their knowledge base through collaborative and individual work. Through projects and activities that will vary each time the course is taught, students will work to apply the skills learned in previous courses, develop and refine their skills in project management, and work to a high level of quality and professionalism. Each student is also required to do a major research paper on a particular problem or technology relating to the digital media industry.

DMT495 - Internship

The Digital Media Technology internship is designed to allow students to gain practical employment experience and to build upon the fundamental knowledge and skills that they developed in earlier courses. Student interns will expand their basic knowledge and skills through research efforts, problem solving, and practical applications in a print manufacturing technology-related research or business environment. Students participating in an internship program gain valuable hands-on experience in solving technical problems and in working with people in a real-world setting. Student interns are placed with an organization, which most nearly approximates employment goals. If this is not possible, students are placed in some type of graphics environment, which is available at the time. The intent of the internship is to provide students with practical work experience in an environment in which they will be dealing with real problems requiring real solutions in a relatively short time frame.

EAS-Earth Science

EAS100 - Introduction to Earth Science

This introductory laboratory-oriented earth science course designed to acquaint the student with the four general areas of the earth sciences: astronomy, geology, meteorology, and oceanography. Laboratory activities are designed to enhance student's understanding of elementary scientific concepts in earth science.

EAS104 - Introduction to Meteorology

This course deals with the physics and chemistry of the atmosphere as influenced by the earth-atmosphere interaction. The effects of the physical controls as they alter the elements are emphasized. Basic laws of Physics and Chemistry are emphasized. The construction and analysis of weather maps is an integral part of the laboratory component of the course. Students are expected to visualize, interpret, and investigate various weather phenomena as they relate to the current state of the atmosphere. Basic prediction of future weather conditions is the final culminating experience of the course, after extensive laboratory investigations in both manual and computer settings.

EAS105 - Extreme Weather

This course provides scientifically accurate description of extreme and unusual weather phenomena. Course discusses a variety of extreme weather phenomena in a descriptive style that does not require advanced mathematical knowledge. Course includes topics like thunderstorms, thunderstorm complexes, tornadoes, hurricanes, extreme snowfall events, blizzards, floods, droughts and downslope windstorms. Climatology of these events is also discussed.

EAS142 - Introduction to Climate Science

In this course the elements and controls of climate are analyzed in a systematic fashion. The physical parameters controlling climate are reviewed, as they relate to physics and chemistry. Various methods and techniques of classifying climates are presented. Climatology is concerned not only with the most frequently occurring types, the average weather, but the infrequent and unusual types as well. Because climatology also analyzes climatic conditions at locations on the earth's surfaces and its effect on human society and/or the environment, the course is geographical in nature. Climates of the past and potential future issues will be discussed. The student will be able to make an informed decision in the form of a research proposal about impending climate change and climate data analysis by the conclusion of the course.

EAS163 - Introduction to Oceans and Climate

Oceanography examines the world ocean from an Earth system perspective. Specifically, it is designed to be an introduction in the study of the four main branches of oceanography: (1) geology of the oceanic basins (origins of the oceans, structure and geomorphology of the ocean's floor, methods of investigation); (2) chemistry of the ocean waters; (3) physics of the oceans (currents, waves, tides, etc.); (4) biology of the oceans (marine plants and animals).

EAS245 - Weather Analysis and Forecasting I

Introduction to the application of basic atmospheric concepts on real-time weather data. This course aims to synthesize observational and numerical weather analyses in order to understand weather phenomena on synoptic scale. Topics include: analysis of forces, accelerated reference frames, conservation equations of mass, momentum and energy; scale analysis; pressure coordinates; geostrophic and gradient flow; thermal wind; kinematic description of the wind, trajectories; circulation, vorticity and potential vorticity. The last part of the course will introduce quasi-geostrophic theory applications in synoptic meteorology and introduce concepts of frontogenesis and atmospheric jets.

EAS323 - Atmospheric Instrumentation and Measurement

This upper-division course in meteorology deals with the specifics of data collection and instrument functionality. Time will be spent dealing with proper site selection, the physical mechanisms present within an automated sensor array, and quality control for data collected. Students taking this course should have a detailed understanding of the role each meteorological parameter has in making a weather forecast.

EAS342 - Dynamic Meteorology I

This course is an introduction to description and theory of atmospheric motion; analysis of forces, accelerated reference frames, conservation equations of mass, momentum and energy; scale analysis; pressure coordinates; geostrophic and gradient flow; thermal wind; kinematic description of the wind, trajectories; circulation and vorticity. The last part of the course will introduce quasi-geostrophic theory.

EAS365 - Remote Sensing: Satellite and Radar Interpretation

This course emphasizes the characteristics and scientific role of radar and satellite interpretation, as well as computer-assisted processing of spectral data acquired by satellites, as they relate to atmospheric analysis.

EAS369 - Climate Dynamics

The main goal for this course is to present the working of the climate system as a whole and its critical components (the atmosphere, ocean, sea ice, glaciers, land surface, etc), their complex interactions and feedbacks, and the mechanisms governing natural climate variability (e.g., ENSO) and the climate response to external perturbations (e.g., the increase in greenhouse-gas concentrations). Several important periods in Earth's climate history are explained in terms of natural and anthropogenic forcings and climate system responses. Various scenarios of future climate changes are also discussed.

EAS419 - Applied Climatology

This course examines the effect of climate on the physical, biological, and cultural environments and includes both present-day and future (re: Climate change) relationships. Part of the course will examine current practices/methodological developments that represent the basic “tools” which underpin applied climatological research. Significant time will be spent investigating the relationship between climate/climate change and a wide range of human activities and responses. This course is a “writing intensive” course, as defined by California University of Pennsylvania. Therefore, many topical discussions, research investigations and climate diagnostic analyses will require writing with the opportunity for the student to revise their original work.

EAS431 - Digital Media for Weather & Climate Applications

The course is an introduction to television weather broadcasts and web-based “narrowcasts” with emphasis on creating accurate weather forecasts, climate outlooks and on the techniques of communicating weather information to various publics. The course consists of weekly lecture/lab meetings and one-on-one critiquing/coaching to develop and improve descriptive science language as well as the graphics that accompany the verbal discourse. Special emphasis is placed upon accurate weather forecasting from skills initiated in previous coursework. Extemporaneous speaking styles will be stressed with timed delivery of weather information. Analysis of a weather graphics presentation will be undertaken, and ultimately students will be expected to arrange their own weather “show” for presentation and evaluation by classmates. A history of meteorology in the media will also be examined in the context of changing technologies and public perceptions.

EAS442 - Dynamic Meteorology II

This course introduces advanced topics in dynamics of atmospheric motions. This course is a continuation of Dynamic Meteorology (EAS 342). Topics include: atmospheric oscillations and waves, synoptic scale instabilities, mesoscale instabilities and isentropic potential vorticity thinking. The last part of the course will introduce the dynamics of numerical modeling and prediction.

EAS445 - Weather Analysis and Forecasting II

Continuation of the concepts learned in Synoptic Meteorology (EAS 340). The lecture part of the course examines frontal boundaries, evolution of mid-latitude cyclones, and applications of potential vorticity concepts to weather analysis and prediction. The laboratory part of this course is a forecasting lab where students independently analyze weather and forecast in a competitive setting.

EAS449 - Mesoscale Meteorology

Introduction to the structure and dynamics of mesoscale weather phenomena. This course aims to synthesize observational and numerical modeling studies of mesoscale weather phenomena. Topics include: mesoscale instabilities, boundary layer dynamics, low-level jets, air mass boundaries, deep moist convection, supercell thunderstorms and tornadogenesis. The last part of the course introduces severe weather associated with deep moist convection.

EAS452 - Atmospheric Thermodynamics and Radiation

This course examines the role of thermodynamics and radiation in the atmosphere. Topics covered in the course include the First and Second Law of Thermodynamics, adiabatic and diabatic processes, thermodynamic diagrams, and stability. These concepts will prepare the student for understanding exactly how the earth is heated by solar radiation. Specifically, those principles in atmospheric radiation will be investigated, including solar and terrestrial radiation, blackbodies, absorption and emission, and scattering.

EAS453 - Cloud Physics

This course is a continuation of EAS 452. The physics relevant to the formation of droplets and precipitation, mixing and parcel theory, adiabatic lifting, nucleation, warm rain processes, cold rain processes, and the growth of hail are investigated. Finally, radiation concepts from EAS 452 are used to look at the impact of clouds on solar and terrestrial radiation.

EAS465 - Seminar in Atmospheric Science

This scientific writing and speaking course covers recent and historical developments in the atmospheric sciences. Students are required to participate in group presentations, complete two written research projects, and produce a critique of classmates' research projects.

EAS469 - Global Climate Change

Climate change has become the defining environmental issue for our global society. Its effects, however, are unequal in different regions of the world. These disparities are due to both natural processes in climate but also due to societal inequities and vulnerabilities caused in part due to historical inertia or geographic challenges. The course begins in describing the many ways in which global climate has and will change through time as a result of many years of scientific observation and understanding of physics and chemistry. Next the course will focus on how those changes have affected humans through the centuries and what influence future changes may have on a modern, globalized society. Related, the human need to consume energy places climate change mitigation efforts squarely in the realm of public policy debate. As such, all parts of the global society are affected many times unequally. These global inequities in both human vulnerability and economies raise a variety of ethical considerations that are a focus of discussion in the course. Students enrolling in this course should have a basic understanding of earth sciences concepts so as to frame their understanding of climate change adaptation/mitigation from a policy, economic, and/or moral standpoint.

ECO-Economics

ECO100 - Elements of Economics

An introduction to the elements of economic analysis, structured particularly for the non-major. The student is exposed to the rational self-interest model of human behavior, the mechanics of the market system and a survey

Course Descriptions

of modern macroeconomic theory and policy. Emphasis is placed on examples from everyday life whenever possible.

ECO102 - Economics for Elementary Education Majors

This course provides an introduction to the fundamentals of economics focusing on a basic understanding of the economic way of thinking, markets, economic efficiency, market failures, the business cycle and macroeconomic policy.

ECO201 - Principles of Microeconomics

This course focuses on explaining the economic choices made by individuals, households and firms. Topics to be covered will include: consumer choice, supply and demand and markets, production and costs, economic efficiency, and market structure.

ECO202 - Principles of Macroeconomics

This course is an introduction to the study of the economy as a whole. Important topics include the determination of national income, the problems of inflation and unemployment, international trade, and economic growth. Simple models used to study the macroeconomy will be introduced and used to study changes in key variables. Emphasis is placed on the roles of monetary and fiscal policy in the conduct of macroeconomic policy.

ECO301 - Intermediate Microeconomics

The purpose of this course is to develop the analytical skills required for dealing with problems of economic behavior and resource allocation, along with an appreciation of the methodological issues involved in modern economic analysis. It covers the traditional body of microeconomic theory, including: utility theory and consumer behavior, the analysis of production and the behavior of the firm, coordination in product and factor markets under

Course Descriptions

perfect competition, and (time permitting) the impact on market operations of monopoly, imperfect competition, externalities, asymmetric information, and public goods.

ECO302 - Intermediate Macroeconomics

This course further explores the theories of economic growth, unemployment, inflation, and business cycles, and traces the evolution of macroeconomic thought from Keynes to the modern day. A particular emphasis will be placed on the key features of modern macroeconomic theory and the conduct of fiscal and monetary policy.

ECO304 - Money and Banking

This course discusses the relationship of money and credit to economic activity and prices as well as the impact of public policy in financial markets and the markets for goods and services. The policies, structure and functions of the Federal Reserve System, and the organization, operations and functions of the commercial banking system, as related to questions of economic stability and public policy, are also covered.

ECO308 - Public Finance

This course studies the role of federal, state and local governments in the economy. Topics include the role of government in society and markets, tax theory and policy, government expenditures, public debt management, cost-benefit analysis, income redistribution, and the economics of voting and politics (public choice theory).

ECO315 - Health Economics

This course explores the application of economic principles and models to various topics in the areas of health, insurance, and health policy. How do we "produce" health? How is health economics different from other areas of economics? The course will examine the role of market failures and government interventions in the market for health insurance and the provision of social insurance.

ECO331 - Urban Economics

This course introduces students to regional economic analysis: theories of city locations and hierarchies, industrial location patterns, land-use patterns, the short-run impact of industrial change upon employment in one community and on long-run differentials of per capita income between regions. This first part of the course focuses on the determinants of location of economic activity within and between urban areas. Topics include comparative advantage and regions, urbanization and economic growth in the US, and the theoretical analysis of regional structure. The second part of the course uses economic analysis to examine problems of special interest to regions/urban areas. Topics may include the economics of poverty, housing markets, racial discrimination and segregation, transportation systems, local economic development, and local public finance.

ECO360 - International Economics

This course provides a non-technical yet rigorous examination of the causes and effects of the international flows of goods, services, labor, and (investment) capital. Also examined is the impact of government policies on these flows and the institutions that have been established to regulate international trade and finance, including the World Trade Organization and the International Monetary Fund. Key topics include: the role of comparative advantage, factor endowments, scale economies, and imperfect competition in international trade; the welfare effects of international trade: who wins and who loses; the economic impact of trade policy (tariffs, quotas and other trade measures); the balance of payments and the causes and effects of trade imbalances; the foreign exchange markets; and regional trading arrangements such as NAFTA and the European Union.

ECO402 - Games and Behavior

Game theory is the study of how individuals make a decision when they are aware that their actions affect others and each decision maker takes this "strategic effect" into account. This course provides a concise, yet rigorous, introduction to game theory and its applications drawn from a variety of disciplines, primarily driven by student interest. Consideration is given to both empirical and experimental tests of game theoretic predictions.

ECO421 - Applied Econometrics

This course explores the formulation, estimation and testing of empirical models in economics and the social sciences. The focus of the course is on the use multiple regression analysis in the estimation and testing of causal relationship. Topics include appropriate model construction including variable selection and functional form, the use of dummy variables and panel data, the assumptions of the Classical model and the problems of multicollinearity, heteroskedasticity and autocorrelation. The class involves both lectures and hands on practice/labs. A significant part of the course is an independent research project utilizing the techniques discussed in the course.

ECO460 - Global Economic Perspectives

This course focuses on an understanding of the global economy in an era of shifting borders, restructuring economies, and regional realignments. Emphasis is placed on the strategic implications for businesses of globalization, analyzing public policy options regarding current international economic issues and on collecting and interpreting international economic data. Students will also be introduced to the roles of various international organizations and the different economic systems, cultural, legal, political, environmental, and social contexts in which businesses operate in different countries.

ECO492 - Economics Internship

The student is placed with a business firm, bank, industrial firm, government office, healthcare facility or similar institution for on-the-job experiences related to classroom coursework. This course should be taken quite late in the undergraduate career. Credit-hours will range from 1 to 12 depending on the nature of the particular assignment.

EDF-Educational Foundations

EDF333 - Educational Technology

This course provides the learner with fundamental concepts and skills that build a foundation for applying computer hardware and software in educational settings. The course focuses on the computer as an object of instruction, a productivity tool and an adjunct to instruction in the classroom.

EDU-College of Education

EDU101 - ESL Intermediate Listening & Speaking

This course is designed to build the oral English skills of non-native speakers of English in order to prepare for academic work in English. This is an intermediate level listening and speaking course and includes practice in group interaction, public speaking and listening comprehension for academic purposes. This course will help students expand their vocabulary and knowledge of language usage in a variety of everyday and classroom situations. NOTE: This course is not a substitute for a Public Speaking course. This course can be repeated for credit.

EDU102 - ESL Intermediate English Reading & Writing

This course is designed to build the English reading and writing skills of non-native speakers of English to prepare for academic work in English. This course is an intermediate level reading and writing course. This course will help students develop into active, fluent readers in the English language for academic purposes. Students will learn and utilize reading comprehension strategies geared toward second language learners to enhance vocabulary knowledge as well as reading fluency and comprehension. Students will read academic texts to search for main ideas and details, read diagrams and charts, and other text structures that will enable them to learn academic content effectively while they are learning English. Students will also learn to write grammatically correct sentences, basic paragraphs, short essays, and respond to academic readings in writing. NOTE: This

Course Descriptions

course is not a substitute for ENG 100, ENG 101, or ENG 102 nor does it supplant the English placement examination. This course can be repeated for credit.

EDU210 - Critical Thinking and Reading

This course exposes students to in-depth readings and well-chosen oppositional readings to help them develop intellectually and ethically by recognizing competing arguments and making a reasoned, context-appropriate commitment to one position. Some of the oppositional readings include artists' statements, criticisms, biographies, web-based essays, peer-reviewed journal articles, and book chapters. These authentic authorial voices engage students in thinking through competing perspectives on an issue. Students will practice critical thinking and reading in order to: reconsider and revise views where honest reflection suggests that change is warranted and face their own biases, prejudices, stereotypes, or egocentric tendencies. When students believe that their efforts are contributing significantly to their learning, learning becomes its own motivation.

EDU310 - Teaching in a Multicultural Society

Teaching in a Multicultural Society is a course designed to develop intergroup-interpersonal awareness to promote the better understanding of the different sexes, religious beliefs, national origins, and the socioeconomic backgrounds found in our multicultural society. The emphasis is on developing the awareness, knowledge skills, and competencies needed for positive human relationships. No Field Experience Required

EDU333 - Technology in Teaching and Learning

This course is designed to provide the learner with fundamental knowledge, skills and concepts for applying technology in the P-12 educational setting. The course focuses on current technologies (such as computers, mobile devices, and online tools) and how to effectively incorporate them into the instructional setting. The class emphasizes building knowledge, increasing technological skills, understanding best practices and application of learning in an educational setting.

EDU335 - Teaching in an Online Environment

This course is designed to provide teacher education majors and others who may teach or train with online instruction the necessary skills, knowledge, and literature background to be able to construct online instruction using a Course Management System (CMS). While this is a teacher education course, it is also a technology in teaching course which can be useful to any person attempting to instruct/train online. The course requires an understanding of basic learning approaches, basic computer technology skills, and experience as a learner using a CMS.

EDU350 - Supporting English Language Learners

This course examines research-based English Language Learner (ELL) teaching and learning methods in K-12 mainstream classrooms. The major theories of second language acquisition will be reviewed and their implications for the second language classroom will be discussed. The primary goals of this course are (a) to familiarize teacher candidates with major theoretical issues and research-based methods in second language learning in formal and informal situations; (b) to provide teacher candidates with opportunities to develop communication strategies that will support their students learning; (c) to assist teacher candidates in becoming skillful at making appropriate teaching decisions that will nurture language learning among culturally and linguistically diverse students, in order to promote and increase academic achievement in the classrooms.

EDU375 - Introduction to Integrative STEM Education

This course is designed to provide the candidate with an understanding of integrated STEM education as well as effective instructional strategies for teaching STEM in K-12 classrooms. The course provides an introduction to the fundamentals of STEM disciplines and the strategies used to implement integrative STEM education. Candidates will review basic fundamental concepts of STEM disciplines (science, mathematics, engineering, and technology), effective STEM pedagogy and teaching strategies, integrative STEM learning, and innovative problem-based instruction utilizing the engineering and design process. Candidates will participate in hands-on

Course Descriptions

laboratory and research-based activities as they engage in engineering design challenges intended to provide candidates with an opportunity to work individually and in collaborative groups to utilize skills of scientific inquiry and problem-solving to design, test, analyze, and evaluate STEM-related processes and products. Candidates will utilize the design process, computational thinking, critical thinking, and problem solving to engage in design challenges and will then communicate the results of the engineering and design process through a variety of formats (i.e., lab reports, multimedia presentations, design briefs, etc.).

EET-Electronic Eng Technology

EET110 - Electrical Circuits I

Circuits I is an introductory course into DC and AC circuit analysis suitable for entry level engineering technology students and technology students. The course focus is developing a basic understanding of voltage, current resistance and reactance in basic circuits. Topics include resistance, voltage, current, series, parallel and series-parallel circuits.

EET160 - Electrical Circuits II

An introduction to the study of electrical circuits in the sinusoidal steady state. Topics include capacitors, inductors, complex numbers, AC mesh analysis AC nodal analysis, and network theorems pertaining to AC sources.

EET210 - Linear Electronics I

A study of solid state semiconductor devices including diodes and transistors, and their application in electronic circuits. Topics include diode and transistor structure and characteristics, design parameters for electronic circuit application, typical power conditioning circuits, and typical amplifier circuits. The laboratory component reinforces

Course Descriptions

course content by applying scientific calculator and circuit analysis/simulation software skills to the derivation and analysis of circuit experiments.

EET215 - Introduction to Instrumentation

An introduction to the techniques of designing electronic instruments to measure physical quantities with the aid of transducers. Topics include analog and digital signal conditioning circuits, electronic filters, and various electronic sensors. Circuits will be designed and tested from mathematical models in order to transfer signals to either an analog or a digital format.

EET310 - Methods in Engineering Analysis

Introduction to matrix theory, classical first and second order transient analysis, active filter design and basic Z- and Fourier-transforms.

EET320 - Network Analysis

A calculus-based circuit theory course. Topics include the introduction to Laplace transforms and the use of Laplace transforms in the study of circuit analysis, transfer functions and frequency response. Circuit analysis programming is used to compare computer solutions with analytic solutions.

EET325 - Introduction to Electric Power

A study of three-phase circuits, transformers, DC machines, polyphase AC machines and single-phase AC machines.

EET365 - Linear Electronics II

This course is an introduction to the function of solid state devices. The emphasis is placed on the internal structure, function and limitations of linear devices such as diodes, transistors, power amplifiers, operational amplifiers and oscillators.

EET370 - Instrumentation Design I

A computer-based graphical programming environment for instrumentation design, control and testing. Mathematical models will be developed to design applications. The course offers students concepts of current industry trends in instrumentation, testing and control. A course project is developed to implement a practical instrumentation system.

EET400 - Senior Project Proposal

This senior course provides the student with an opportunity to integrate several concepts of different areas of the program and it allows him/her to pursue specialized interests. The student will submit a written proposal for a project. After approval of the project the student will be assigned a faculty advisor. Minimum requirements for the proposal are submission of a functional specification and time schedule for completion.

EET410 - Automatic Control Systems

This course covers theory and practice of control systems with emphasis on classical control theory and an introduction to the fundamentals of modern control. Students will analyze, design and synthesize continuous feedback control systems based on root locus, frequency response and state space methods. Students will become familiar with the analytical techniques and will be exposed extensively to the use of computers for analysis and design of control systems. Various control strategies will be discussed.

EET425 - Power System Analysis

A concise study of classic and modern topics related to the operation of power systems. Subjects covered in this course include analysis of steady state balanced 3-phase systems, transmission lines, power flow, system protection and controls. The laboratory component is mostly software based. Simulations of basic to advanced configurations will help the students investigate all the basic theoretical concepts.

EET426 - Power System Management

A study of various topics related to generation, transmission, distribution, and use of electric energy. The course references traditional (fossil fuels, hydro, nuclear) as well as renewable energy sources and covers subjects in power station management and electric energy market structure.

EET430 - RF Communications

Communication systems principles, including AM/FM modulation, AM/FM demodulation, transmitters, receivers, antennas, transmission lines, digital techniques and protocols.

EET450 - Senior Project

Employs the design, construction and analysis of an electronic device or instrument. Depending on the complexity of the project, total construction may not be required. With approval from the adviser, group projects may also be involved.

EET460 - Digital Signal Processing

Introduction to linear systems, digital filters and the Z-Transforms, and the Fast Fourier Transform. Fundamentals of Shannon's sampling theory and the interfacing of analog signals to microprocessor based systems for digital signal processing.

EET485 - Special Topics in EET

This course allows current topics in electrical engineering technology to be offered in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic; however, they are appropriate to a senior-level course. The course topic depends upon current trends in electrical engineering technology, interests of the student, and the instructor. This course is repeatable.

EET495 - EET Internship

Upon acceptance to an internship site, the student will work with an electrical engineer and/or an electronic technician inspecting, maintaining, calibrating, testing, analyzing, assembling, modifying or designing various types of electronic devices. Programs of instruction will vary, but the student will be provided with practical work experience in a dynamic environment in which they will be dealing with actual problems requiring practical solutions.

ELE-PreK thru Grade 4 Educ

ELE220 - Instruction and Assessment in Pre-K Settings

This course is designed to provide teacher candidates with in-depth instruction and authentic experience in developing curricula, which is multi-disciplinary and multidimensional. In this course teacher candidates will examine appropriate curriculum and assessment for pre-school children. They will examine young children's approaches to learning and effective teaching that enhances learning. The focus will be on planning, teaching and assessing key experiences that promote children's learning and development across all domains. Candidates will also gain experience in early childhood environmental design. Through hands-on experiential learning, candidates will construct an in-depth understanding of Pre K teaching and learning, including a variety of curricular approaches, the role of the learning environment, and the socially situated, play-based early learning that is developmentally, culturally and individually appropriate for the youngest learners.

ELE221 - Instruction and Assessment K-4

This course is designed to provide teacher candidates with the knowledge, skills, and dispositions necessary to create developmentally appropriate instruction and assessment activities for children in K through grade 4 classrooms. Topics covered include K through grade 4 curriculum models, developmentally appropriate practices, lesson planning, writing objectives, constructivist instructional strategies and assessment of student learning. Through class discussions, practice sessions, role-playing and microteaching, the teacher candidates will learn how to plan for and utilize strategies based on research in effective teaching, Pennsylvania Department of Education Academic Standards and standards set forth by the National Association for the Education of Young Children.

ELE300 - Emerging Literacy

The purpose of this course is to prepare early childhood teacher candidates to become facilitators of early language and literacy learning. The candidates will gain critical content knowledge in language acquisition as the basis for literacy development. The content of this class deals with concepts of emerging literacy and supports candidates to acquire strategies for developing high-quality, meaningful language and literacy experiences for young children from infancy through the first grade. This course will give candidates practicum experience as they design and implement literacy bags and conduct a case study with an individual young learner. In this study candidates will research appropriate practice and examine literacy development, assessment, and design/implementation of appropriate language and literacy learning activities.

ELE301 - Literacy Foundations I: Language Arts

In this course, teacher candidates learn how to teach reading writing, listening, speaking, viewing, and visually representing skills. In particular, course objectives focus on writing development and implementation in of emergent and early writing strategies and materials, using developmentally appropriate techniques that are professionally compatible with current research and practice. Theoretical orientations to literacy instruction,

Course Descriptions

with a focus on writing, are introduced, analyzed, and evaluated. Best-practices that are aligned with these theories are examined in detail, and candidates are expected to demonstrate strategies through the use of lesson planning, presentations, and teaching in the field. Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to support the English language arts, and in particular, writing skills, to preschool and early elementary children in a variety of classroom settings. The course is standards-based, supported by the Pennsylvania Department of Framework for Grades Prek-4, as well as the National Association for the Education of Young Children (NAEYC), and the Interstate Teacher Assessment and Support Consortium (InTASC).

ELE302 - Literacy Foundations II: Reading

This course is designed to build upon a scientific reading research base to develop the practice of teaching literacy to young children from preschool through grade four. Teaching strategies are based on theoretical orientations of emerging literacy; in which children's development from birth to preschool contribute to their literacy abilities. Candidates learn research-based best practices that cultivate early literacy development so that young children through grade four develop skill in phonemic awareness, phonics, vocabulary, comprehension, and fluency. Candidates learn how to assess, make instructional decisions, and provide interventions that will meet the needs of a diverse classroom population. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, as well as the International Reading Association (IRA), the National Association for the Education of Young Children (NAEYC), and the Interstate Teacher Assessment and Support Consortium (InTASC). Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to support early literacy and to teach early literacy skills to preschool and early elementary children in a variety of classroom settings. In the required performance assessment project, candidates plan and implement a guided reading lesson in a K-4 classroom.

ELE310 - Teaching Pre K STEAM

The teacher candidate is introduced to how science, technology, engineering, creative arts, and mathematics (STEAM) skills develop in children between infancy and age 5 and how to support and assess this development. The candidate will research, plan, and lead small group STEAM activities with children in pre K settings. These activities will be planned according to the Project Approach, based on the interests of the young children as well as the National STEM and Creative Arts Standards, NAEYC Standards and PA Early Learning Standards. The Project Approach involves 3 phases: Discovery, Investigation, and Conclusion; candidates will gain experience in using this cross-curricular approach to contextualize STEAM concepts and to create meaningful learning experiences for their young students. Additionally, this course views children as individuals who are socially and culturally situated, and as such identity and culture will be valued and included as part of the instructional planning, activities, and assessment.

ELE311 - Teaching Mathematics K-4

This course will allow students to develop the understanding, knowledge, and skills necessary to teach mathematics to young children. Students will become proficient in the problem-solving process and will come to understand mathematical reasoning in order to teach problem-solving and mathematical reasoning to young children. Lastly, students will plan, implement, and reflect on standards-based mathematics lessons which will be taught to young children in a local elementary school.

ELE321 - Teaching Children Science: Grades K-4

This course provides teacher candidates the science education knowledge, skills and dispositions expected of beginning elementary/early childhood teachers in self-contained classrooms. The course provides an overview of the nature of science, scientific inquiry and focuses on science process skill teaching strategies. Candidates learn and practice science teaching skills such as: creating a classroom environment conducive to scientific inquiry, designing science instruction, assessing student attainment of academic standards, and using the local

Course Descriptions

community as a location and topic of classroom science instruction. The course assignments introduce students to the professional community of science education professionals and resources. Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to teach in a variety of educational contexts.

ELE331 - Teaching Social Studies K-4

This course is designed to build upon a scientific base to the practice of teaching social studies to children from preschool through grade four. The foundations of the social studies are examined with an emphasis on the standards and themes sanctioned by the National Council of Social Studies. Candidates learn research-based best practices that promote the two main goals of the social studies; social understanding and civic awareness. Instructional strategies and resources for the constructivist social studies classroom will be discussed and demonstrated. Attention will be given to current trends and the present status of elementary social studies. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, as well as the National Council for Social Studies (NCSS), the National Association for the Education of Young Children (NAEYC), and the Interstate New Teacher Assessment and Support Consortium (INTASC). Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to support social understanding and civic awareness to preschool and early elementary children in a variety of classroom settings.

ELE410 - Pre-K-4 Field Experience

This course is designed to provide candidates with practical experiences in two settings: An early childcare center (e.g., daycare, Headstart, nursery school, or Prek setting), as well as a K-4 early 6 elementary classroom. Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of mentor teachers in the two Prek-4 settings. Current teaching technology and strategies to meet the needs of children in preschool and early elementary school settings will be researched,

Course Descriptions

observed and discussed. Developmentally appropriate, best-practices for teaching young children are emphasized in the following areas: Planning and preparation, classroom environment, instructional delivery, assessment, and meeting the needs of diverse learners. Students will complete a mini-action research project, in which they assess learners to identify areas of need, plan and implement developmentally appropriate interventions, and use age-appropriate assessments to determine impact on student learning. University classroom seminars and field classroom teaching experiences are combined to give candidates an opportunity to discover their aptitude and interest in working with Pre-K-4 school children.

ELE411 - Field Experience K-4

This course is designed to provide students with practical experiences in a K-4 classroom. Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in K-4 elementary classroom. Current teaching technology and strategies to meet the needs of children in grades K-4 will be researched, observed and discussed. Students will complete a mini-action research project, in which they assess learners in a K-4 classroom to identify areas of need, plan and implement developmentally appropriate interventions, and use age appropriate assessments to determine impact on student learning. University classroom seminars and field classroom teaching experiences are combined to give students an opportunity to discover their aptitude and interest in working with K-4 school children.

ELE461 - Student Teaching and School Law (Pre K-4)

This course is the capstone experience in CALU's teacher education program. Teacher candidates engage in a fifteen-week placement in a PreK-4 classroom with increasing levels of responsibility for planning, classroom environment, instructional delivery including diverse learners, and assessment while maintaining high levels of professional conduct. Teacher candidates complete an action research project where they will determine a target group of students, consult the literature, analyze student-learning data, create instructional plans, and reflect

Course Descriptions

on impact on student learning. In addition, teacher candidates participate in practicum sessions that focus on research-based strategies.

ELE721 - Teaching & Assessing Students' Science Learning

This course provides teacher candidates at the graduate level opportunities to acquire the science education knowledge, skills and dispositions expected of beginning early childhood teachers in self-contained classrooms. The course provides an overview of the nature of science, scientific inquiry and focuses on science process skill teaching strategies. Candidates learn and practice science teaching skills such as: creating a classroom environment conducive to scientific inquiry, designing science instruction, assessing student attainment of academic standards, and using the local community as a location and topic of classroom science instruction. The course assignments introduce students to the professional community of science education professionals and resources. Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to teach in a variety of educational contexts.

ELM-Grades 4 thru 8 Education

ELM200 - Introduction to Middle Level Education (Grades 4 to 8)

This course is an introductory overview course in which teacher candidates are exposed to many topics that they will explore in depth in future specialization courses for the program. In the course, students will gain first-hand experiences with professional behaviors expected of middle level teachers. Thirty hours of field experiences are required, fulfilling the initial field requirement of the Early, Middle, and Special Education department. Course objectives, course outline, and the performance assessments reflect the ten standards for beginning teachers' licensing and development, written by the Interstate New Teacher Assessment and Support Consortium (INTASC), as well as the seven standards of the Association for Middle Level Education (AMLE).

ELM220 - Instruction and Assessment in Grades 4-8

This course is designed to provide teacher candidates with the theoretical and practical background necessary to develop instruction and assessment activities that meet Pennsylvania Department of Education Academic Standards as well as the standards set forth by the Association for Middle Level Education. This course includes topics such as developmentally appropriate practices, grade 4-8 curriculum models, constructivist instructional strategies, and assessment of student learning. Through various teaching and learning methodologies, teacher candidates will learn how to plan for and utilize strategies based on evidence-based research. Planning for instruction will be evidenced through development of lessons and/or unit plans, which reflect utility in inclusive and diverse settings.

ELM301 - Reading Methods, Assessments, and Interventions (Grades 4-8)

This course is designed to build upon a scientific base to the practice of teaching literacy to middle level students from grades four to eight, with an emphasis on comprehending a variety of texts in the content areas. Teaching strategies are based on theoretical and research-based assumptions that readers construct meaning as they decode, using what they know about print and the world to understand written text. Candidates learn how to assess, make instructional decisions, and provide interventions that will meet the needs of a diverse classroom population. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, as well as the International Reading Association (IRA), the Association for Childhood Education International (ACEI), the Interstate New Teacher Assessment Consortium (INTASC), and the National Middle School Association. Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to teach literacy to middle school children in a variety of classroom settings.

ELM302 - Language Arts: Methods, Assessments, and Interventions

This is one of two courses that examine the development of literacy in children and adolescents from grades 4-8. Candidates are taught how to develop reading writing, listening, speaking and visually representing skills, with an emphasis on the development of writing skills, using an integrated approach that includes a wide variety of literature, as advocated by the Association for Middle Level Education, and consistent with the constructivist theory of teaching and learning. Theoretical orientations to literacy instruction, with a focus on writing, are introduced, analyzed, and evaluated. Practical implications of these theories are examined in detail, and students are expected to demonstrate strategies through the use of formal and informal assessment, lesson planning, presentations, and mini lessons. A performance assessment project that includes a field experience will be required.

ELM311 - Math Methods Assessment and Interventions

This course will allow students to develop the understanding, knowledge, and skills necessary to teach mathematics to young adolescents. Students will become proficient in the problem-solving process and will come to understand mathematical reasoning in order to teach problem-solving and mathematical reasoning to young adolescents. Lastly, students will plan, implement, and reflect on standards-based mathematics lessons which will be taught to young adolescents in a local middle school.

ELM321 - Teaching Children Science: Grades 4-8

This course provides teacher candidates with the science education knowledge, skills and dispositions expected of beginning Grade 4-8 teachers in discipline specific classrooms. The course provides an overview of the nature of science, scientific inquiry and focuses on science process skill teaching strategies. Candidates learn and practice science teaching skills such as: creating a classroom environment conducive to scientific inquiry, designing science instruction, assessing student attainment of academic standards, and using the local

Course Descriptions

community as a location and topic of classroom science instruction. The course assignments introduce students to the professional community of science education professionals and resources. Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to teach in a variety of educational contexts.

ELM331 - Social Studies Assessment and Interventions

This course is designed to build upon a scientific base to the practice of teaching social studies to children from fourth to eighth grade. The foundations of the social studies are examined with an emphasis on the standards and themes sanctioned by the National Council of Social Studies. Candidates learn research-based best practices that promote the two main goals of the social studies; social understanding and civic awareness. Instructional strategies and resources for the constructivist social studies classroom will be discussed and demonstrated. Attention will be given to current trends and the present status of elementary social studies. The course is standards-based, supported by the Pennsylvania Department of Education standards for teacher preparation, as well as the National Council for Social Studies (NCSS), the Association for Middle Level Education, and the Interstate New Teacher Assessment and Support Consortium (INTASC). Teacher candidates participate in university classroom and field experiences that provide them with the knowledge, pedagogy, and dispositions needed to support social understanding and civic awareness to middle school students.

ELM360 - Environment, Ecology and Nature-Study Education

This course explores educational strategies, practices and ethics for use when teaching people about the environment, ecology, and natural history of their local community. Course activities examine the complex relationship between humans and their environment from multiple perspectives. Historical, current and research-based approaches to public school student and citizen education provide the focus for an in-depth examination of the individual's role in contributing to the health, sustainability and mutual dependence between natural communities and human communities.

ELM411 - Field Experience 4-6

The candidate receives background and experience in working with children in grades 4 through 6 through on-site field experience in a public school classroom. Each candidate will work with a school-based mentor teacher while also concurrently participating in campus-based seminar sessions. These combined experiences will provide candidates with multiple opportunities to further explore instructional strategies as they develop and teach formal lessons and conduct an individual case study of a young adolescent's instructional needs.

ELM412 - Field Experience 7 – 8

The candidate receives background and experience in working with children in grades 7 through 8 in the classroom setting. University classroom and school-based classroom teaching experiences are combined to give the candidate an opportunity to expand upon their knowledge base and apply methods that they have learned in university methods courses.

ELM415 - Middle Level Field Experience

This course is designed to provide students with practical experiences in a classroom in the middle school (grades 4-8). Pennsylvania Department of Education Field competencies, Level 3, provide the objectives of this course. Students are required to complete these competencies with 30-45 hours of observation and teaching under the guidance and observation of a mentor teacher in a Grades 4-8 classroom. Current teaching technology and strategies to meet the needs of young adolescents in Grades 4-8 will be researched, observed and discussed. Students will complete an Impact on Learning research project, in which they assess learners in a Grades 4-8 classroom.

ELM461 - Student Teaching and School Law (Grades 4-8)

This course is the capstone experience in CALU's teacher education program. Teacher candidates engage in a fifteen-week placement in a 4-8 classroom with increasing levels of responsibility for planning, classroom

Course Descriptions

environment, instructional delivery including diverse learners, and assessment while maintaining high levels of professional conduct. Teacher candidates complete an action research project where they will determine a target group of students, consult the literature, analyze student-learning data, create instructional plans, and reflect on impact on student learning. In addition, teacher candidates participate in practicum sessions that focus on research-based strategies.

ENG-English

ENG100 - English Language Skills

This beginning course provides guided practice in writing and reading, with emphasis on the interrelationship of reading, thinking and writing. English Language Skills stresses fundamental principles of and attitudes toward writing, as well as how to put these principles and attitudes into practice. It emphasizes the ability to read correctly and to organize material effectively and, by adherence to the innate logic of language (revealed in its rules of grammar, syntax, punctuation and vocabulary choice), to express ideas clearly and precisely.

ENG101 - Composition I

Composition I is a sequel to English Language Skills. It provides guided practice in writing, with emphasis on thoughtful analysis of subject matter, clear understanding of the writing situation, flexible use of rhetorical strategies and development of stylistic options, particularly those related to an understanding of a variety of purposes and voices. ENG 101 continues the development of the essential writing, reading and thinking skills stressed in ENG 100.

ENG102 - Composition II

The sequence of Composition I – Composition II provides guided practice in writing, with an emphasis on more demanding writing situations. It continues the work begun in Composition I with more complicated rhetorical

Course Descriptions

strategies and stylistic options, especially audience-centered considerations. ENG 102 introduces research and research writing at the undergraduate level.

ENG106 - Introduction to Poetry

An introduction to the elements of poetry, this course emphasizes close analysis and explication of selected poetry from a variety of poets.

ENG107 - Introduction to Fiction

An introduction to the elements of fiction, this course focuses on the close reading of selected short stories and novels by a variety of authors.

ENG108 - Introduction to Drama

This introduction to the basic elements of drama focuses on readings selected from works from the Greek Classical period to the Modern Age.

ENG110 - Introduction to Creative Writing

Introduction to Creative Writing presents creative writing as a process of creation, revision, expansion, transformation, and engagement, introducing the student writer to many of the elements of the craft of writing in the genres of fiction, drama, creative nonfiction, and poetry.

ENG112 - Myth, Magic, & Mysticism

The course is a study of the four basic paths into the unknown: magic, mysticism, fantasy and myth.

ENG127 - Woman as Hero

The course explores heroic roles assigned to women in literature, the contrast between reality and the literature, and the differences between fictional women created by male and female authors. An analysis of the reasons for these differences forms part of the subject.

ENG135 - Re-Reading Harry Potter

In Re-Reading Harry Potter, we will explore the literature that helped shape the Harry Potter series created by J.K. Rowling with the intention of better understanding her writing process and the imaginative world she has developed. We will also explore the larger socio-cultural themes that dominate her books, including racism, sexism, classism, and others social constructs and behaviors. In addition, students will be encouraged to think critically about their own responses to the series and how they have changed over time.

ENG136 - Women's Memoirs

In this course, we will critically read and analyze memoirs written by women with the objective of better understanding the main characteristics of the genre. We will also explore the larger socio-cultural themes that dominate the memoirs and the cultures and time periods in which they are written, including racism, sexism, classism, and others. In addition, students will be encouraged to think critically about their own responses to the assigned literature.

ENG137 - Northern Appalachian Literature

In Northern Appalachian Literature, we will critically read and analyze literature written by people from the northern Appalachian region of the United States with the objective of better understanding the culture of the area. We will also explore the larger socio-cultural themes that dominate this literature, including racism, sexism, classism, and other social constructs. In addition, students will be encouraged to think critically about their own responses to the assigned literature.

ENG148 - Horror in Literature

An examination of the tradition of horror literature in England and America from a literary, historical and psychological viewpoint, the course also emphasizes the sociological implications of the popularity of the form.

ENG150 - Baseball in Literature

This course requires the student to read, write and talk about a game that Steinbeck called a "state of mind," a game that is, in the words of Jacques Barzun, a way "to know America." Thus, students who work learn about both themselves and their country.

ENG152 - The Lord of the Rings

This course explores J.R.R. Tolkien's Lord of the Rings trilogy in light of its Medieval, Victorian, and early 20th century influences, as well as Tolkien's influence on popular culture in the present day.

ENG155 - Introduction to African American Literature

This course introduces a variety of African American texts that represent African American life, culture, and history. Students work with African American non-fiction, fiction, drama, and poetry to cultivate a deeper understanding of the diverse literatures and experiences of African Americans and their relations with other American populations. The study surveys texts from the colonial period to contemporary times and analyzes them in historical, cultural, and critical contexts.

ENG156 - Introduction to Native American Literature

This course introduces a variety of Native American texts that represent Native people, culture, and history. Students work with traditional Native forms as well as fiction, drama, and poetry to cultivate a deeper understanding of the diverse literatures and cultures of Native peoples and their relations with immigrant

Course Descriptions

populations of the Americas. The study surveys texts from pre-Columbian to contemporary times and analyzes them in social, historical, cultural, and critical contexts.

ENG178 - Literature and Film

A study of the relationship between literature and film and the artistic and technical processes of translating from one medium to the other. The course also investigates the influence of motion pictures on literary critics and writers.

ENG179 - Introduction to the Animated Film

This course provides a historical and international survey of the animated film from the late nineteenth century to the present day, emphasizing the unique characteristics of the medium across a wide range of cultures. The ways in which animation functions as both a global language while at the same time retaining specific cultural characteristics will also be explored. While this is not a production course, aspects of production and reception will both be covered.

ENG180 - Literature and Natural Environments

This course surveys fiction, poetry, drama, and nonfiction that represent humanity's relationship with Earth and nature. The course will investigate the evolution of the concept of the "natural" and the development of a variety of perspectives that inform writing about Earth and natural environments, such as utilitarian, pastoral, romantic, conservation, transcendental, naturalistic, and ecological, with particularly emphasis on the latter.

ENG181 - Cultures of American Humor

This course analyzes diverse American humorous texts in theoretical, social, cultural, and historical contexts. Students will survey a variety of textual forms—fiction, nonfiction, film, TV, stand-up, graphic texts, and so on—

Course Descriptions

to ascertain what humor is, how it functions, and how it critiques the complexities of America's diverse social and cultural history.

ENG203 - Great Books

The texts and historical backgrounds of selections from the most highly regarded literature of the world are studied. The range is from the Classical Greek era to the 20th century.

ENG211 - Business Writing

The course is an introduction to the analysis, writing and oral presentation of formal and semiformal documents essential to the business communities.

ENG217 - Scientific and Technical Writing

This is a writing course that introduces students to the style, tone, techniques and formats used in scientific and technical documents and reports. Using interactive teaching strategies, students plan, structure, write, and evaluate a variety of scientific and technical papers and reports for multiple audiences.

ENG301 - British Literature I

The course is a survey of English literature from the beginnings in the sixth century to the late 18th century.

ENG302 - British Literature II

This course is a survey of English literature from the Romantic poets to the present day.

ENG306 - Press Law and Media Ethics

This course helps student journalists understand not only what they can and cannot do by law, but what they should and should not do within commonly accepted standards of good taste and morality.

ENG308 - Research for Writers

For students in each of the professional writing concentrations, this course introduces students to basic library materials and techniques, on-campus resources, government documents, research libraries, advanced techniques of interviewing, document analysis, etc., and concludes with a pre-publication draft of a researched paper in the student's area of specialization.

ENG312 - Journalism III, Editing

This course emphasizes practical journalism. Journalism III teaches students how to edit and prepare materials for publication. Professional editing procedures are covered, ranging from rewriting, editing and proofreading to headline writing, layout and design.

ENG315 - Survey of American Women Writers

The importance of both text and method in the study of American women writers is emphasized in this course. Assigned readings and research workshops introduce students to a variety of texts and sources as well as methods for reading, discovering and interpreting writings. Integration of text and method is achieved through a series of writing and research projects that are tied to the assigned readings.

ENG320 - Multimedia Journalism

Multimedia journalism is a class that asks students to examine critically and evaluate how journalism is evolving because of multimedia and to learn through hands-on projects how to create multimedia journalism.

ENG325 - World Literature to 1600

Examples of works from a variety of periods and cultures through 1600 are examined for their literary merit and national characters. Works are read in translation.

ENG326 - World Literature from 1600

Examples of works from a variety of periods and cultures after 1600 are examined for their literary merit and national characters. Works are read in translation.

ENG334 - Reporting

ENG 334 is a professional-level course that introduces students to basic newsroom procedures and assignments.

ENG337 - Survey of American Literature I (to 1865)

A writing intensive course, American Literature I surveys canonical authors and works from pre-Columbian Native America to the American Civil War, studying writers, genres, and narrative forms that have contributed to America's diverse literary and cultural history.

ENG338 - Survey of American Literature II

The second course of the two-course survey begins with the literature of the Reconstruction period, Realism and later Naturalism and moves to the experimental writing of the 20th and 21st centuries, culminating in works by contemporary authors. The emphasis is on showing the development of an eclectic and uniquely American literature.

ENG345 - English Grammar and Usage

This course provides future English teachers, writing majors and other interested students with a sophisticated background in English grammar. The course covers a variety of grammatical theories, issues of mechanical correctness in writing and the sociology of usage.

ENG346 - History of the English Language

This course surveys the development of the language from its Germanic base to the emergence of American English. Explanations of sound shifts and foreign and social influences are covered.

ENG347 - Introduction to Linguistics

This course examines the several areas of language study: history of the language, phonology and morphology, grammars (traditional and modern), and contemporary American usage, dialects, lexicography and semantics.

ENG350 - Journalism Genres

Special Topics in Journalism Genres is a repeatable theoretical and hands-on course, in which students study one of the following genres: editorials and commentary, arts and entertainment reporting and criticism, public affairs reporting and analysis, environmental reporting and analysis, health and fitness reporting and analysis, technology reporting and analysis, or consumer and business reporting and analysis, or other genres. Students will read journalism articles in the genre, as well as report and write stories in that genre.

ENG351 - Publishing the Magazine

Students in this course publish a magazine, "The Inkwell." They contribute works of literature and photographs, edit the pieces, establish editorial policy and publish the magazine.

ENG352 - Studies in Writing

This course is a study in style, its definition, its analysis, and the techniques modern writers of creative nonfiction use to achieve it. Students analyze the work of such writers as Tom Wolfe, Joan Didion, Hunter Thompson and Truman Capote, then apply to their own prose the techniques these writers use.

ENG354 - Media History

A critical exploration of how American journalism evolved from colonial times to the present, analyzing the roles that political, philosophical, social, technological and economic forces play in the evolution of the media, particularly print and online media, and how the media, in turn, influence society.

ENG355 - Survey of African American Literature

This course introduces students to literary texts by and/or about African Americans and their experience over several centuries. The course features the significant literary contributions of African Americans to America's diverse cultural history. The course will also include several critical approaches to the analysis of this literature.

ENG367 - Journalism – News Writing

This course is an introduction to basic news gathering and news writing taught by in-class exercises early in the semester, followed by weekly assignments that require submission to the Cal Times newspaper.

ENG369 - Journalism – Feature Writing

Students learn feature writing and in-depth news reporting and write several articles, some of which are submitted to local media.

ENG371 - Critical Theory and Teaching of Literature

A required course for English majors in the Secondary English track, Critical Theory and the Teaching of Literature shows students how to relate contemporary literary criticism to the teaching of literature. The varieties of literary criticism covered include New Criticism, reader-response criticism, deconstructive criticism, psychological criticism, feminist criticism and New Historicism. The literature studied emphasizes items typically taught in secondary schools, including both canonical (e.g. Shakespeare's plays) and noncanonical (e.g., Young Adult literature and Multicultural literature) works.

ENG372 - Advanced Composition

Advanced Composition is an introduction to rhetorical theory as it concerns the nature of writing and the teaching of writing. This course also offers practical information about and experience with modern course design and pedagogy, as well as discussion of the politics of writing instruction in contemporary schools.

ENG375 - Advanced Writing

This course is concerned with helping students develop a more sophisticated style in using persuasion, exposition and argumentation.

ENG376 - Creative Writing Fiction

Techniques of fiction are studied and applied to the writing of short stories, and students are encouraged to use and shape their own experience, transmitting those everyday things around them into fictional realities.

ENG377 - Creative Writing Poetry

Aspects of poetry such as line length, rhythm, sound patterns, and imagery are discussed. Students will apply those techniques to their own experience and vision, developing a poetic voice or style.

ENG378 - Creative Writing: Drama

Writing techniques for the modern stage are covered; students progress from idea through written text to the production of a scene or a one-act play.

ENG406 - Advanced Study in Literature

This course will provide students with an opportunity for advanced study of literary texts using one or more theoretical / critical approaches. The course may investigate a particular time period, genre, author(s), or a combination thereof.

ENG410 - Adv Study in Creative Writing

Through the study of creative nonfiction, fiction, drama and poetry, students will explore the diverse voices of published writers and develop their own unique voices. Students will identify and analyze different styles of published writing and outline a range of craft techniques for their own writing. Classes will consist of readings of contemporary literature, discussions of aesthetic principles, writing exercises and workshops in which students will have the opportunity to give and receive constructive feedback on their work.

ENG419 - Internship in Professional Writing

An internship is a 120-hour, work-based and academic experience, emphasizing learning in a professional setting. Internships are supervised by both a work-site supervisor and a faculty supervisor and are designed to give the student a broad understanding of the particular writing and professional practices of the internship sites.

ENG425 - Shakespeare

This course explores in considerable depth Shakespeare's plays and poetry in their cultural, literary and performative contexts, both contemporary and modern.

ENG430 - Adaptation of Literary Materials

Students learn how to write fiction, poetry, drama and/or screenplays based on another work, such as writing screenplays or plays based on novels, writing updated versions of classics, writing in response to visual art, or telling traditional stories from altered perspectives.

ENG448 - Practical Criticism

An introduction to the theories comprising major schools in literary criticism, this course provides practice in applying these theories to literary analyses.

ENG450 - Advanced Study in Journalism

Intensive study and practice of reporting and writing articles employing one or more journalistic techniques such as longform writing, immersion journalism, literary journalism, investigative reporting, data journalism, and digital storytelling. Areas of emphasis will vary with each semester.

ENG452 - Advanced Study in Composition and Rhetoric

An opportunity for in-depth study, this course may focus on a single theme, historical period, theoretical approach, or group of rhetoricians and/or compositionists. Given that this is a writing intensive course, students will be expected to use writing as a tool for learning. In addition, this upper division course may familiarize students both with the consumption and production of emerging technologies for text-based inquiry, research, and expression.

ENG478 - Advanced Study in Media and Film

This course will provide students with an opportunity to study mediated forms of creative expression that go beyond (though not exclusive of) the textual. The course will look at one or more forms of media, such as film,

Course Descriptions

television, and social media from an English Studies perspective. That is, questions of narrative, setting, character and cultural historical context will be combined with an awareness of the unique qualities of the medium.

ENG484 - Studies in 19th Century English Literature

This course emphasizes the poetry of Keats, Shelley and Byron; the critical writings of Blake, Wordsworth and Coleridge; and the essays of Lamb and Hazlitt. It traces for the student the mutual evolution of literary forms and cultural, social and philosophical upheavals. It places particular emphasis on the essence of the Romantic movement: the spirit of individual liberty.

ENG485 - Studies in 20th Century British Literature

This course examines contemporary trends in literature, such as inter-textuality, ethical issues, major figures (i.e., Conrad, Greene, Woolf, Orwell and Burgess), WW I poetry, drama or the novel.

ENG487 - American Literary Genres

English 487 surveys canonical authors and works in selected genres or special topics in American literature study, which may include the short story, novel, poetry, drama, nonfiction, humor, travel writing, transatlantic writing, period literature, and ethnic literatures.

ENG489 - Studies in English Literary Genres

English 489 is an in-depth study of a particular genre of English literature or a comparative study of more than one genre. Genres covered may include epic poetry, lyric poetry, the short story, the 19th-century novel, the 20th-century novel, modern poetry, drama, nonfiction and film.

ENG495 - Seminar in Creative Writing

This is intended to be a final polishing course in creative writing, where students write and revise fiction, poetry, or drama, preparing a professional-level work.

ENG496 - Writing for Publication

Students analyze regional and national markets and refine their work for publication. They are expected to publish at least one work during the semester.

ENG499 - English Studies Capstone Class

This course for English majors is required for every English Department track: creative writing; journalism; language and literacy; and literature. The course will give majors from any track opportunities to demonstrate their application of the knowledge and skills developed through the undergraduate curriculum, particularly in the major and the General Education Program. Emphasizing written and oral performance at the professional level, the course will ask students to show proficiency in academic analysis and synthesis of English studies concerns while also addressing the social relevance and community implications of such concerns.

ENS-Environmental Science

ENS101 - Introduction to Environmental Science

The broad field of environmental management includes human population growth, soil, land and energy use, water and air pollution, and agencies and laws associated with the above topics. No one area is covered in depth. Rather, the student is introduced to each problem, its source, current corrective measures, and possible future technology.

ENS335 - Sustainable Agriculture

This course explores the origins, major concepts, and current issues of sustainability in agriculture. Our society's agricultural history has unfolded in such a way that we are just now trying to understand and create sustainability where it does not currently exist. How did this occur? We will explore environmental, economic, and social considerations of sustainability in agriculture. We will begin with a brief history of agriculture from its original inception, to the Green Revolution in the mid-1900s, to the current push for sustainability in its various forms. At the end of the course, you should be able to understand and explain to others the characteristics of our current agricultural system, the many components of sustainable agriculture and how they relate to each other, and ways that our society is moving or could move toward a sustainable agricultural system. As a lab course, the student will also plan and implement a garden plan. They will apply Sustainable agricultural methods to a variety of crops and establish a garden.

ENS399 - Conservation Biology

This course will broadly cover the multidisciplinary field of conservation biology. The course will focus on the historical context of this emerging field and the deviation from traditional natural resource management. The course will explore the impact of humans on biodiversity, both in the destruction of it and in the maintenance of what is left. The role of government, non-government organizations, and citizens will be studied.

ENS420 - Principles of Wildlife Management

This course is designed to provide students with an understanding of the philosophies and concepts of scientific wildlife management. Major emphasis will be placed on wildlife management in North America, but differing perspectives from other regions of the world will be incorporated into the course. Topics to be covered will include monitoring habitats and habitat management, population exploitation and administration, economics, and socio-political topics as they relate to wildlife management.

ENS423 - Wildlife Management Techniques

This course will cover selected techniques commonly used by wildlife biologists. Techniques used to encounter mammals, birds, reptiles and fish will be covered. Important techniques covered include aging and sexing of game species, habitat measurement and evaluation, population analysis, and analysis of food habits. The lecture portion will provide an introduction to those techniques while the lab portion will provide practical use and application of selected techniques.

ENS424 - Fisheries Management

A combination of lectures, lab, and field trips will emphasize fisheries biology and management in North America, including both freshwater and marine systems. Lectures will include fisheries resources, aquatic habitats, population dynamics, laws and regulations, aquaculture, conservation, and current fisheries issues. Labs and field trips will emphasize research methods and harvest and habitat management techniques.

ENS425 - Principles of Aquaculture

This course is designed to provide students with an understanding of the philosophies and concepts of aquaculture. Major emphasis will be placed on the impact that aquaculture has in North America, but additional global issues will be incorporated into the course. Topics to be covered include water treatment systems; recirculating and flow through aquaculture systems; integrated aquaculture; finfish and shellfish aquaculture; fish health and disease; and the economics and politics of aquaculture.

ENS435 - Natural Resource Law and Policy

This course will focus on the history of current federal laws, policies, and programs, and include discussions of the roles of various resource management agencies. The course will focus on related natural resources administration and policies in the United States but will include aspects of international law and policy as they affect North America's resources. The course will cover the historical context of U.S. natural resource policy

Course Descriptions

including the history of land acquisition and disposition by the federal government and the creation of the public domain including the National Parks, National Forests, Wildlife Refuges, and Bureau of Land Management Lands.

ENS440 - Environmental Pollution Control

A comprehensive study of environmental pollution to include its major sources, control and management, and the impacts from environmental toxins, contaminants and pollutants on humans and our environment. An emphasis will be given to the technologies involved in the abatement, treatment, and monitoring of environmental pollutants. Specific topics will include: land, air, water and noise pollution.

ENS475 - Wetlands Ecology

A coordinated lecture/laboratory approach that will emphasize wetlands within the continental United States. The course will provide a background in both historical and modern wetland issues; characteristics of freshwater, estuarine and marine wetland types, including important plants and animals of each; processes of wetland determination and delineation; regulatory framework of wetlands protection ; and procedures involved in wetland restoration and conservation. T

ENS480 - Topics in Field Biology

A specialized off-campus residential program which emphasize ecology, behavior and the natural history of organisms in their natural environments. Students will be trained in a variety of methods used in field biology and have the opportunity to contribute to original research projects. Program focus will vary, depending on the length of the course and the site at which the course is offered. Course may be repeated as the topic/site changes.

ENS492 - Animal Population Dynamics

This course is designed to provide students with an understanding of theoretical and applied aspects of animal population dynamics. The course will examine variation in population size and sex/age composition, reproduction

Course Descriptions

and mortality, and quality and condition of animals in populations. Emphasis will be placed on principles and techniques used by wildlife ecologists to quantify and predict populations of vertebrate animals. The lecture portion of the course will include lecture and discussion on issues and concepts in population dynamics. The lab portion of the course will emphasize application of common techniques and models used by wildlife population ecologists.

ENS495 - Experimental Design and Analysis

This class will help prepare students to design, conduct and evaluate scientific research. Class work will focus on the theoretical and applied basis of experimental design, sampling theory and sampling designs, data collection and analysis (using statistical software), and the proposal and evaluation of research studies.

ESP-Special Education

ESP100 - Social Contexts of Disability in Popular Media

This is a discussion-based class designed to develop an awareness of disabilities as they are portrayed in modern popular media. This course specifically investigates representations of disability in mainstream media, as well as the impact that such portrayals have on people with disabilities and on people without disabilities.

ESP210 - Special Education Foundations and Collaboration

This course is designed to provide information and skills necessary for accommodating exceptional learners in a variety of school arrangements. The primary focus is foundations and characteristics of special education and students with exceptionalities and collaboration/consultation for the successful inclusion of students with exceptionalities into the inclusionary classroom.

ESP211 - Special Education History, Theory & Exceptionality

This course is designed to provide information and skills necessary for individuals interested in the philosophy found within special education identification and practices. The course also serves to provide information regarding the definition, prevalence, etiology, characteristics, and general educational practices as they relate to individuals with exceptionalities.

ESP311 - Assessment and Positive Behavior Interventions

This course is required for all education or related services majors and is intended to provide future teachers with the fundamental knowledge, skills, and disposition: how to administer, score, and interpret both norm-referenced and criterion-referenced assessment devices; how to design appropriate learning environments to promote positive learning and reduce interfering behaviors; and how to design and implement schoolwide and classroom positive behavior interventions and supports.

ESP312 - Applied Behavior Analysis for Special Educators

This course is designed to provide a strong foundation and knowledge of basic principles of learning through the introduction of Applied Behavior Analysis, the science and technology of behavior. The focus is on current practices for group / individual data collection, program selection, and implementation. Basic research design, positive practices, group contingency, and behavior reduction techniques are emphasized. [At least 30 hours of field experience are required.]

ESP339 - Special Education Field Experience I

The Special Education Field Experience I is a course taken by students majoring in Special Education. Students spend 45 hours in a school setting to gain experience with students with disabilities. This will be a collaborative experience between the student, university supervisor, and collaborating teacher. The collaborating teacher

Course Descriptions

certified in special education and at least two years experience teaching students with disabilities. While fully immersed in the school-based setting, university students may observe, assist, tutor, instruct, assess, and/or manage students. Within the experience students will reflect and self-critique their current skills, knowledge, and disposition related to all school-age students they encounter.

ESP349 - Special Education Field Experience II

The Special Education Field Experience in Low Incidence Disabilities is a course taken by students majoring in Special Education. Students spend 45 hours in a school/agency setting to gain experience with students with low incidence disabilities. This will be a collaborative experience between the student, university supervisor, and collaborating teacher/professional. The collaborating teacher/professional certified in special education with at least two years experience with students/adults with disabilities. While fully immersed in the field-based setting, university students may observe, assist, tutor, instruct, assess, and/or manage students/adults. Within the experience students will reflect and self-critique their current skills, knowledge, and disposition related to all students/adults with disabilities they encounter.

ESP402 - Life Skills Planning & Instruction

This course prepares students to work with children and/or adults who require on-going support in order to participate in one or more major life activity. Students are required to design and implement an instructional program with a person who needs this type and level of support.

ESP403 - Assessment and Prescriptive Teaching

This course teaches students how to administer, score, and interpret both norm-referenced and criterion-referenced assessment devices and how to prescribe programs of remediation based on the results of these devices.

ESP406 - Transition Planning and Instruction

This course deals with special education programs for senior high school students as well as those persons who reside in the community. Emphasis is placed on vocational preparation and training. Specific techniques for task analysis of jobs, daily living skills, and social adaptation constitute a major portion of this course. Emphasis is placed on the development of functional skills that contribute to normalized development.

ESP407 - Early Intervention Special Education

The course is designed to provide future educators with knowledge of history, theories, legislation and litigation associated with early childhood special education. In addition students will develop learning environments, implement research based curriculum, conduct developmental assessments, establish educational teams as well as enhance skills in communicating with team members and facilitate consultation with the targeted population and family members. [Field Experience: 30 Hours]

ESP411 - Special Education History, Theory & Exceptionality

This course is designed to provide information and skills necessary for individuals interested in the philosophy found within special education identification and practices. The course also serves to provide information regarding the definition, prevalence, etiology, characteristics, and general educational practices as they relate to individuals with exceptionalities.

ESP412 - Evidence-Based Practices for PreK-8 Inclusion

Evidence-Based Practices for Elementary Inclusion is offered to Elementary Education majors the semester prior to their student-teaching experience and is a methodology course for pre-service education teachers. The purpose of the course is to prepare elementary pre-service teachers to provide evidence-based language arts and math instruction to students with disabilities in inclusion settings. An emphasis is placed on results of research

Course Descriptions

and proven methods of instruction for teaching beginning reading and math to children with learning difficulties. The course stresses a behavioral approach to teaching, as well as the development and implementation of intervention strategies for various populations of children with exceptionalities in inclusion settings. Additional topics include modifications and adaptations of materials, effective teaching, learning strategies, lesson planning, assessment, and individualized education programs.

ESP413 - Evidence-Based Practices for Secondary Inclusion

Evidence-Based Practices for Secondary Inclusion is offered to Secondary Education majors the semester prior to their student-teaching experience and is a methodology course for pre-service education teachers. The purpose of the course is to prepare Secondary pre-service teachers to provide math language arts instruction to students with disabilities in secondary inclusion settings. An emphasis is placed on results of research and proven methods of instruction for teaching reading and math to secondary students with learning difficulties. The course stresses a behavioral approach to teaching, as well as the development and implementation of intervention strategies for various populations of children with exceptionalities in inclusion settings. Additional topics include modifications and adaptations of materials, effective teaching, learning strategies, lesson planning, assessment, and individualized education programs.

ESP414 - Advanced Evidence Based Practices for PK-8 Inclusion

The course is designed to provide future educators with knowledge of research based practices that may be employed in Pre-K to 8 in academic and nonacademic educational settings. The course will focus the future educator on techniques that will be beneficial for developing skills in core areas such as mathematics, language arts, science and social studies along with those skills that are necessary for navigating non-instructional periods. Specifically, this course will provide future educators with intensive, Tier 3, evidence-based interventions for

Course Descriptions

students with exceptionalities. This course is a continuation of ESP 412 in that it provides more intensive, individualized teaching methods for those students who do not adequately respond to Tier 1 & 2 interventions.

ESP418 - Advanced Evidence Based Practices for Secondary Inclusion

This course serves to provide and prepare special education teachers to use research and strategy based interventions and plan instruction of adolescents in grades 7-12 who receive special education services and may be included in the general education classroom. The course focuses on how to effectively apply the use of evidence-based practices in several curricular areas with an emphasis on the critical areas of English, Mathematics, Science, and Social Studies.

ESP419 - Evidence Based Practices for K-12 Inclusion

Evidence-Based Practices for K-12 Inclusion is offered to K-12 majors the semester prior to their student teaching experience and is a methodology course for pre-service education teachers. The purpose of the course is to prepare pre- service teachers to provide evidence-based language arts and math instruction to students with high and low incidence disabilities in inclusion settings. An emphasis is placed on results of research and proven methods of instruction for teaching reading and math to students with cognitive, physical, social, behavioral, and language-based disabilities. The course stresses a behavioral approach to teaching, as well as the development and implementation of intervention strategies for various populations of students with exceptionalities in inclusion settings. Additional topics include modifications and adaptations of materials, effective teaching, learning strategies, lesson planning, assessment, and individualized education programs.

ESP461 - Student Teaching Practicum

The student teaching program is designed to ensure that special education majors are exposed to the full range of children covered under the comprehensive certification, i.e., mentally retarded, emotionally disturbed, learning

Course Descriptions

disabled, brain damaged, and physically handicapped. The major practicum provides an intensive experience for the student in two of the handicapping areas for a period of 16 weeks. The practicum seminar component meets weekly to provide special education majors with an opportunity to discuss problems encountered by the students in their teaching experiences. Students are provided with opportunities to demonstrate the effectiveness and functionality of their teacher-made devices, learning centers, and curriculum materials used in their classrooms. Undergraduate students seeking dual certification in both special education and elementary education are also supervised within the special education department for their practicum experience. Teacher candidates are required to have one student teaching experience within special education and another in a regular elementary classroom. All other components remain the same for the student teachers seeking dual certification.

FIN-Finance

FIN301 - Financial Management

The purpose of this course is to have students learn the basic financial principles and practices necessary to manage the business firm. The course will cover the tools and techniques used by the financial managers for financial analysis and planning, valuation of financial assets, financing decisions, and Investment decisions.

Topics include time value of money, risk and returns trade-off, valuation of financial assets, calculation of cost of capital, capital budgeting and other subjects.

FIN302 - Advanced Financial Management

A continuation of FIN 301. An intensive study of capital budgeting, capital structure, working capital management, leasing vs. buying, distribution in shareholders, mergers, bankruptcy, multinational finance and analysis of cases relating to financial decisions of firms.

FIN304 - Personal Finance

A guide to personal finance to best meet one's objectives and make financial decisions easier. Topics include: budgets, major purchases, use of credit and bank loans, insurance, real estate and investment in securities, taxes and estate planning.

FIN305 - Investments Management

This course covers the most common concepts, theories and skills used in financial investment management. Topics include but are not limited to financial assets (i.e. stock and bond), portfolio theory, behavioral finance, fundamental analysis, technical analysis, asset allocation, etc. Current financial market events will be discussed in class. Stock virtual trading will be used to enhance learning.

FIN311 - Financial Markets and Institutions

Description and analysis of major financial institutions and money and capital markets. Determination and Structure of interest rates, derivative security markets, major sources of uses of funds by major financial institutions and impact of government regulations are discussed.

FIN325 - Series 7 Exam Prep

This course provides students with the qualifications necessary in General Securities Representative Qualification Exam (Series 7 Exam), in order to make different types of trades with all types of general securities, excluding commodities and futures. The exam is administered by the Financial Industry Regulatory Authority (FINRA). It is the most commonly required registration in the U.S. financial securities industry. The course covers equity, debt, mutual funds, variable insurance products, limited partnerships and derivative securities, operations of the primary and secondary markets, securities analysis, and the rules and regulations that govern business conduct in financial securities industry. This class will get students ready to take the Series 7 exam once they are hired by a financial company.

FIN331 - International Finance

This course is designed to teach the fundamental economic and financial issues faced by multinational corporations. Topics covered will include international monetary system, balance of payments, foreign exchange market and theories, currency futures and options, currency risk management, and international financial markets.

FIN335 - Risk Management

This course is designed to provide students with a broad coverage of various aspects of risk management used in financial industry. For each type of risk, it addresses its concept, usage, risk measurements, and its basic quantitative and/or qualitative skills. Topics include, but are not limited to, risk management industry, theories and measurements of risk, types of risks(i.e. market risk, interest rate risk, credit risk, operational risk, etc.), the tools and instruments used in risk management, related regulations and practice in various financial institutions.

FIN341 - Entrepreneurial Finance

This course addresses the financial aspects of entrepreneurship: the financial managerial skills and various financing strategies. Compare to well-established corporations, early stage ventures face higher level of operational uncertainty and greater financing difficulty. In this course, students are introduced to the financial analytical skills that are most needed for new entrepreneurial ventures, such as financial ratio analysis, cash management, and financial statement projection. They will also get to know various funding sources, for example: venture capital, crowdfunding (part of FinTech ecosystem), alternative financing etc.

FIN420 - Securities Industry Essentials Exam Prep

This course prepares students with the requisite knowledge and a better understanding of the topics tested on the Securities Industry Essentials (SIE) Examination, the first-level test of 9 different securities licensing exams (including Series 6, 7, 22, 57, 79, 82, 86/87, 99). The SIE exam is the only securities licensing test that opens to college students while in college. It could greatly increase job placement opportunities. This course provides

Course Descriptions

a comprehensive understanding of the various investment instruments that are available to individual and institutional investors. The topics will include, but not be limited to, introduction of securities markets, investment vehicles (such as equity and debt securities), alternative investments, investment strategies, basic economic theory, and the industry rules and regulations governing the securities industry.

FIN421 - Series 7 Exam Prep

This course provides students with the qualifications necessary in General Securities Representative Qualification Exam (Series 7 Exam), in order to make different types of trades with all types of general securities, excluding commodities and futures. The exam is administered by the Financial Industry Regulatory Authority (FINRA). It is the most commonly required registration in the U.S. financial securities industry. The course covers equity, debt, mutual funds, variable insurance products, limited partnerships and derivative securities, operations of the primary and secondary markets, securities analysis, and the rules and regulations that govern business conduct in financial securities industry. This class will get students ready to take the Series 7 exam once they are hired by a financial company.

FIN492 - Finance Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing finance-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

FIT-Fitness

FIT100 - Introduction to Fitness

This course is an introductory overview of fitness and the fitness industry. Students will be exposed to current practices within the fitness industry. Students will also gain an understanding of wellness and the wellness lifestyle. This course serves as a prerequisite for all courses within the curriculum.

FIT115 - Applied Anatomy and Physiology in Wellness and Fitness

This course is a continuation of Human Anatomy and Physiology I for Wellness and Fitness professionals. Continuing the exploration of the human body, this course provides an in-depth examination of the skeletal, nervous and muscular systems. Students will learn the organization and physiology of these systems especially as they relate to human movement and physical activity. Particular attention will be paid to surface anatomy, skeletal landmarks, muscle tissue structure, and synovial joint structure. The major articulations of the body will also be explored along with the muscles related to the movement of these articulations. Application of anatomical and physiological concepts to practical issues in fitness and wellness will be made throughout the course. Students will explore human anatomy utilizing 3D interactive models.

FIT125 - Fundamentals of Speed Training

This course is designed to provide students content related to the ever-growing specialization in speed training. Students will be exposed to content from the National Association of Speed and Explosion (NASE), and at the close of the course will be prepared to sit for their certification to become a Speed and Explosion Specialist. All aspects of speed training will be explored, including mechanics, training, and program design. The course will provide an entry-level understanding of biomechanics and exercise physiology as they pertain to improving athletic performance. Additionally, practical applications will be presented pertaining to proper warm up

Course Descriptions

procedures, drills and exercises and sample programs that can be immediately applied upon completion of the course.

FIT250 - Current Topics and Strategies for Youth Fitness

This course will focus on developing the skills that will benefit individuals who are ages 6-18 by providing knowledge and skills necessary to promote and maintain fitness. Students will be exposed to topics that impact this population, including skill development, long-term impact of the sedentary lifestyle and the development of a healthy lifestyle. Special emphasis will be placed on specific training regimens, current fitness trends for today's youth, and program development.

FIT300 - Business Aspects of Fitness

A comprehensive discussion of the pragmatic approach to conducting business in the fitness industry. The course focuses on key elements within the business structure, including marketing, facility management, accounting, budgeting, change management and the creation of additional profit centers. Additionally, students will identify key partners in running a successful business.

FIT305 - Motivation in Wellness and Fitness

The art of motivating people to begin and/or maintain physical activity and a healthy lifestyle is a challenging style that fitness professionals must develop. This course is designed to allow students to implement strategies to motivate clients to begin and/or maintain wellness and fitness lifestyles. Motivational concepts like creating habits, setting goals, creating self confidence through positive self talk and attitude, and creating an encouraging fitness environment are all discussed.

FIT325 - Integrated Personal Fitness Training

A comprehensive view of personal fitness training with a focus on assessment and developing customized fitness programs. The course will orient the student to the basics of the revolutionary exercise programming strategies of the Optimum Performance Training™ model.

FIT335 - Integrated Personal Fitness Program Design

This course will introduce the revolutionary exercise programming strategies of the Optimum Performance Training™ model specifically for the fitness and wellness professional. The student will receive a detailed insight into designing safe and effective exercise programs for any personal training client. This course is linked to FIT 325.

FIT350 - Fitness for Special Populations

An in-depth analysis of the fitness needs of individuals from special populations. Particular attention will be placed on legislative initiatives and their effect on fitness professionals and the individuals with special needs whom they serve.

FIT380 - Wellness and Fitness for the Aging Population

This course will focus on developing the skills that will assist individuals who are aging by providing knowledge and skills necessary to promote and maintain fitness. Students will be exposed to special topics impacting this population. Special emphasis will be placed on adapting activities and strategies for leading groups.

FIT401 - Leadership Concepts and Actions in Wellness and Fitness

Leadership is always an action, and sometimes a position. This course will guide students to learn about leadership styles, concepts and actions. Building upon the leadership concepts presented, students will be challenged to identify and further develop personal leadership traits, philosophy, vision and skills. Students will be asked to reflect on different leadership scenarios including ethical, conflict resolution, and team building situations found within the fitness and wellness industry.

FIT405 - Wellness Seminar I

This course examines current trends in wellness and prevention across the spectrum and throughout the lifespan. Traditional and nontraditional approaches are considered.

FIT410 - Wellness Seminar II

This course is designed as a continuation of Wellness Seminar I. A major focus of the course will be the continued adoption and adaptation of the wellness lifestyle. Students will be required to complete a community/service learning project as a culminating activity in the course/program.

FIT420 - Trends and Issues in Fitness

An analysis of professional fitness trends as well as preventative care health issues from historical, contemporary and futuristic viewpoints with implications for professional fitness practice in the health and wellness delivery system.

FIT425 - Evaluating Research in Fitness and Wellness

This course is designed to teach students to become knowledgeable consumers of research in order to keep current as a professional in the fitness and wellness industry. Emphasis is placed on developing library research skills and critically analyzing research.

FIT430 - Applications in Fitness and Wellness Research

This course is a continuation of FIT 425 whereas the student will blend the compiled information of the aforementioned course and apply it to complete the objectives as noted above. Continued emphasis is placed on developing library research skills, critically analyzing research, and becoming a knowledgeable consumer of research to stay current as a fitness and wellness professional. Different types of research, particularly descriptive and experimental, are presented.

FIT499 - Exercise Science Internship

This course is designed as a culminating experience for students desiring a clinical internship. Students will be assigned to an internship site based on their individual needs and preferences. Students will work with professionals in various fitness and wellness arena facilities as well as selected non-traditional sites.

FRE-French

FRE101 - Elementary French I

For the student without previous knowledge of French. The development of the fundamentals of correct idiomatic French. Instruction in basic audio-lingual comprehension, sentence structure, reading, writing and speaking. Classroom instruction is supplemented by laboratory study and practice.

FRE102 - Elementary French II

A continuation of French 101.

FRE203 - Intermediate French I

A continuation of French 102.

FRE204 - Intermediate French II

Continuation of French 203. Oral-aural work continues but is accompanied by a development of reading skill through discussion of selected prose and poetry.

FRE341 - 17th Century & Classical Age

This course surveys the evolution of French culture from the early 17th century or the Baroque (1600-1640) to the classical period (1640 to the end of the century). The course seeks to introduce the student to the history of French thought in the Splendid Century. While it follows sociological, political, philosophical and historical developments to a certain degree, its primary emphasis is on the artistic domains of literature, music, architecture and the visual arts of the period. In so doing, this course illustrates the ways in which France has been influenced by its rich cultural heritage.

FRE342 - 18th Century & Enlightenment

This course surveys the evolution of French culture throughout the Age of Enlightenment, when scientific discovery and new historical methods acted as agents of change upon the traditional foundations of belief. We will consider how these changes affected French thought, especially in the artistic domains of literature, music, architecture and the visual arts of the period. The course will introduce the student to this age of criticism and reconstruction, an age viewed as the crisis of the European mind, which gave birth to the philosophe, or

Course Descriptions

philosopher, one who was not only involved with the theories but with social reform as well. These reforms in human institutions and thought will be shown to terminate in the revolution of 1789 and the end of the Ancient Regime.

FRE344 - The Age of French Realism: The Second Empire to the Aftermath of the Franco-Prussian War

This course surveys the evolution of French culture during the Age of Realism, including the Franco-Prussian War, positivism and its aftermath. This period encompasses the dictatorship of Napoleon III, a monarchy marked by material success among the middle class and by disappointment and pessimism among thinkers, writers and artists. This course considers the artistic achievements of the period within the framework of the sociological, political and historical setting. It studies certain schools of art (Realism, Impressionism and Naturalism) and seeks to illustrate how these movements of artistic expression manifested themselves in the principal works of literature, philosophy, music and the visual arts. This course is taught in English.

FRE345 - Birth of Modern French Culture in the Arts 1900-World War II

This course surveys the evolution of French culture from 1900, the time of the Belle Epoque, or Beautiful Period, at the turn of the century, to the advent of the Second World War. While the course follows the sociological, political and historical developments of the period, it puts emphasis on the artistic ramifications of this period of conflict and rapid change. The interwar years are treated in all their artistic output, especially in interwar theater, fiction and the presence of the school of Surrealism in poetry, fiction, theater and art. This course is taught in English. .

FRE347 - Francophone Africa

This course examines Francophone Africa from a literary, socio-political, and artistic perspective. The focus is on representative works illustrating the African traditions and identity embodied in the concept of “Négritude.” It also looks closely at French colonization in Africa and the transition from Pre-Independence to Post Independence.

FRE348 - Francophone Canada

This course examines Francophone Canada from a literary, socio-political, and artistic perspective. The focus is on representative works illustrating the French Canadian language and culture. It also looks closely at the Quebec separatist movement and the Quiet Revolution, a period of intense socio-political and cultural change.

GCM-Graphics and Multimedia

GCM311 - Advanced Screen Printing Techniques

A study of the techniques used for transfer of line and tonal images on a variety of substrates commonly used in the screen printing field. Each student has the opportunity to identify, calibrate and print upon selected substrates. The student generates specifications, estimates, and procedures for the production of self-directed screen printed products. Ultraviolet curing theory and practice, statistical process control, and current trends in screen printing are analyzed for application through student coursework.

GCM410 - Digital Portfolio

The course focuses on the integration of multimedia components including conventional photography/scanned images, digital photography, stock art/images, animation, sound and videography for the purpose of achieving effective assessment portfolios. Emphasis will be placed on the process of integrating the assessment components using various hardware platforms and software tools, and incorporating basic image manipulation. As a terminating project, the student will create and master a CD-ROM based professional digital portfolio. Students

Course Descriptions

should have a resource bank of materials suitable for inclusion in a professional digital portfolio. They must have a working knowledge of computer operating systems for this course.

GEO-Geography

GEO100 - Introduction to Geography

This course introduces students to regional differences throughout the world in terms of land forms, climates, soils and vegetation as well as population characteristics and economic activities. Representative areas, such as western Europe, Russia, Japan and Latin America, are developed.

GEO102 - Geographic Systems for Elementary Education

The geography component focuses on basic geographic literacy, physical characteristics of places and regions, human characteristics of places and regions, and the interactions between places and people.

GEO205 - World Cities Geography of Tourism

The geography of tourism in selected cities of the world with an emphasis on form and function is covered. Topics include an analysis of resources for tourism, the organization of related land-use patterns, and developmental processes.

GEO217 - Demographic Analysis

This basic course on demographic processes and trends emphasizes distribution patterns and environmental ramifications.

GEO221 - Geography of Drugs

This course examines international drug trade from the perspectives of historical, social, cultural, and economic geographies. The course will explore supply and demand relationships between the major world drug production regions and their consumers. Historical and contemporary trafficking relationships will be explored. Concepts of urban geographies of the western world with an emphasis on North America and Europe will be compared to socio-economic and geopolitical characteristics of the developing world. Implications for public health for producers and consumers are emphasized. Regulation, criminalization, and legalization issues and trends will also be explored from the perspective of community health and wellness.

GEO360 - Emergency Management

This course examines the emergency management process as it relates to both natural and technological (human-induced) hazards. Topics covered in the course include the history of emergency management in the United States and the four phases of the disaster life-cycle model (mitigation, preparedness, response and recovery). These concepts will prepare the student for understanding how disaster events can be managed in order to reduce losses. The course will incorporate analyses of case studies to display alternative solutions to disaster problems and provide valuable lessons for facing future threats.

GEO474 - Developing the Master Plan

The course examines planning as a process. Attention is focused on the elements and activities necessary to prepare and implement a comprehensive plan. The course provides an opportunity for the student to apply acquired planning skills to specific urban and regional problems.

GEO479 - Internship

The internship provides the student with the opportunity to apply classroom theory to realistic, professional-level situations. It is intended to give the student a concentrated practical experience in a professional organization.

Course Descriptions

The concepts and experiences acquired in the classroom are honed and fine-tuned at this level to prepare students for their career undertaking.

GET-General Engineering Tech

GET130 - Introduction to Engineering Technology

This course covers engineering technology fields such as computer, electrical, industrial, mechanical, mechatronics and robotics and their relation in sharing a set of common foundation concepts and skills. The intent of this course is to introduce the beginning engineering technology student to the world of engineering technology. Included topics for this course: survey of engineering technology fields and sample problems, case studies, terminology and units of measurement, problem solving/decision making, design processes, data collection and interpretation, technical calculator usage, drawing concepts, fabrication/prototyping basics, communication skills, and team work. Through a series of hands-on projects, the student will also be introduced to a number of modern software tools as used in various engineering technology fields.

GET140 - High Tech Systems

Modern society relies on high-tech systems for agriculture, communications, manufacturing, transportation and similar applications. One facet of these systems is based essentially on the Internet and mobile technologies, and this course serves as an introduction to the principles and methods used in modern hightech systems. Topics covered include a study of the fundamentals of electricity and electronics; the construction and control of simple circuits; the definition, types and uses of modern communications and networking equipment; and the use of computer technologies and smart devices in modern operations. The focus is the network of systems, including physical devices, autos, vehicles, appliances, homes, and other items embedded with electronics, software, sensors, actuators, and the network connectivity which enables these objects to connect, exchange and respond within systems.

GIS-Geographic Information Sci

GIS222 - Geo-Business

Spatial patterns associated with the location, distribution and consumption of goods and services are studied.

Emphasis is placed on techniques for site selection, marketing and spatial analysis through the use of geotechnology.

GIS303 - Crime Mapping and Spatial Analysis

This course provides an analysis of different methods and techniques of representing spatial crime data through the use of various computer-based technologies. The students will examine crime at the national, state and local level using geotechnology. Students will also learn some of the problems dealing with spatial crime data.

GIS311 - Geographic Information Systems

This course provides an analysis of different methods and techniques of representing geographic data through the use of various manual and computer-based technologies. The focus is on the processes involved in the collection, compilation and display of geographic data within a database.

GIS314 - Spatial Land Data in the Oil and Gas Industry

This course provides an analysis of different concepts and techniques in representing land data through spatial technology. The students will examine land documents and input, edit and analyze them using geographic information systems. Students will also learn some of the pitfalls with land data including accuracy.

GIS350 - Remote Sensing of the Environment

This course covers the composition and interpretation of aerial photographs and remote sensing images.

Students will learn how to interpret photos and satellite imagery for quantitative and qualitative information on natural and anthropogenic features and processes. The class requires independent and group interpretations of maps, satellite imagery, and computer processed and enhanced images.

GIS413 - Environmental Applications in GIS

This course is tailored to introduce environmental issues to students within a spatial framework, using geographic information science. GIS and its impact in the natural and social sciences has grown dramatically over the years and its use has become pervasive in environmental disciplines. The course will cover the general concepts of GIS use and introduce the material in exercises to demonstrate practical applications of GIS for environmental problems. Students will have exposure to hands-on applications related to natural resource management, contaminant fate and transport, land use, and remediation techniques.

GLG - Geology

GLG150 - Introduction to Geology

This course introduces students to the physical and chemical nature of the Earth, erosional and tectonic processes that shape the Earth, and geologic history. Laboratory work is an integral part of the course where students will learn how to apply primary methods used in geologic investigations through identification of rock and minerals samples, outcrop observations, collection and analysis of field data, construction and interpretation of maps, graphs and diagrams

GLG200 - Historical Geology

The topic of Historical Geology centers on the principles of Geologic Time. This course is an in-depth study of the geologic history of the earth emphasizing the succession of the major chemical, tectonic and biologic events that have shaped earth history. Interpretation of earth history is based on principles of relative and absolute dating, especially as they are applied to the sedimentary rock record. Laboratory work is a significant emphasis of the course, with hands-on exercises including examination of geologic maps, cross sections and rock and fossil specimens. Field trips are also an integral part of the course and will require you to adjust your schedule to accommodate one or two weekend events.

GLG210 - Introduction to Soils

This introductory course in soil science presents basic concepts of soils including: composition and genesis; physical, chemical, and biological properties; soil water; classification and mapping; soil conservation; management practices; and soil fertility and productivity. It introduces the relation of soil to other environmental concerns such as environmental quality and non-agricultural land use. Emphasis is placed on hands-on exercises including examination of topographic, soil and geologic maps, and soil and rock specimens. Field trips are also an integral part of the course.

GLG230 - Earth Resources

This is a survey course focusing on the diversity of the geologic resources of Earth. Attention is paid to the interaction of all of Earth's surficial systems, particularly the geosphere, hydrosphere, and biosphere. Special emphasis will be placed on the mineral and energy resources of Pennsylvania. Students will explore the relation of resources to society and their importance to global and local economies. Lab and field sessions provide additional time for discussion and illustration of topics, as well as providing "hands-on" experience with selected locales and rock and mineral samples.

GLG250 - Volcanology

This course is a study of volcanic processes on Earth and the other terrestrial planets. Topics include a review of igneous materials and eruptive styles, eruption-triggering mechanisms, formation of lava and pyroclastic flow deposits, lahars, volcanic gas, volcanic hazards, and case studies of recent eruptions.

GLG290 - Planetary Geology

An introduction to the geology and geochemistry of the Solar System, with an emphasis on the rocky planets. The course includes an introduction to space exploration and uses imagery and data to present the origins of the solar system, the geology of the planets, asteroids, and their satellites, and how this relates to human advancement and future discovery.

GLG301 - Professional Development for Geologists

The course develops the students' understanding of career opportunities and expectations in Geology and the sciences. Students learn about the different career tracks in Geological and Environmental industries. Graduate school topics are addressed such as logistics of preparing and applying, expectations, and sub-disciplinary program strengths around the country. Students create resumes, cover letters, and portfolios. They are introduced to networking opportunities and techniques, job search strategies, and interview protocols. The purpose of the course is to develop the whole student as a scientist, but also as a mature, well-prepared professional that can contribute to their employer on the first day on the job.

GLG303 - Hydrology

Hydrology is a survey course relating to the existence of water on Earth. Topics include the occurrence and movement of water, physical and chemical characteristics of water, and climatologic and geologic considerations of surface and subsurface water.

GLG331 - Mineralogy

Minerals make up nearly all of the solid part of our planet, providing us with critical resources. Their behavior, particularly their interactions with the fluid portions of the planet, determines an array of important environmental variables. This course will provide you with an opportunity to learn about minerals and mineral behavior. If you take full advantage of this opportunity, you should complete the course with the ability to apply mineralogical data and tools to geologic and environmental problems. The course is designed as an introduction to the morphology and internal structure of crystals and the chemical and physical characteristics of minerals. Laboratory time is devoted to the study of crystal models and the identification of selected mineral specimens.

GLG332 - Petrology

A complete survey of the major rock types (igneous, sedimentary, and metamorphic) forms the basis of this course. Consideration is given to their origin, description, and classification. Of particular importance is the relationship of the various rock types to the composition and historical development of the solid earth. Emphasis in laboratory is mostly hands-on specimen identification, but some microscopic thin-section work is also involved.

GLG333 - Geochemistry

This course is designed for students pursuing environmental and geological careers. Participants will explore the relationships between natural chemical processes and environmental issues. They will spend considerable time evaluating human impacts on the chemical and environmental balance in natural settings. Geochemistry is essential to all aspects of modern Earth Science. This course provides an introduction to geochemistry for undergraduates pursuing careers in geology, environmental science, and atmospheric sciences. It combines two distinct topical groupings. The first is an introductory focus on essential geochemical principles of thermodynamics and kinetics, aquatic chemistry, isotope geochemistry, and trace element geochemistry. The second is a deeper pursuit to understand the Earth from a geochemical perspective and includes topics such as formation of the

Course Descriptions

elements; formation of the Earth and Solar System; evolution of the crust, mantle, and core; weathering and stream chemistry; and ocean chemistry.

GLG343 - Geomorphology

This course involves the study of the origin, history, and characteristics of landforms and landscapes as they are produced by the processes of weathering, mass-wasting, fluvial, glacial, wind, and wave erosion (or a combination of these) acting upon the geological materials and structures of the earth's crust. Field trips are also an integral part of the course.

GLG355 - Geophysics

This course will cover basic theories involving methods of collection and interpretation of several types of geophysical data. Included are the usage of gravitational, electric, and magnetic geophysical surveys, and the instrumentation required to collect these data in a non-invasive and non-destructive manner for both environmental and economic purposes. Seismic methods will also be covered in detail with explanation of how they are utilized in the oil and gas industry for identifying traps and describing reservoir potential. They can also be used for identifying the depth of the water table and locating coal seams, mines, and mineral resources. Ground penetrating radar will also be described with a focus on shallow environmental subsurface issues such as shallow fracture systems and groundwater flow characteristics.

GLG391 - Geology of the Northwestern US Field Course

Field Geology, an integral part of a geology degree, is best addressed with a focused, immersive approach to expose students to the topics and locations that act as a "live textbook." Generally, western states provide a more accessible location for study of sedimentary layers and geologic structures due to the relatively sparse vegetation. The course is designed for students pursuing geological and environmental earth science careers. Participants will explore spatial relationships of geologic features. Geologic mapping will be introduced, including

Course Descriptions

use of a Brunton Compass for measuring structure and orienteering. A field course focusing on regional geology of northwestern states including, but not limited to Wyoming, Utah, Idaho, and Montana. Students will visit and study geological features such as volcanoes, folds, faults, fossils, igneous intrusions, geysers and hot springs. Additional travel costs may be required.

GLG392 - Geology of the Southwestern US Field Course

Field Geology, an integral part of a geology degree, is best addressed with a focused, immersive approach to expose students to the topics and locations that act as a “live textbook.” Generally, western states provide a more accessible location for study of sedimentary layers and geologic structures due to the relatively sparse vegetation. The course is designed for students pursuing geological and environmental earth science careers. Participants will explore spatial relationships of geologic features. Geologic mapping will be introduced, including use of a Brunton Compass for measuring structure and orienteering. A field course focusing on regional geology of southwestern states including, but not limited to Arizona, Utah, New Mexico, and Colorado. Students will visit and study geological features such as volcanoes, folds, faults, fossils, and dune fields. Additional travel costs may be required.

GLG393 - Geology of the Eastern US Field Course

Field Geology, an integral part of a geology degree, is best addressed with a focused, immersive approach to expose students to the topics and locations that act as a “live textbook.” Generally, western states provide a more accessible location for study of sedimentary layers and geologic structures due to the relatively sparse vegetation. The course is designed for students pursuing geological and environmental earth science careers. Participants will explore spatial relationships of geologic features. Geologic mapping will be introduced, including use of a Brunton Compass for measuring structure and orienteering. This field course focuses on regional geology of eastern states. Trips will alternate between trips to the Great Lakes region, the Northeast (especially New England), and the Southeast. Students will visit and study geological features such as metamorphic terrains, folds, faults, fossils, and glacial landscapes. Additional travel costs may be required.

GLG402 - Groundwater Hydrology

This course is designed as a follow-up course to Hydrology. Students will have the opportunity to study and apply the principles governing the movement and occurrence of water in the subsurface. Emphasis is placed on the physics and engineering principles as they relate to groundwater for water supplies as well as related to contamination issues.

GLG423 - Sedimentology and Stratigraphy

An advanced course that focuses on sedimentary processes, sedimentary rock formation and stratigraphic interpretation. Students will use both quantitative and qualitative methods to identify, classify, and interpret the history of sediments, sedimentary structures, and sedimentary rocks and formations. Students will study rock units in the local outcrops, correlate these units within the stratigraphic framework and develop understanding of geological history of the region. The stratigraphy of the United States will be discussed.

GLG425 - Structural Geology

This course deals with the origin and analysis of geologic structures including folds, faults, and joints. Brittle and ductile deformation processes are examined in relation to fractures, faults, and folds. Geologic maps and cross-sections are formulated and analyzed.

GLG427 - Tectonics

Tectonics is the study of Earth's lithospheric plates and their interrelationships of motion and collision. The focus of the course is on macroscopic issues related to plate motion and specific plate relationships, which elucidate the historical geologic record, shape the landscape, and effect the distribution of resources and hazards. The goal of the course is to evaluate tectonic theories within a framework of worldwide historical geology but with an emphasis on the Appalachian and the North American Cordilleran orogenic events.

GLG429 - Petroleum Geology

This course deals with the processes that lead to generation of hydrocarbons and the accumulation of an economically sufficient amount of petroleum and/or natural gas to warrant extraction. Emphasis is placed on the economics of all types of hydrocarbon deposit including both conventional and unconventional accumulations of liquid, solid, and gaseous hydrocarbons. In addition to the science of formation, attention will also be given to the future societal impacts of reliance on hydrocarbons as a source of energy. This is intended as a course for geology or energy-related majors and a student will need an understanding of basic geologic principles. Students will be introduced to all parts of the petroleum system and extraction process. Well log analysis and site evaluation activities will be an integral part of the course and will give students a well-rounded view of the science and economics of the petroleum system.

GLG437 - Field Methods in Geology

This course provides students with knowledge of geologic problems encountered in fieldwork and the techniques utilized to solve those problems. The student is exposed to geologic and topographic maps as well as various geologic instruments. The course consists of planned trips with overnight stays to areas of geologic interest. Summary reports, field exercises, and laboratory problems constitute the students' work responsibility.

GLG438 - Computer Applications in Earth and Environmental Sciences

This upper-level course introduces the principles of computational methods and numerical modeling in the Earth Sciences. Students will use modern computational techniques and tools to solve real-world problems. The course is designed to provide students the opportunity to apply computer and mathematical procedures to the solution of Earth and Environmental Science problems. Emphasis is placed on hydrologic systems, including groundwater, surface water, and atmospheric water. Particular attention is paid to modeling natural systems using a range of

Course Descriptions

techniques and software packages. Additional topics in the Earth Sciences may be addressed, including global climate and geophysical models. A written project will be required.

GLG441 - Advanced Environmental Geology

This course deals with problems and issues associated with the interaction between the natural environment and mankind. Emphasis is placed on an in-depth study of an environmental problem or issue and technological solutions that address the issue. Basic engineering principles as applied to geological problems are considered. Lectures, laboratory exercises and problems, field reports and a research paper are an integral part of the course.

GLG448 - Watershed Evaluation

This course introduces students to the hydrology and management concepts of watersheds. The course will cover the physical nature of water (quantity and quality) as well as water balance of systems, the morphology and ecology of fluvial systems including hillslopes, floodplains, and riparian corridors, and the intersection of water with land use and human activities. The course places these concepts in the context of water issues that affect water supply, land use, ecosystem health, and human engineering of the natural environment. Lectures, laboratory exercises and problems, field reports and a research paper are an integral part of the course.

GLG455 - Geochronology

This course focuses on the various techniques used in the earth sciences to provide accurate quantitative ages for terrestrial and extraterrestrial rocks and minerals. Earth and planetary science is gradually becoming more dependent on accurate ages from natural materials and essentially all sub disciplines in earth science can benefit directly from these analyses. An understanding of the limitations and advantages involved with the various styles of geochronologic dating is critical to the successful determination of which method to employ in each different setting. In addition, various techniques related to utilization of geochronologic datasets in tectonic reconstructions

Course Descriptions

and planetary geology will also be emphasized. The ability to critically evaluate peer-reviewed literature utilizing geochronologic methodology will be a core component of the course.

GLG492 - Field Course in Geology

This course provides the opportunity for a student to identify an unanswered question regarding geologic phenomena including hydrologic, geochemical, structural, and petrographic studies and thoroughly answer that question using rigorous field methodology and efficient data analysis practices. Students will personally collect meaningful and original datasets to answer their self-defined research question, analyze their data, and disseminate the results to their peers and select professionals to gain experience with field methodologies and the processes of scientific research.

GLG496 - Seminar in Geology

In this scientific writing course students pursue a geologic topic through library and field research. Students learn to define a geologic problem, to obtain relevant literature, to gather raw data, and to write and present a research paper.

GMS-General Military Science

GMS101 - General Military Science 101

GMS 101 introduces you to the personal challenges and competencies that are critical for effective leadership. You will learn how the personal development of life skills such as goal setting, time management, physical fitness, and stress management relate to leadership, officership, and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions, attributes and core leader competencies while gaining a big picture understanding of the ROTC program, its purpose in the Army, and its advantages for the student.

GMS102 - Foundations of Leadership

GMS 102 overviews leadership fundamentals such as setting direction, problem-solving, listening, presenting briefs, providing feedback, and using effective writing skills. Cadets explore dimensions of leadership values, attributes, skills, and actions in the context of practical, hands-on, and interactive exercises.

GMS201 - General Military Science 201

GMS 201 explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and two historical leadership theories that form the basis of the Army Leadership Requirements Model (trait and behavior theories). Cadets practice aspects of personal motivation and team building in the context of planning, executing, and assessing team exercises and participating in leadership labs. Focus is on continued development of the knowledge of leadership values and attributes through an understanding of Army rank, structure, and duties, and basic aspects of land navigation and squad tactics. Case studies provide tangible context for learning the Soldier's Creed and Warrior Ethos as they apply in the Contemporary Operating Environment (COE).

GMS202 - Applications of Leadership and CBT PWR

GMS 202 examines the challenges of leading teams in the complex operational environment. The course highlights dimensions of terrain analysis, patrolling, and operation orders. Further study of the theoretical basis of the Army Leadership Requirements Model explores the dynamics of adaptive leadership in the context of military operations. GMS 202 prepares cadets for GMS 301. Cadets develop greater self awareness as they assess their own leadership styles and practice communication and team building skills. Case studies give insight into the importance and practice of teamwork and tactics in real-world scenarios.

GMS301 - Military Science Leadership

You are challenged to study, practice, and evaluate adaptive team leadership skills as you are presented with the demands of the ROTC Leader Development and Assessment Course (LDAC). Challenging scenarios related to small unit tactical operations are used to develop self awareness and critical thinking skills. You will receive systematic and specific feedback on their leadership abilities.

GMS302 - Military Science Leadership

This is an academically challenging course in which you will study, practice, and apply the fundamentals of Army leadership, officership, Army values and ethics, personal development, and small unit tactics at the team and squad level. At the conclusion of this course, you will be capable of planning, coordinating, navigating, motivating and leading a team or squad in the execution of a tactical mission during a classroom PE, a Leadership Lab, or during a Situational Training Exercise (STX) in a field environment. Successful completion of this course will help prepare you for success at the ROTC Leader Development and Assessment Course (LDAC) which you will attend next summer at Fort Lewis, Wash. This course includes reading assignments, homework assignments, small group assignments, briefings, case studies, and practical exercises, a mid-term exam, and a final exam. You will receive systematic and specific feedback on your leader attributes values and core leader competencies from your instructor and other ROTC cadre and MS IV cadets who will evaluate you using the ROTC Leader Development Program (LDP) model.

GMS401 - Military Science Leadership

GMS 401 is a practical application of adaptive leadership. Throughout the semester, students are assigned the duties and responsibilities of an Army staff officer and must apply the fundamentals of principles of training, the training management, the Army writing style and military decision making to weekly training meetings. During these weekly training meetings, the student will plan, execute and assess ROTC training and recruiting events. Students will study the special trust proposed to Army officers by the US Constitution and the President of the

Course Descriptions

United States--a special trust given to no other civilian professions. Students will study how Army values and leader ethics are applied in the Contemporary Operating Environment and how these values and ethics are relevant to everyday life. The student will study the Army officer's role in the Uniform Code of Military Justice, the counseling of subordinates, administrative actions and the management of an Army Officer's career. Students will be given numerous opportunities to train, mentor and evaluate underclass students enrolled in the ROTC Basic Course while being mentored and evaluated by experienced ROTC cadre. The GMS 401 course is designed to include multiple opportunities for student-centered learning, to include, but not limited to student reading assignments; homework assignments; participation in small group assignments, practical exercises and case studies; student-delivered briefings and operations orders; and a variety of student assessments such as quizzes, a mid-term and a final exam. In addition, MSL 401 students are rotated through a variety of leadership positions that support a variety of ROTC battalion training and recruiting events throughout the semester where the student will receive detailed and constructive feedback on his/her leader attributes and core leader competencies from experienced cadre.

GMS402 - Military Science Leadership

GMS 402 explores the dynamics of leading in the complex situations of current military operations in the Contemporary Operating Environment (COE). You will examine differences in customs and courtesies, military law, principles of war, and rules of engagement in the face of international terrorism. You will also explore aspects of interacting with non government organizations, civilians on the battlefield and host nation support. The course places significant emphasis on preparing you for BOLC II and III, and your first unit of assignment. It uses case studies, scenarios, and "What Now, Lieutenant?" exercises to prepare you to face the complex ethical and practical demands of leading as a commissioned officer in the United States Army. This semester, you will 1) Explore military professional ethics and ethical decision making facing an officer; 2) Gain practical experience in cadet battalion leadership roles; 3) Demonstrate personal skills in operations and communications; 4) Evaluate & develop MSL III small unit leaders & examine issues of force protection in the COE; 5) Prepare for the transition to a career as an Army officer.

GTY-Gerontology

GTY100 - Introduction to Gerontology

An introduction to the field of aging for majors and non-majors. A general overview of the psychological, biological, cultural and behavioral aspects of late life.

GTY200 - Aging in American Society

This course reviews the physical, social and cultural aspects of aging within the context of contemporary demographic and historical variables. Students will assess the impact of aging on the individual, the family, the workplace, the community and the U.S. society as a whole. Theories about roles and adjustments in later life are examined from a cross-cultural perspective to determine their relevance for both rural and urban settings.

GTY300 - Aging Policies and Services

This course provides a review of the public policies that have the greatest influence on the lives of older persons and those that have been promulgated especially because of concern for older persons. The major policies affecting older Americans are discussed in detail. The course will also discuss the evolution of policies as an outgrowth of developments in our society and the processes by which policies are introduced, debated, and established. The course will also examine the controversies, choices, and decisions involved in current policy debates and examine ways in which practitioners in aging can be involved in the policy process.

GTY305 - Biology of Aging

Introduction to biological aspects of aging, both normal and pathological. Studied are age-related changes in the digestive, skin, musculoskeletal, endocrine and reproductive systems.

GTY310 - Aging and the Family

Overview of the theory/research on families in later life, including a synthesis and review of existing literature, identification of research issues and needs and implications of this information for practitioners, researchers, and family members.

GTY315 - Practicum in Gerontology

Exploration of the professional skills required to work in the field of gerontology and the positions available through working in such an agency under the joint supervision of a community partner and gerontology faculty member.

GTY320 - Alternatives in Long Term Care

Exploration of the current and emerging options for older adults needing long-term care, including institutional and community-based approaches.

GTY330 - Dying, Death and Bereavement

Introduction and survey of the current issues, concepts and practices of the social and psychological aspects of dying, death and bereavement.

GTY340 - Diversity in Aging

This course is designed to provide an understanding of the diversity among aging individuals and subgroups in this country and in other countries around the world. The course surveys aging in this country and around the world with a view toward identifying commonalities and varieties of the aging experience; demographic features; values; kinship; economics; policies; and political, religious and educational roles.

GTY350 - Ethical Issues in Aging

This course examines the difficult and perplexing issues facing those who work in the field of gerontology or those who are involved in the care of older adults from a personal perspective. Issues such as competence, independence, informed consent, managed risk, surrogate decision making, rational suicide and patient autonomy are examined. The course also helps students to develop a personal, professional, ethical framework within which to consider legal and ethical issues in working with older adults.

GTY380 - Wellness and Aging

This course examines the prevention or moderation of age-related physical changes and shows ways in which individuals can have greater personal control over the individual aging process by directing attention to significant lifestyle modifications and preventive health care strategies. The course also considers the psychological and social implications of age-related changes for human behavior.

GTY400 - Adult Development and Aging

Introduction to psychology of aging. An overview of later life cognitive processes including intelligence, learning, memory, problem solving, and creativity. Examination of adult socialization, personality adjustment, psychopathology, and death.

GTY410 - Research Methods in Gerontology

This course presents information and requires completion of assignments designed to develop the skills gerontologists need: 1) to formulate research questions and determine the method(s) of investigation likely to obtain the most meaningful results; 2) to identify literature relevant to one's study, read it critically and summarize the pertinent findings; and 3) to write research proposals related to aging. Emphasis is placed on developing library research skills, critically analyzing research and becoming a knowledgeable consumer of research.

GTY430 - Seminar in Gerontology

For advanced gerontology students to intensively examine and discuss selected aging subjects. Topics chosen by instructor; research paper/project required.

GTY440 - Internship

Development of the professional skills required to work in the field of gerontology through working in an agency under the joint supervision of a community partner and gerontology faculty member.

HIN-Harrisburg Internship

HIN374 - Harrisburg Internship Assignment

This internship gives selected students an opportunity to work in various state government offices, including the Governor's office, the Senate and the House of Representatives.

HIN375 - Harrisburg Internship

This course is completed in conjunction with HIN 374.

HIN376 - Public Policymaking

This seminar is completed in conjunction with HIN 374.

HIS-History

HIS101 - United States History to 1877

American history from the Pilgrims to the age of modern industry: the Colonial heritage, American Revolution, the emergence of a new nation, westward expansion, Civil War and postwar Reconstruction.

HIS102 - United States History since 1877

The emergence of modern America, its achievements and its problems: prosperity and depression, war and social unrest, World War I through the Vietnam era and beyond, and the computer age and its challenges.

HIS104 - History of Western Society to 1500

Western society from its origins in the Near East to the period of Absolutism in Europe.

HIS106 - History of Western Society Since 1500

This course covers Western society from the Enlightenment to the present. This course is a survey lecture course with class discussion encouraged. The course is intended to impart a basic knowledge of historical events crucial to the development of western civilization from the Enlightenment through the present day.

HIS111 - World Civilization to 1500

The process and interplay of the major world cultures in their evolution: Indian, Muslim, East Asian (China, Korea, Japan), Slavic, Western European, Latin American and African.

HIS112 - World Civilizations since 1500

Significant factors influencing change in the world's major cultural areas: industrialization and urban conflict, the democratic revolution, and the rise of charismatic leaders from Napoleon to Hitler.

HIS200 - History of Pennsylvania

The history of Pennsylvania from Colonial times to the present: the changes involved in social, economic and political life are treated from internal and external points of view.

HIS240 - History of the Cold War

The origins and continuance of Soviet-American rivalry since World War II. Confrontation in Europe; NATO; the Warsaw Pact; the growing nuclear arsenal; regional conflict in Africa, Latin America and Asia; the Congo, Angola, Cuba, Iran, China and Vietnam; the politics and leadership of both nations; the emergence of Russia as a global power.

HIS288 - Local History

An introduction to the location, evaluation, and significance of local history by using the problem-solving and genealogical approach. Specific topics are analyzed in order to get to know at firsthand the importance of local and family history.

HIS295 - The Craft History

This course acquaints students who are considering history as a major or minor field of study with basic historiography and historical methodology. Students receive a hands-on introduction to historical research and writing, and learn about various schools of history to prepare them for upper-level history courses.

HIS303 - Military History through Wargaming

This course uses military simulations (usually referred to as “war games”) to examine the military side of history. The war games involved are complex simulations which allow both recreations of historical battles and also the exploration of what might have happened had historical events turned out differently. Students will study and discuss the conflicts under consideration in class before and after each simulation/game session, and will prepare written reports analyzing how their simulations of the battles worked out, why, and what they did right and wrong.

HIS304 - The Great Depression and World War II

The stresses and strains of the 1930-1945 period of United States history using recent trends in scholarship.

HIS305 - Contemporary U.S. History

The unprecedented changes that have occurred in the United States since the end of World War II.

HIS308 - History of American Constitution

The growth of the American constitutional system, with special emphasis on those aspects of constitutional growth that relate closely to the fundamental structure of American government and social order.

HIS310 - Christianity to 1500

This course explore Christianity’s role in transforming western society from earliest times to the fifteenth century, through study of its belief system, the growth of monasticism and the institutional church, issues of dissent and reform, and more.

HIS311 - Public History

This course is an overview of the methods and arenas of the public historian. Through hands-on experience in labs focused on such areas as museum design, collection development, museum education, archival management, historical preservation and historical editing, the student will gain an understanding of the challenges and rewards of the public historian.

HIS315 - Christianity since 1500

This course explores Christianity's role in western society from the time of the Reformation to the present day, through study of its belief system, the impact of the Protestant Reformation, the reaction of Christianity to challenges such as the Enlightenment and the revolutions of the eighteenth through the twenty-first centuries, issues of dissent and reform, and more.

HIS317 - African American History to 1877

This course explores great western African civilizations, the three continents involved in the transatlantic slave trade with special attention on the middle passage. Particular attention will be paid to African retention, African-Americans and the Colonial period and the new nation, the construction of race, the peculiar institution of slavery, free black populations, black resistance to subjugation, abolitionism, gender dynamics, blacks during the Civil War and the Reconstruction eras. The course also offers analysis of African-American literature, spirituals and other cultural manifestations.

HIS318 - African American History since 1877

The course surveys African-Americans in the aftermath of Reconstruction and during the Nadir period, the Great Migration, black urbanization, black cultural manifestations and movements, the rise of black protests, the Civil Rights and Black Power movements, and African-American involvement in 20th century war efforts and postindustrial America. This course also examines themes of identity, gender dynamics, leadership, pan-

Course Descriptions

Africanism, nationalism, American politics and economic issues as they all pertain to African-Americans.

Additionally, this course will examine the massive African-American literary canon, as well as two of the most significant cultural epochs, which include the proliferation, demise, and legacy of the Harlem Renaissance, as well as the permanence of hip-hop.

HIS322 - History of Religious Persecution in the U.S.

Religious tolerance and religious persecution have been recurring themes in U.S. history; from the first encounters with Native Americans to continuing controversies over school prayer, religion has played a major role in the development of American culture. This class will examine the diverse groups that sought to practice their religions freely in the U.S. and how they suffered forms of persecution; it will also explore the meaning of the First Amendment and claims of religious freedom.

HIS323 - World Environmental History

Traces the impact of the environment and environmental change on major world cultures and historical events from the Stone Age to the present through the examination of select case studies; explores the impact of different modes of production; the Columbian exchange; and different cultural conceptions of civilization.

HIS324 - The History of Women, Gender and Sexuality in the Modern World

This class will look at comparative women's history, focusing on topics such as sexuality, marriage, beauty and motherhood. Examples will be drawn from all over the world - and from various time periods from 1300 to the present.

HIS325 - Women in U.S. History

A study of women's lives in America from the Colonial era until the present, this course places special emphasis on non-elite women, whose lives have often been hidden or devalued in the annals of history. Topics explored include reform, abolition, political activism, working conditions and contemporary issues.

HIS327 - History of the Civil War & Reconstruction

The American Civil War is the most critical event in the creation of the United States. This watershed ended forever the practice of chattel slavery that had significantly shaped the country. The South as a distinct region changed considerably due to the war in ways that reverberate to the 21st Century while the North also embarked on a new course forward. The process of reuniting the country proved almost as divisive and the war itself. Reconstruction was a complex period that reveals a great deal about 19th Century America. This course examines the history of this national crisis and evaluates how it shaped the nation as a whole.

HIS329 - History Internship

Application of historical methodologies to various professional environments, under faculty supervision.

HIS331 - Ancient Greece

This course provides an overview of the history of ancient Greece, from its earliest foundations in Minoa, through Mycenae, the Greek Dark Age, archaic Greece, classical Greece and the Hellenistic period.

HIS333 - Film and History

Film in History is a course that assesses the important political, economic and cultural roles that film and the film industry play in the world. This study of cinema includes the importance of film in shaping our attitudes toward history as well as its central place in determining the visual language of cultures.

HIS341 - Early Middle Ages

This course traces the story of civilization and culture from late antiquity to the beginnings of the High Middle Ages and the First Crusade.

HIS342 - High and Late Middle Ages

This course will focus on the development of the civilization of medieval Europe from approximately AD 1100 to 1500, with supporting material both before and after the period.

HIS345 - Rise and Expansion of Islam

This course traces the history of the Islamic world from its foundation by Muhammad in the seventh century to the last siege of Vienna in the 17th century. Emphasis is on the Near East, Europe and North Africa and on interactions between the Muslim and Christian worlds.

HIS347 - History of Race and Ethnic in the United States

This course focuses on the changing ethnic and racial make-up of the American population from colonial times to the 20th century. We will consider who came to America and why, how people define their own ethnicity and the ethnicity of others, how ethnicity and race relate to each other, and how cultural diversity has shaped life in the U.S.

HIS348 - History of American Sport

This course offers the history of sport as a subject for scholarly study. It presents sport as a pervasive facet of our popular culture, as a social institution, as an arena of human activity, as drama, even spectacle. The course emphasizes the history of sport as a study of cultural values and value conflict, and also examines the relationship

Course Descriptions

of sport to social change. It investigates, among other things, the literature of sport, the economics of sport, and the influence of modern sport on our language, politics, religion and education.

HIS350 - Adolf Hitler

The philosophical and psychological elements of Adolph Hitler's life that led to the rise of National Socialism, and its impact upon the western world.

HIS352 - Native American history to 1850

A survey of the history of Native Americans. The class will focus on the major tribal groups that interacted with and impacted the course of American history. We will look at various aspects of Indian life such as gender divisions, political expression, and social organization. A major point of the course will to be recognize the contributions of native peoples in shaping the development of the American nation.

HIS353 - Native American history from 1850

A survey of the history of Native Americans. The class will focus on the major tribal groups that interacted with and impacted the course of American history. We will look at various aspects of Indian life such as gender divisions, political expression, and social organization. A major point of the course will to be recognize the contributions of native peoples in shaping the development of the American nation.

HIS355 - US Civil Rights Movement

This course will explore the modern Civil Rights Movement in the United States as a component of the larger Black Freedom Movement, which spans from Africans' arrival in North America until today. Scholars throughout multiple disciplines consider the Civil Rights Movement in the US to be the most significant social movement of the 20th century, which students will evaluate. In analyzing the Civil Rights Movements, students will gauge major organizations, events, theaters, national and local leaders. Important victories, legislation and legacies will

Course Descriptions

also be explored. The course will pay special attention to the social categories of gender, class, race, region and age/youth. The latter portion of the course will explore the long-term and immediate legacies of the Civil Rights movement such as its impact on the Women's Movement, Chicano Movement, LGBT Movement and Black Power Movement.

HIS356 - History of Colonial and Revolutionary America

The founding centuries of our nation shaped the course of the United States. The combination of native inhabitants and immigrants created a unique society which experimented with new ideas for the future. The course will explore American history from the arrival of Europeans to the closing days of a successful rebellion against Britain.

HIS366 - History of Modern Latin America

The emergence of modern Latin America from independence to Castro; economic and social development of the region in the 20th century; struggle for social justice among diverse cultures; conflicts within Latin American political life; military dictatorships; parliamentary democracy; guerrilla warfare; and counter terrorism.

HIS369 - The Legacy of Vietnam

The main goal of this course is to get you to think critically about the Vietnam War. The first portion of this course will explore the origins, escalation and conclusion of American involvement in the Vietnam "War" from roughly 1945 to 1975 through lectures, readings, discussions and oral interviews of war veterans. The second portion of this course will consider the political, social and economic aftermath of the war on both the US and Vietnam. The course examines these ramifications mainly through the lens of film(dramatic and documentary) and assigned readings. Furthermore, the course will also explore Vietnam's continuing relevance today. Specifically, the course will address the lessons and legacies of the war and why they continue to influence American thinking and foreign and military policy. Additionally, students will consider historical debates about how the war should be interpreted.

HIS379 - Special Problems in History

Topical historical studies determined by departmental faculty.

HIS380 - Readings in African American Studies

This course will examine the history and evolution of the discipline, key scholars, ideas, themes, central disciplinary questions and debates, and prominent theoretical and methodological frameworks used by scholars of African-American Studies (or alternatively Black Studies, Diasporic Studies Africana Studies and African Studies). Students will also evaluate social and political thought and literary, cultural, and aesthetic forms of expression. In all, students will acquire the necessary skills to critically engage each other on the interdisciplinary scholarship within African American Studies.

HIS402 - History of the Nineteenth Century United States

This course focuses on major events and trends in United States in the 19th century. Major topics of study include slavery, abolitionism, the Civil War, industrialization and reform.

HIS410 - Crusades

This course examines the wars fought by Christians in defense of Christendom, from the confrontation between the Byzantines and Arabs in the seventh century to the siege of Vienna in 1683. Special attention is paid to expeditions to the Holy Land in the 11th, 12th and 13th centuries.

HIS420 - Renaissance & Reformation in Europe

This course is a study of the Renaissance and the Reformation in Europe from the 14th to 16th centuries, with an emphasis on the Italian Renaissance, northern humanism, and the appearance and character of the principal branches of Protestantism.

HIS430 - Topics in Modern Asian Cultural History

This course focuses on the modern Asian cultural histories of India, China and Japan. Major topics include Hinduism, Buddhism, Daoism, Legalism, Confucianism, Islam, Bushido, Shintoism, Jainism, imperialism (and Anti-Imperialism) and industrialization and their impact on Asian culture and politics.

HIS435 - History of Law

This course will trace the origins of Western law from the Roman Republic's Law of the Twelve Tables to the American Articles of the Confederation. Students will gain an understanding of Roman, feudal, Canon, English common, German, French and Spanish legal traditions.

HIS440 - U.S. at War: 19th century

This class examines the principal causes for U.S. foreign wars (declared and undeclared) in the 19th century and the lasting consequences of those engagements, including political, legal, social, cultural, and economic factors. Students will study competing historical explanations for America's foreign wars, drawing their own conclusions about the efficacy of waging war. In addition to personal narratives of soldiers in combat, the class will focus on changes to society on the home front, racial or gender discrimination, war opposition, media portrayals, and the war's effect on U.S. territorial expansion or foreign policy.

HIS441 - U.S. at War: 20th Century

This class examines the principal causes for U.S. foreign wars (declared and undeclared) in the 20th century and the lasting consequences of those engagements, including political, legal, social, cultural, and economic factors. Students will study competing historical explanations for America's foreign wars, drawing their own conclusions about the efficacy of waging war. In addition to personal narratives of soldiers in combat, the class will focus on changes to society on the home front, racial or gender discrimination, war opposition, media portrayals, and the war's effect on U.S. foreign relations.

HIS491 - Readings in History

This course presents a series of guided readings in history, with emphasis given to the significant trends in the writing of history and historical scholarship since the mid-twentieth century.

HIS495 - Seminar in History

This course is a study of historians and their writings; changing interpretations of major topics in history; and historical research and writing.

HON-Honors

HON100 - Honors and University Orientation

This course provides the Honors student with a fairly comprehensive introduction to University life in general and the Honors Program in particular. Practical matters, including a comprehensive review of the Honors Program curriculum, requirements to remain in the program, advisement and registration procedures to be followed, and an elaboration and description of ancillary University services available to the student, are covered. The meaning and function of a university, the importance of the liberal/general education part of the curriculum, the relationship between the university and society, and current issues affecting the academy are addressed through selected readings and discussion. Also, students will be required to establish a portfolio that will be maintained throughout the undergraduate experience.

HON150 - Honors Composition I

As an introduction to university level writing and critical thinking, this course rehearses and refines students' abilities to construct argumentative essays incorporating secondary research, classical argumentation, and rhetorical analysis. The course involves significant reading assignments and is organized thematically to include British, American, and/or world literature, studies of historical periods or events, studies of philosophical questions

Course Descriptions

or problems, or investigations of political and/or cultural importance. As preparation for college and professional writing, students will also practice appeals to authority and differing audiences as well as revising and critiquing their own writing and that of others.

HON200 - Honors Research Practice I

This course is intended for undergraduate Honors students in the second year. It builds on concepts introduced in HON 100 and HON 250, and it should serve as preparation both for the Honors Thesis Project (HON 499) and for other research projects related to Honors coursework or major coursework.

HON201 - Topics in Quantitative Problem Solving

This course will provide the student with an application-oriented, investigative quantitative problem-solving curriculum. Drawing from diverse disciplines in the fields of mathematics, engineering, the physical and life sciences, business, finance, computer science, and/or the social sciences, students will use technology and cooperative group work to solve real-life problems and gain a greater understanding and appreciation for quantitative analysis. This course is repeatable.

HON210 - Honors Introduction to Disciplinary Research in Mathematics and Quantitative Literacy

This course will make use of disciplinary norms and may explore any topic arising in the study of mathematics, the science of numbers and their operations, interrelations, combinations, generalizations, and abstractions and of space configurations and their structure, measurement, transformations, and generalizations. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

HON215 - Honors Introduction to Disciplinary Research in Technological Literacy

This course will make use of disciplinary norms and may explore any topic arising in learning and knowing how to use tools, resources, processes and systems to change or to control the natural and artificial environment, thus altering the human condition. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

HON220 - Introduction to Disciplinary Research in the Social Sciences

The course will make use of disciplinary norms and may explore any topic arising in the disciplines such as psychology, anthropology, sociology, social work, economics, archaeology, political science, linguistics, etc. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experience with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with permission of the instructor.

HON225 - Honors Introduction to Disciplinary Research in the Fine Arts

This course will make use of disciplinary norms and may explore any topic arising in disciplines such as art, dance, music, theatre, film, etc. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

HON230 - Introduction to Disciplinary Research in the Humanities

The course will make use of disciplinary norms and may explore any topic through a combination of any of, but not limited to, the following mediums: literature, fine arts, writing, photography, music, theater, film, graphic arts. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experience with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both.

HON235 - Honors Introduction to Disciplinary Research in the Natural Sciences

The course will make use of disciplinary norms and may explore any topic arising in disciplines such as (but not limited to) biology, chemistry, physics, earth sciences, environmental science, etc. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with permission of the instructor.

HON240 - Honors Introduction to Disciplinary Research in Public Speaking

This course will make use of disciplinary norms and may explore any topic arising in disciplines such as rhetoric, public speaking, and the history and theory of rhetoric, etc. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

HON245 - Honors Introduction to Disciplinary Research in Health and Wellness

This course will make use of disciplinary norms and may explore any topic arising in the study of health and wellness such as physical, emotional, social, spiritual, intellectual, and environmental health. Each course will focus on a specific topic, discipline, and area of scholarship as selected by the instructor. These will include at least one of the following emphases: eating and exercising toward a healthy active lifestyle, building healthy relationships, understanding and preventing disease, explaining alcohol and drug use and abuse, making healthy choices, and building healthy communities. No prior experiences with the topic and discipline is necessary, as the course will serve as an accelerated introduction to both. The course is repeatable with the permission of the instructor.

HON250 - Honors Composition II

Building on the skills learned in HON 150, this course shifts the focus to responding to the ideas of others and includes preparation and presentation of a major research project. The course involves significant reading assignments and is organized thematically to include British, American, and/or world literature, studies of historical periods or events, studies of philosophical questions or problems, or investigations of political and/or cultural importance.

HON270 - Global Transitions II

This trans-disciplinary course rooted in the history of humankind is the second in a two-semester sophomore sequence on the origin, nature, accomplishments and failures of the diverse complex societies of this planet. This panoramic investigation focuses on two major themes: 1) human interactions with the natural world, and 2) the ways that human societies have changed, grown apart from one another, re-established contact, and influenced one another. This course covers events from approximately 1300 C.E. to the present. Global Transitions since 1300 is a standalone course and need not be taken in conjunction with Global Transitions to 1300.

HON300 - Honors Research Practice II

This course is intended for undergraduate Honors students in the third year. It builds on concepts introduced in HON 100, HON 200, and HON 250, and it should serve as preparation both for the Honors Thesis Project (HON 499) and for other research projects related to Honors coursework or major coursework.

HON320 - Topics in Self and Society

This course is an interdisciplinary examination of the relationship between the self and society with the specific topic of each offering determined by the instructor. The selected topic may be explored through a combination of any of, but not limited to, the following approaches: history; political science; sociology; psychology; anthropology; economics; linguistics; archaeology; communications; ethnic, race, and gender studies; law; social work; and urban and rural studies. This course is repeatable.

HON330 - Topics in Culture and Society

Culture is not a new idea, and its meaning is a subject of debate. This course employs culture (and its political uses) as a lens through which to examine topics and texts in a range of disciplines from the social sciences, to media studies, to the humanities. In the process, this course examines some of the most pressing issues of today and the past. This course is repeatable.

HON335 - Topics in Science and Technology

This course is an interdisciplinary foray into the hard sciences. It does not presume a prior extensive knowledge of chemistry, biology, physics, mathematics, the environmental sciences, applications of technology and/or the philosophy or history of science. The course defines science and technology, their terminology and method of inquiry, the philosophical ideas underlying scientific inquiry, and how humans value them. Various topics, especially from the physical sciences, may be examined with an emphasis on the specific ways scientific inquiry tries to understand our experience, whether it reflects universal rationality or particular cultural concerns, whether

Course Descriptions

it offers understanding of nature or only control of (some) natural processes, and what impacts – both positive and negative – the application of technology has. This course is repeatable.

HON340 - Topics in Arts and Humanities

Each class will focus on a specific topic selected by the instructor. The selected topic may be explored through a combination of any of, but not limited to, the following mediums: literature, the fine arts, creative writing, photography, the graphic arts, music, theatre and film. This course is repeatable.

HON490 - Honors Research Seminar

This course is intended for undergraduate students at any stage of the University Honors Program who wish to develop an independent research project within their major or related to Honors coursework. Scientific work, research papers, creative efforts, service projects, are just some of the possible research projects. Each project will be tailored to the individual student, will involve close collaboration with a faculty member, and should ultimately be presented publicly or published.

HON499 - Honors Thesis

The senior Honors project serves as the capstone of the University Honors Program. Under the supervision of a faculty adviser of the student's choice, the Honors student seeks to make a substantive contribution to the discipline. Considerable latitude in the form of the contribution is permitted. Empirical and historical research as well as creative products are all appropriate. A reader/reviewer is assigned to independently pass judgment on the student's scholastic effort. An oral defense, demonstration, or display of the completed honors project is required.

HRM-Human Resource Management

HRM300 - Principles of Human Resource Management

Principles of Human Resource Management prepares students to work within diverse organizations. It helps them to better understand the responsibilities and skills required to be successful in an HR position. It also introduces them to the basic concepts of HR Management so that they can identify and/or implement best practices with regard to policies and procedures. It sets the foundation for future coursework in HR management and also prepares any student for working with people.

HRM310 - Compensation Management

An examination of the general structure of an organization and the rewards employees seek in exchange for the efforts and contributions they provide. Topics to be offered include people and word rewards, a motivating work environment, government and market influences, job contract analysis, developing pay structures, pay for performance, employee benefits, and administration of the compensation plan.

HRM322 - Human Resource Information Systems

This course is designed to provide an introduction to the use of technology in the administration of human resources, and how new technologies can contribute significantly to the efficiencies in the management of a company's human capital. It is designed to help students understand the integration of technology into the human resource department. It will address the strategic needs of organizations and how they are met through the use of human resource information.

HRM330 - Labor Relations

This course provides background and insight into the many areas and processes of labor relations. Students analyze and evaluate the role and effectiveness of labor organizations in today's society. Students compare and

Course Descriptions

evaluate the impacts and effects of labor organizations on both (unionized and non-unionized) organizations and employees. Although focused on current United States labor relations practices, global labor relations are also discussed. The course offers students the opportunity to explore labor organizations' influence on social, political, legal, economic, technical, cultural and global environments.

HRM340 - Managing Risks Associated with Human Resources

This course is designed to address business management risk issues specific to human resources. Students will evaluate risk from the perspective of HR management. Through this course, students will identify potential human-related risks associated with health, safety, security, and privacy and work to develop policies and procedures to mitigate risk. Students will learn how to conduct a workplace investigation once a potential breach occurs. Additionally, they will develop policies and procedures aimed at preventing and/or minimizing HR risk.

HRM400 - Human Resources Strategy and Planning

This course examines human resource management from a strategic perspective. It focuses on the major aspects of how an organization manages its people strategically, i.e. the strategies used for human resource acquisition and placement, the strategies used for maximizing human resource productivity, and the strategies used to maintain human resources. The course also examines the traditional human resource functions of recruitment, selection, training, compensation, and performance appraisals from a strategic perspective.

HRM410 - SHRM-CP/SHRM-SCP Certification Preparation

The Society of Human Resource Management (SHRM) sets the industry standard for HR practitioners in today's workplaces. This course is intended for senior-standing HR students and/or non-traditional students interested in sitting for the SHRM-CP exam. The Cal U BSBA – HR Concentration is certified by SHRM so that students are able to sit for the exam provided they meet the following requirements: 500 hours of HR work experience

Course Descriptions

(can be an internship) and senior standing. The course will cover SHRM competencies covered in the Body of Competency and Knowledge. It is a structured explanation of each competency as well as study tips and tricks within the Learning System. Completion of this course does not guarantee success on the SHRM-CP or SHRM-SCP, rather it helps students prepare for the exam. Course content reflects the SHRM Body of Competency and Knowledge. This course of study will in no way guarantee or assure success on the SHRM-CP® or SHRM-SCP® exam. Students must use the most recent edition of the SHRM® educational products for this course, and may not use outdated materials.

HRM462 - Global Workforce Management and Change

This course equips students with the ability to recognize the diversity in the global workforce that firms face in today's increasingly complex and unstable world. It provides a comprehensive understanding of the ways multinational firms can successfully integrate and draw on the talent available around the world. This course provides a framework within which to understand the legal, regulatory and business challenges of managing a global workforce. In an increasingly globalized labor market, managers must understand these challenges as they coordinate work practices across countries and prepare individuals for global assignments. The course includes a comparison of international labor markets in terms of costs, demand/supply, culture and law. Current events and case studies are used to illustrate issues faced by multinational firms including performance management, outsourcing, offshoring, and industrial relations.

HRM492 - HRM Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing human resource management-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

HSC-Health Science

HSC101 - Foundations of Health Science

HSC 101 provides an overview of various health science/health care professions, their histories, their education and licensing requirements, employment trends, earnings potential and career paths. Professional healthcare providers share their personal stories, introduce you to how they work with the healthcare system, and describe what a typical day is like. This course also allows you to learn the importance that interdisciplinary collaboration plays throughout your career while exploring the various fields under the Health Science umbrella.

HSC110 - Anatomy and Physiology I

This course entails the study of the structures and functions of the human body. The course takes a systematic, level of complexity approach, beginning on the sub-cellular level and progressing to the study of entire organ systems. Specific systems that are studied include the integumentary, cardiovascular, lymphatic, gastrointestinal, respiratory, urinary, endocrine, and reproductive.

HSC115 - Current Health Issues

Current Health Issues is a course designed to convey information concerning the individual's role in establishing a healthful lifestyle as well as encouraging prevention of disease and a focus on healthful living. The basic themes from the text include personal responsibility, a commitment to prevention, practical applications of knowledge, and a focus on behavioral change.

HSC120 - Human Anatomy and Physiology II With Lab

This course, a continuation of Human Anatomy and Physiology I, entails the study of the structures and neuromuscular functions of the human body. The course takes a systematic approach to the study of the anatomy

Course Descriptions

and physiology of the bones, joints, muscles and nerves. Laboratory experiences reinforce the didactic portion with prosected human cadavers, human skeletons, and a variety of anatomical models.

HSC210 - Culturally Competent Community Health

This introductory course explores the complex determinants of health and strategies to improve the health of communities. Learners will explore community and public health theories and principles that are useful for the delivery of health care for all individuals. Learners will examine current delivery systems in the U.S. and will be introduced to the major areas of public health, epidemiology, health care management, environmental and social/behavioral health.

HSC225 - Medical Terminology

The study of medical terminology introduces students to the language of medicine. Students will gain an understanding of basic elements, rules of building and analyzing medical words, and medical terms associated with the body as a whole. Using a systems-approach, the student will define, interpret, and pronounce medical terms relating to structure and function, pathology, diagnosis, and clinical procedures, oncology, and pharmacology. In addition to medical terms, common abbreviations applicable to each system will be interpreted.

HSC250 - Nutrition for Health and Wellness

This introductory course is designed to provide learners with a basic understanding of nutritional principles including the energy metabolism, digestion, absorption, and transport of nutrients. Additionally, the course will provide information on the role of macronutrients and micronutrients. Weight management and nutrition throughout the lifespan will be discussed.

HSC275 - Functional Kinesiology

The biomechanics of motor performance. Prepares students to analyze movement in order to teach, correct or improve human performance.

HSC290 - Therapeutic Modalities

This course will use face-to-face and also Multi-Modal delivery. Per article 41 of the CBA, Multi-Modal is the delivery of instruction using face-to-face classroom instruction in addition to synchronous and/or asynchronous online technologies. The laboratory portion entails student access to specific equipment as well as significant hands-on-instruction and assessment of student competency of the hands-on skills. As such, the laboratory portion will be face-to-face. The lecture portion will utilize synchronous and/or asynchronous online technologies

HSC310 - Special Populations and Pathology of Disease

This course examines the disease process on the system level as well as specific needs of physically active individuals considered a special population or with known disabilities. Special emphasis is placed upon pathologies commonly encountered in the ambulatory care setting. Students will also investigate the basic concept of disease and the impact the disease has on the well-being of an individual. In this class, students will engage in an intensive writing assignment to evaluate current trends in pathology and management of disease or disability and how this may be altered in physical activity.

HSC315 - First Aid & Personal Safety

First Aid and Personal Safety is a course designed to convey information to understand the cause-effect, prevention and treatment of emergency situations. This course is recommended to all students, especially students in the teacher education program. Two year certification is offered by the American Heart Association.

HSC325 - Physiology of Exercise

The course covers the scientific theories and principles underlying strength, muscular endurance, cardiovascular endurance, flexibility, training and conditioning in human movement.

HSC360 - Holistic and Alternative Medicine

This course explores and introduces the learner to complementary and alternative medicine (CAM) treatments and therapies, covering a broad range of healing philosophies. Topics include but are not limited to; traditional Chinese medicine, aroma therapy, chiropractic, reflexology, herbal medicine, etc. The role of the naturopathic physician will be explored within this course. Students will examine methods of delivery, safety, practitioner expertise, cost, and effectiveness of. This is a writing intensive course which students will select a CAM therapy or treatment of their choice to explore more. Students will construct a CAT paper to demonstrate their understanding of the topic they choose.

HSC425 - Health Science Capstone

Students will produce a major culminating piece of academic work that synthesizes health science concepts and/or a career path. This will take the form of a research activity including original research, creation of an educational resource or other extensive produced work that is approved by the course instructor. Additionally, students will outline a career path in the health sciences, develop a resumes, practice interviewing skills and learn necessary skills and etiquette for networking as a professional.

INT-Global Studies

INT157 - American Military Experience in Global Context

This course provides students the opportunity to explore and research the personal and historical American military experience in a global context.

INT200 - Introduction to International Studies

An interdisciplinary course introducing students to the broad and varied approaches to international studies.

INT300 - Special Problems in International Studies

Topical study of contemporary and historical issues in International Studies determined by program faculty.

ITE-Industrial Technology

ITE135 - Digital Electronics

An introduction to the theory and application of logic gates, Boolean algebra, combinational logic, sequential logic, shift registers, counters, and arithmetic circuits. Laboratory experiments provide experiences with digital integrated circuits, circuit behavior and digital troubleshooting techniques. Laboratory exercises reinforce the theoretical concepts by providing hands-on experience with digital integrated circuits and digital troubleshooting equipment.

ITE181 - Materials Technology I

A study of the theory and application of materials and materials testing used in a wide variety of industrial applications. Study includes the chemical, physical, mechanical and dimensional properties of metallic materials, plastics, and ceramics. Sufficient background in general chemistry is included to provide the proper foundation for the various concepts being presented in class.

ITE215 - Computer-Aided Drafting (CAD) I

This course is an introduction to 2-D design and drafting using CAD. Students will create and manipulate basic geometric objects in order to create 2-D models. Experiences dealing with dimensioning, layers, and isometric drawing will also be incorporated. AutoCAD software will be used to teach this course.

ITE250 - Introduction to Automation

This course provides a variety of introductory experiences in industrial automation. Instruction will include theoretical applications as well as practical, hands-on laboratory applications in robotics, automatic guided vehicles (AGVs), computer-aided drafting (CAD), machine vision, automatic identification and programmable logic controllers (PLCs). Students learn what automation is, its advantages and disadvantages, and how it is applied.

ITE305 - OSHA General Industrial Safety

The purpose of the course is to provide instruction to entry-level workers and students on general safety and health. The course will be offered in either as a traditional “in-class” or an “on-line” teaching environment. Students enrolled in the traditional class/course (face to face) are eligible for an OSHA 30 hour General Industry Outreach Training card. Those enrolled in the “on-line” version of the course are not eligible. This course emphasizes hazard identification, avoidance and control. Topics covered include the following: introduction to OSHA, the OSHA Act/general duty clause, inspections, citations and penalties, record-keeping, walking and working surfaces, mean of egress and fire protection, electrical hazards, personal protective equipment, respiratory protection, hearing protection, machine guarding, hazard communication, chemical safety, lockout/tagout, confined space hazards, welding brazing and cutting hazards, asbestos awareness, hazardous materials, industrial hygiene, and ergonomics.

ITE315 - CAD II

This course is an extension of Computer-Aided Design into three-dimensional representations. Unlike traditional CAD that focuses on wire-frame and orthographic/isometric drawings, this course focuses on solid models of various components and assemblies. The concepts of rendering, animating and properties analysis are introduced.

ITE341 - Quality Control

An introduction to the methods used in analyzing quality control, this course's topics include a study of the fundamentals of statistics and probability, the construction and use of control and attribute charts, the definition and use of acceptance criteria, and the use of computers in modern quality control operations. An overview of the role of the quality control department of a manufacturing facility will be presented.

ITE342 - Quality Planning and Analysis

This course builds on the techniques learned in Quality Control and applies those techniques to an industrial organization in a practical way. The student will learn the basics of the six sigma approach to quality and the use of quality functional deployment to identify customer needs. Students will study how a quality plan can be developed and implemented. The course will apply quality to all aspects of the organization, including personnel, shop floor operations, the supply chain, and products and services.

ITE375 - Principles of Production

An introduction to the methods used in analyzing the production flow from raw materials to the finished products. Topics covered include a study of operations types, operations layout, decision analysis, work measurements, production and inventory control, scheduling and waiting line analysis. An overview of the role of production management will be presented.

ITE376 - Technical Supervision

This course builds upon the information presented in the Principles of Production course and brings the human factor into operations. The student will learn the basics of the supervision of technical operations with a focus on the shop floor. This course will include the basis for motivating employees and will identify some of the special problems associated with technical production and manufacturing.

ITE385 - Industrial Cost Estimating

An introduction to the methods used to cost and budget a production organization, this course covers some accounting basics, cost accounting, the time value of money and cost estimating as related to industrial operations.

ITE420 - Production Analysis

An introduction to the methods used in analyzing the production flow from raw materials to the finished product. Topics covered include a study of the major manufacturing processes, materials handling, plant layout, operations analysis, industrial engineering, inventory control and shipping. An overview of the role of production management as it relates to the various areas of an industrial environment will be presented.

ITE460 - Principles of Manufacturing

An introduction to the methods used in manufacturing processes, this course includes a study of the manufacturing ability, fabricability and marketability of manufactured products. Problems encountered by production managers in changing raw materials into a consumable product are discussed. The use of personal computers for the solution of manufacturing problems is included.

ITE461 - Supply Chain Fundamentals

A key item in the management of a manufacturing operation is the making of intelligent decisions. The manufacturing planning and inventory control systems provide the information to efficiently manage the flow of materials, effectively utilize people and equipment, coordinate internal activities with those of suppliers, and communicate with customers about market requirements. This course will provide an overview of the basic principles of production and inventory control, including MRP, JIT, master scheduling, capacity planning, demand management, and the integration of these basic principles.

ITE462 - Inventory Scheduling and Planning

This course will be the second course taken by students in the general area of production and inventory control. Focus of this course is on the various techniques for material and capacity scheduling. Included will be detailed descriptions of material requirements planning (MRP), capacity requirements planning (CRP), inventory management practices, and procurement and supplier planning. Topics include recognizing techniques and practices of inventory management, the mechanics of the detailed material planning process, the planning operations to support the priority plan, and the planning procurement and external sources of supply.

ITE471 - Project Management

Operations and projects differ in that operations are ongoing while projects are temporary. A project, by its very nature, is also unique and requires particular knowledge of how the components combine to form an integrated whole. This course will introduce the student to the field of project management and will present an overview of the body of knowledge necessary for successful project management. The course will focus on the fundamental principles that cross the boundaries of projects and will demonstrate how project management techniques can be applied to a wide variety of disciplines. This course will also introduce the student to computer methods for solving project management problems.

ITE476 - Lean Enterprise

Production systems consist of more than the machines that produce the consumer products. Other parts of the business operation contribute to the production and must be included in any discussion.

ITE481 - Concepts and Issues in Technology Management

This course combines the elements of Technology Management, providing the participant with the opportunity to study concepts and issues typically encountered by an industrial technologist. This multi-disciplinary course is intended as an overview of Technology Management as a discipline with emphases on the operation and performance of technological systems in industry and their effect on people and the environment. Also, the potential and limitations of the future developments in technological systems and their use in industry is discussed. Diversified approaches will be used to explore some crucial contemporary industry concepts and issues including problem solving and role-playing in various industrial settings and situations.

ITE495 - Technology Management Internship

Student interns work with an industrial organization which most nearly approximates their goals for employment. The intent of the internship is to provide students with practical work experience in an environment in which they will be dealing with practical problems requiring real solutions in a relative short time frame. Working with the Internship Center, advisor and department chairperson approval are required before course enrollment. Credit for this course shall be awarded as one academic credit for each 40 hours of internship work. During the internship, students will be limited to three weeks of activities in one discipline area. For the purposes of this internship, a discipline area is defined as an area of industrial work that would normally be taught by one undergraduate course.

ITE499 - Research Project

This course is designed to provide supervised research experience in initiating, designing, analyzing, documenting and presenting original research in an area of interest to the student. This course is to be completed under the supervision and direction of a faculty member who will work with the student to develop an appropriate topic and methodology for investigation.

JUR-Jurisprudence

JUR300 - Classical Jurisprudence

A comprehensive overview of ancient and classical jurisprudence forms the foundation of this course. Commencing with an in-depth examination of the Plato's Laws, the course will delve deeply into this original contribution whereby law is considered transcendently. From there the course moves to Cicero and his remarkable work on law and nature, his naturalism and his discourse on legal ethics and public duty. Next, the concept of justice as espoused by Aristotle is fully examined as well as other juris-prudential resources of ancient Rome and Greece.

JUR310 - Medieval Jurisprudence

The course examines the dynamic evolution of legal theory and jurisprudence from the early to latter Middle Ages. Beginning with Augustine's inquiry into the nature of free will, human action and personal responsibility, the course will then weave its way into early themes and threads of natural law tradition. Concepts of justice and injustice will be fully assessed as well as early commentary on the nature of an unjust law and civil disobedience. The second part of the course will intensely examine the jurisprudence of Thomas Aquinas especially as espoused in his Treatise on Law.

JUR320 - Anglo-American Jurisprudence

The primary aim of this course is the introduction of mainline American theories of law and jurisprudence from its common law roots to the founding period of this nation. At issue is the evolution of our current legal institutions and principles. How does a body of law and practice become fully ensconced into the dynamism known as America? How does the English system influence the American model? The course looks at legal definitions, legal procedures and processes, common law principles, the role of judge, jury and the tribunal, the pedagogy of legal education, the types of legal professions common to Western democracies as well as the development of ecclesiastical, equitable, civil and criminal systems. Finally, the course examines some of the more influential thinkers in law and jurisprudence at the time of this nation's founding including Locke, Mill and Jefferson

JUS-Criminal Justice

JUS101 - Introduction to Criminal Justice Studies

The course covers the nature, scope and impact of crime in the United States; independent and interdependent operations and procedures of police, courts and corrections; and introductory theories of crime and delinquency. The course introduces the justice model in a systematic way whereby students delve into the numerous components of the justice system, including law enforcement, legal and judicial process and correctional operations. Career opportunities will be fully covered throughout the course.

JUS102 - Introduction to Law Enforcement

An introduction to the law enforcement system in America, which is the gateway to the criminal justice process, this course covers topics such as the historical foundations of police processes, occupational roles and tasks of law enforcement, and the nature and designs of typical, as well as innovative, police systems. Perennial problems of policing, particularly as it relates to community interaction, are also essential components of the course.

JUS103 - Correctional Systems

Course examines the management, structure and organizational design of correctional institutions. Correctional planning, construction, program evaluation and community interaction will be considered, and improvement strategies for correctional operations will be debated and critiqued. The course provides a broad overview of the correctional system which incarcerates and confines, treats and reclaims criminal personalities, and protects and serves the state and the community by removing threats to the social order.

JUS104 - Introduction to Security

The various dimensions of security include physical, personal, and operational measures. Security professionals must not only prevent unauthorized access to equipment, installations, material, and documents; and safeguard against espionage, sabotage, damage, and theft, but protect VIPs from kidnapping and assassination and employees from discussing operational plans from the workplace. All public, private, corporate, and government agencies face new and complex security challenges across the full spectrum of operations. Globalization and new security threats challenge security operations, and could include the control of populations, information dominance, multinational and inter-agency connectivity, anti-terrorism or counter terrorism, target hardening, VIP protection and the use of other physical-security assets as a versatile force multiplier. This course will prepare the security and justice professional to operate in any environment that requires a need for complex coordination and security measures.

JUS105 - Introduction of Forensic Science

Forensic science applies scientific principles and techniques to the field of criminal justice. This introductory survey course is designed to expose students to the broad scope of forensic science. Special attention is paid to the collection, preservation, and analysis of physical evidence in criminal investigations across various scientific disciplines, as well as the introduction and presentation of evidence in a court of law. Topics discussed include: (a) the history of criminalistics; (b) crime scene documentation and investigative practices; c) the properties,

Course Descriptions

collection, and categorization of physical evidence—e.g. fingerprints, bodily fluids (serology), DNA, hair, soil, plants, fiber, tool marks, firearms and projectiles (ballistics); (d) the analysis of documents, voice, and digital evidence; (e) biometric identification systems; (f) scientific instruments used in crime labs; (g) forensic evidence in judicial proceedings; and, (h) careers in the field of forensic science.

JUS201 - Criminal Investigation

This course is a comprehensive examination of civil and criminal investigations in both public and private modes, including most major felony processes and relevant civil actions. Focus is on the fundamentals of the investigative process and the range of skills necessary for successful performance and management of investigations, including evidence gathering and analysis, witness assessment, field techniques, and linkage between investigative and prosecutorial agencies.

JUS205 - Principles of Homeland Security

Students will gain an understanding of homeland security by analyzing the various security principles and policies that establish a foundation upon which to organize U.S. security efforts as a nation. Students will study how the national strategy aligns and focuses homeland security functions within critical areas such as: (1) intelligence and warning, border and transportation security, domestic terrorism; (2) protecting critical infrastructure and defending against catastrophic terrorism; and (3) emergency preparedness and consequence management. The first area focuses primarily on preventing terrorist attacks, the second area on reducing the nation's vulnerabilities, and the third on minimizing the damage and recovery from the aftermath of terrorist attacks.

JUS211 - Organized Crime

This course covers the historical, criminological/theoretical, legal, investigative, and juridical aspects of domestic and transnational organized crime. It includes traditional organized crime such as La Cosa Nostra, as well emerging nontraditional associations such as outlaw motorcycle groups and relationships with terrorist

Course Descriptions

organizations. Studies will blend the scholarship surrounding organized crime with practical, contemporary investigative tools used to combat associated criminal activity such as racketeering, narcotics and dangerous drugs, syndicated gambling, and public corruption.

JUS215 - Victimology

This course will examine issues surrounding the central character in a criminal act – the victim. Contents are designed to develop an understanding of what it means to be victimized, including the physical, psychological and economic impact of crime upon victims, their families and society in general. Special consideration will be given to specific victim populations (i.e., survivors of homicides, sexual assault and family violence), secondary victimization by the criminal system, victim assistance program, and future trends in this field. A full review of how the American justice system has responded to the needs of victims is part of the course content and includes a look at victim testimony at sentencing and parole and probation hearings, victim notification, Megan's Law, victim advisory and protection services, and other means in which the judicial system assures victim participation during the adjudicative phase.

JUS220 - High Technology Crime Investigations

High Technology Crime Investigation is an emerging area within the criminal justice/security discipline. This course exposes students to the legal and technical aspects of high technology crime. Students are able to learn and apply their knowledge and skills to identify and address the risks and damages associated with high technology crimes, including high-tech frauds, email-based crimes, high-tech vice crimes, hackers, terrorists, pedophiles, and online child enticement. High-tech intelligence gathering and online resources are also covered.

JUS225 - Private and Corporate Investigations

This course is a comprehensive examination of the private investigation profession, often glamorized in the media, but little understood in actuality. Investigative techniques utilized in corporate and private venues will be

Course Descriptions

covered, as well as the legal and moral considerations private investigators are likely to encounter. In addition, students will learn the value of the Internet in conducting investigations.

JUS265 - Report Writing for Criminal Justice Professionals

This course examines the characteristics and importance of good report writing within the criminal justice system. Reports used in law enforcement and security, the courts, and corrections are explained and discussed. Elements of composition, required substance, proper and improper conclusions, and descriptions of persons and property are explained. Practice in writing reports is emphasized and proficiency must be demonstrated.

JUS305 - International Criminal Justice

This course compares and contrasts the criminal justice system of the United States with the systems of other countries on a substantive and procedural basis. It provides a thorough examination of other cultural models of law and justice so that differences in justice processing and definition become apparent. Emphasis is placed on international policing, international crimes and international courts.

JUS309 - White Collar Crime

This course considers crimes committed by corporations as well as white-collar criminals: how such crimes are defined; who commits or is victimized by them; which moral, ethical, legal and social contexts promote them; and how society responds. Procedural and policy considerations in the investigation and enforcement of relevant statutes will also be covered, including the concept of legal privilege, the role of the grand jury and other pretrial processes, evidentiary questions, litigation strategies, and potential sanctions and other punishments.

JUS320 - Applied Technologies in Criminal Justice

This course will examine the various technologies used in the criminal justice system, such as data collection, databases, data analysis, and forensic technology that is used by criminal justice practitioners. Students will also

Course Descriptions

apply the technologies used in criminal justice for crime prevention, criminal investigations, criminal prosecution, border security, risk management in correctional facilities, forensics, social media investigations, and tracking and locating suspects and offenders. Students will also explore legal and privacy concerns with technologies used in criminal justice.

JUS331 - Juvenile Justice

This course covers the juvenile justice system, with special emphasis on the way it procedurally differs from adult offender adjudication. The parts of the juvenile justice system, hearings, due process standards and constitutional mandates are fully reviewed. Status offenders and other youth classifications are considered together with a historical summary of juvenile court philosophy. New trends in the procedural disposition of juveniles, especially transfer to adult jurisdiction, types of punishment, suitability of the death penalty, are discussed.

JUS335 - Corporate Security Law

A focused examination familiarizes students with the origins and development of private security, with an emphasis on defining security's role in the administration of justice, its historical underpinnings, types of security services in the American marketplace, and the legal aspects of private-sector justice. Further considerations are regulation, licensing, the civil and criminal liability of security personnel, and the ongoing constitutional debate that surrounds private security enforcement. Exactly how private-sector justice operatives are legally liable for their conduct, as contrasted with the public justice official, is a major feature of the course design.

JUS338 - Executive Protection

Assassinations and kidnapping of political and corporate leadership has increased significantly in the past century. Terrorists and extremists groups, rogue states, drug cartels, transnational criminal groups, to local criminals and extremists working alone, have found an effective strategy to influence politics and societies. This course will prepare the security and justice studies student to operate and develop security policy in any environment

Course Descriptions

that requires complex coordination and security measures needed to protect executive leadership at all levels, to include their personal and organizational assets, and their families. This course will examine the theories of executive protection (security), analyze assassination and kidnapping case studies on the corporate, national, and international levels, determine security failures that have led to the assassination or kidnapping, and develop security policy to prevent such attacks.

JUS345 - Probation and Parole

This course examines the theory and practices of probation and parole with juvenile and adult offenders, including release philosophy, bail and petition, hearings on grant, revocation or denial, alternative community-based corrections, and legal issues that emerge in award revocation or imposition of probation and parole.

JUS361 - Court Systems

An examination of the American judicial system, highlighting state, local, and federal court systems, including an assessment of their hierarchy, subject matter and personal jurisdiction, this course will also review judicial reasoning, judicial process, and the chief personnel responsible for judicial operations. More particularly, the course will expose the various phases inherent in civil and criminal litigation, including the concepts of jurisdiction, venue, parties and the pleadings that guide advocacy.

JUS365 - Mock Trial Concepts

Courtroom procedures used in criminal and civil trial courts are studied as students examine the courtroom environment through guided reading and critical evaluation of a mock trial case study. Students are expected to participate in simulated mock trial proceedings in the classroom with an emphasis on the roles of law enforcement, attorneys, prosecutors, forensics, and expert witnesses in the trial process. This course requires both independent work product and team collaboration. It is recommended for students pursuing careers in legal fields, law enforcement, and forensics.

JUS375 - Criminal Law

An introduction to substantive criminal law that reviews the social, philosophical and legal foundations of criminal codification, the course also covers the historical development of criminal law in the U.S. Other subject matter includes parties to crimes, including principals/accessories, criminal capacity, criminal elements (e.g., mensrea and actusreus), and the specific crimes against person, property and public order. Lastly, the course captures criminal law from the defendant's perspective by reviewing the accused's mental states, potential defenses and uses of mitigation.

JUS376 - Criminal Procedure

Criminal Procedure is the study of the criminal justice process including the law of arrests, search and seizure; the making of bail; adjudication; pretrial and post-trial activities; and the nature of plea bargaining. Substantial emphasis is given to the constitutional protections afforded through the Bill of Rights, particularly the 4th, 5th, 6th, 8th and 14th. This course deals extensively with case law applications of these principles and the role of judge and jurist in the crafting of criminal process standards. This is a writing intensive course. Prerequisite: JUS 101 or permission of the instructor. (3 crs.)

JUS380 - Crime Scene Imaging

This course is designed to expose students to the crime scene imaging process while learning traditional film, video and digital imaging techniques. Techniques and methods of crime scene imaging focus on practical exercises as well as general viewpoints of crime scene documentation. Topics include the fundamentals of photographing scenes from general to specific utilizing the overall, middle range and close-up "three-step" method. Crime scene imaging techniques, both basic and advanced, will be discussed and practiced while photographing mock crime scenes. The advanced technique of crime scene imaging includes the use of digital cameras; the digital darkroom; crime scene panorama; creation of court charts; and the enhancement and

Course Descriptions

analysis of latent prints, footwear, tire impressions, questioned documents, security video image enhancement and restoration, etc.

JUS385 - Violence and the Media

This course will analyze media violence and its potential influence on various audiences. Specific variables will be examined in relation to aggression and consequently, violence. Violence will be examined within different media contexts - including news, film, television, pornography, advertising and Internet. The daily repetition of media violence will also be examined as it promotes the normalization and legitimization of violent behaviors. This course will also examine violence and aggression in relation to its historical, cultural, and contemporary influences and sources.

JUS394 - Problems in Policing

This course involves discussion and study of specific problems of law enforcement and policing in contemporary American society. It emphasizes the development, nature and function of law enforcement as it relates to public criminal justice rather than private sector justice. Topical coverage consists of ethics, corruption, deadly force and civil liabilities, and other dilemmas commonly faced in the modern police system.

JUS395 - Death Penalty

An examination of death penalty policies in the American justice system from a legal, ethical and jurisprudential perspective, this course includes analysis of case and statutory law, the principles of due process, and appellate rights.

JUS397 - Law and Evidence

This course is a comprehensive review of evidentiary principles and reveals how judges and trial lawyers actually think about evidentiary rules - particularly the Federal Rules of Evidence. It will show how evidentiary issues

Course Descriptions

arise before and during trial. The course will logically track the stages of a trial, from the opening statement(s) through direct examination, cross examination and closing arguments. Students will be required to advocate their respective case utilizing the evidentiary principles in a real criminal court environment and must use due diligence in preparing their respective roles.

JUS399 - Selected Topics in Criminal Justice

Focused examinations of an emerging and dynamic problem or issue are in the study and practice of criminal justice. Special subject matter not ordinarily covered in the existing curricula can be presented by interested faculty. Examples include but are not limited to: alternative punishment schemes, euthanasia and mercy killing, civil disobedience and the rule of law, minorities in the justice system, affirmative action policy, and police use of force and women in criminal justice.

JUS400 - Foreign Study in Law and Justice

This course provides students with a culminating opportunity to learn about and apply their content specific knowledge within the employment setting and/or abroad. Students will gain discipline perspective as well as be able to apply their knowledge gained in the field criminal justice to the vast agencies within the justice system. This course is an educational experience that contributes to the methods of inquiry that are employed within the coursework and it facilitates civic engagement on regional, state, national and global levels.

JUS405 - Cyber Security

Many aspects of our lives rely on the Internet and computers, including digital media communications (email, cell phones, texting, social media), government records, financial information, personal medical record. How are the data and the computer systems on which that data resides kept safe? The increasing volume and sophistication of cyber security threats including cyber terrorism, targeting phishing scams, identity theft, and other online vulnerabilities-demand that we remain vigilant about securing our homeland, computer systems and personal

Course Descriptions

information. Cyber security is an emerging area within the criminal justice/homeland security discipline. This course is designed to expose students to legal and technical aspects of cyber security. Students are able to learn and apply their knowledge and skills to identify and address the risks and damages associated with, digital fraud and cyber crimes, including computer crime, cyber terrorism, identity theft, cyber hacking and cyber virus and malicious code.

JUS410 - International Security Issues

The globalization of societies and fluid/political conditions and the growth of radical extremist groups has placed international security problems right at our door step. Our national security concerns are intertwined with our homeland security concerns. The dangerous security threats as a result of war/civil wars, terrorism, democratization, economic conditions, transnational crimes, corruption, or toxic leadership within the international community, will have a direct or indirect impact on US interests, safety, and security, to include our responsibility to protect the helpless and innocent. This course is designed to introduce the dimensions of the concept of Human Security, contemporary security issues, and problems that affect the international and homeland security arena. It is heavily weighted toward analyzing, evaluating and developing security tactics and techniques that can protect against, or mitigate the residual effects of political violence, low intensity conflicts, transnational crimes, leadership and corruption, coups, assassinations, public demonstrations and uprising, and terrorism. Fundamentally, this course is designed to acquaint the student with the complexity of these problems; techniques for examining and evaluating these problems, and then pursuing "security measures" to protect, mitigate, defend, and preempt the effects of these problems.

JUS415 - Multiculturalism and the Criminal Justice System

This course will focus on cultural needs of law enforcement to operate in a heterogeneous society with a high level of professionalism. It covers issues related to improve police performance in dealing with individuals from different ethnic backgrounds, classes, religions, and races in the United States. Students will be given case

Course Descriptions

studies related to different groups in the American Society and how law enforcement agencies handled and/or should have handled such cases.

JUS425 - Advanced Criminal Law and Investigation

This is an advanced course in criminal investigation and related law. The student will learn tactical and strategic criminal investigative techniques focusing on serious crimes such as murder, sexual assault, and hate crimes. Students will receive an update on substantive as well as procedural criminal law, and they will be able to critically analyze and strategically use circumstantial evidence in cases such as complex conspiracy trials and vice, narcotics, and federal and state racketeering investigations.

JUS429 - Terrorism

This course examines current terrorism, its origins and ideological bases, with particular attention to its relation to political institutions and the criminal justice process. Specific attention is given methods and means of the terrorist, motivations and modus operandi trends and predictability, and law enforcement's multifaceted reactions to its many devious forms. Legislative efforts to curb the scourge of terrorism are also highlighted.

JUS430 - Criminal Intelligence Analysis

This course will focus on the intelligence function and its use in crime analysis. It will introduce students to analytical techniques and solutions to everyday law enforcement crime analysis problems. Special attention will be given to understanding crime patterns and trends. Cases related to terrorism, organized crimes, white-collar crimes and street crimes will be analyzed and discussed. Intelligence methods of data collection and analysis will be explored and applied to crime analysis.

JUS435 - Countering Terrorism

The global threat of terror crime as a result of politics, radicalization, and recruitment for terrorism has grown significantly. New counter terrorism tactics and new forms of corroboration are critical to combat a very unpredictable and skilled criminal. Law enforcement and military professionals are depending on the community as the public citizen to play an integral role in the quest to combat terror crime. This course will explore a new philosophy, new techniques, and new strategies of fighting terror crime. The course will discuss the role of police and the community by integrating new practices and new forms of inclusion with respect and leadership to form a stronger strategy to combat terror crime.

JUS440 - Military Criminal Justice

This course examines criminal justice in the military. Students will be exposed to the historical underpinnings justifying the need for an independent and separate system of justice for members of the armed forces and will learn about military crimes and procedure. Courts-martial will be a central focus of the course, which will incorporate the composition of the military equivalent of a jury, trial courts, and civilian appellate review. Contemporary aspects of military justice—to include special extraterritorial jurisdiction over civilians and the prosecution of enemy combatants and terrorists before military commissions—will also be covered. Finally, students will study the special nuances of military police, U.S. federal agents that investigate crimes involving the military, and the rights of service members.

JUS459 - Behavioral Analysis of Violent Crime

An-upper-level, interdisciplinary course that examines violent crime in accordance with the specific aspects of behavioral analysis and law, specific aspects of behavioral analysis and law specific course content will examine typologies of crime, organized/disorganized offenders and behaviorally based crime scene characteristics (including crime scene staging). A particular emphasis will be on the psychopathology of crime, pedophilia, serial

Course Descriptions

killers, human sacrifice rituals and victimology, and how these factors affect or are affected by criminal motivation, modus operandi and signature aspects of violent crime.

JUS460 - Sex Crimes and Predators

This course will examine the specific etiologies, phases and methods associated with defined sexual crimes. In addition to the dissection of the sexual crime scenes, various sex offender profiles will be examined with respect to crimes of rape, pedophilia and other sexual paraphilias. Students will critically examine the modus operandi, ritual, fantasy and signature aspects of various sexual offenders as well as be able to differentiate between trophies and souvenirs left and/or taken with respect to the crime scene. Victim analysis and offender treatment programs will also be discussed.

JUS465 - Applied Mock Trial

An advanced course designed for students to apply legal theory and knowledge in a simulated trial courtroom environment. Students will be expected to work extensively on case preparation and oral argument and witness presentation, to participate in group activity and team building, and to compete in mock trial proceedings in real courtrooms. Students will function as attorneys, lay witnesses, and/or expert witnesses including forensic experts in conformity with learned rules of evidence and trial procedure. Each year alternates between civil and criminal trial mock trial proceedings.

JUS466 - Leadership and Ethics in Criminal Justice

This course introduces the individual principles and theories of effective leadership and ethics specific to criminal justice and professional security organizations. This is a special type of leadership and ethics designed specifically for the professional working in a dynamic and hostile environment. It is common for public service professionals in the first responder, law enforcement, corrections, security or any professional field in the justice arena to unexpectedly be placed in a temporary or permanent leadership position, or be promoted to a

Course Descriptions

supervisory position, with little or no leadership and ethics education or additional preparation. A critical part of the leadership and ethics course is the analysis and evaluation of ethics and value-based leadership and the definition of leadership and its key components. Theories of leadership and leadership styles will be examined. The leadership framework will be discussed: what a leader must be, which includes values, ethics and attributes such as loyalty, duty, respect, selflessness, honor, integrity, personal courage, and mental, physical and emotional attributes; what a leader must know, which includes skills such as interpersonal, conceptual, technical and tactical; and what a leader must do, which includes a leader's influencing, operating and improving actions in a dynamic environment. The challenge of initially taking charge of an organization will also be emphasized. The class will include situational critical-thinking exercises and conclude with an in-class capstone exercise.

JUS470 - Crimes Against Children

This is a course that examines criminal activity targeted against children. The course will focus on the physical and sexual abuse, neglect, kidnapping, and sexual exploitation of children. Students will explore methods of identifying victims, investigating offenders and court presentation of criminal cases. Special attention is focused on the dynamics of the relationship between victims and offenders and how that is a factor in the investigation and prosecution of criminal acts.

JUS485 - Forensic Law

An interdisciplinary course covering law, criminal justice, and science and technological issues in the evidentiary arena. Coverage in the course provides a broad assessment of expert witnesses, microanalysis, pathological evidence, admissibility and investigatory practice, ballistics, fingerprints, vascar/radar, and photographic techniques. Contrasted with criminalistics, subject matter of this course is primarily evidentiary. More particularly, the course will delve into the rules of evidence, which guide the admissibility of forensic evidence in a court of law. Examination includes threshold tests for reliability and admissibility, qualification of witnesses competent to testify, scientific rigor required for admission, and case law determinations on the use and abuse of scientific evidence.

JUS487 - Computer Forensics

This course is designed to expose students to legal and technical aspects of computer forensics. The methods of the collection, preservation, analysis and presentation of digital evidence will be presented to properly conduct a computer forensics investigation. The focus of this course will be on how law enforcement obtains electronic evidence, maintaining the evidentiary chain, as well as the legal aspects of the search and seizures of computers and related materials.

JUS488 - Cyber Crime Investigation

As computers become more common in businesses and households, it is inevitable that the information or evidence an investigator seeks will be stored in those computers or will involve use of the Internet. Data networks now in place allow us to transmit information to and from virtually any location on Earth in a timely and efficient manner. But what has this tremendous enhancement in communications technology brought us? Another opportunity for criminal activity to take place. Who are the criminals in cyberspace? Understanding cybercrime requires an understanding of the technology that is being used to commit the criminal acts. The investigation of cybercrimes requires highly specialized skills. This course is designed to expose students to legal and technical aspects of cybercrime investigation. The guidelines of the collection, preservation, analysis and presentation of digital evidence will be presented to properly conduct a cybercrime investigation. The focus of this course will be on how law enforcement investigate a cybercrime and obtain electronic evidence, maintaining the evidentiary chain, as well as the legal aspects of the search and seizures of computers, smart phones and related digital devices.

JUS490 - Forensic Accounting

An advanced review of strategies and tactics essential to the fraud examination process. Course presentation assumes basic accounting knowledge and guides the student into specialized applied settings indicative of forensic accounting. Coverage includes financial statement analysis, interpretation and scrutiny of financial

Course Descriptions

records and documentation, trace techniques, reporting irregularities, fraud examination approaches, and legal rules and statutory construction pertinent to accounting practices. Students will prepare a series of field exercises in common fraud cases, such as bankruptcy, insurance, employee/employer reporting, covert examinations, trading practices and money-laundering schemes.

JUS495 - Research Methods in Criminal Justice Studies

This course serves as an introduction to the basic research methods in the field of criminology and criminal justice. Qualitative and quantitative methods are explained in this course. In addition, ethical issues are focused on in this course.

JUS496 - Criminological Theories

This course will focus on the study of crimes, criminals, causes of criminal behavior, and victimization issues. Students will explore how the classical, psychological, sociological, economic, biological, and political theories of crime explain criminal behavior, and the impact of these theories on the work of the criminal justice system.

JUS498 - Internship in Criminal Justice Studies

An on-site, experiential learning experience students work at a variety of justice agencies for academic credit is the central aim of the internship program. Intern locations have included government agencies, police departments, prisons, federal and state law enforcement, private security firms, judicial clerkships, legal offices, and legal research concerns. Interns must complete a self-evaluation, perform a series of exercises and assignments, author a log diary and a paper outlining the internship experience, work 45 hours per internship credit, and present an acceptable recommendation from the internship supervisor upon completion of the experience.

JUS499 - Seminar in Criminal Justice Studies

This is the capstone course for Justice Studies students. It will focus on the integration of information learned from different courses with special focus on criminal law and legal issues, theories of crime, juvenile delinquency, law enforcement, corrections, ethics, forensic science, and research methods. This course will be offered to justice studies students in their final semester in which they receive their degrees. All students in this course must take the Criminal Justice ETS exam, the exit survey.

LAW-Law

LAW300 - The Paralegal Profession

This course introduces the student to the role of the legal professional with special emphasis on paralegals and legal assistants. Course stresses professionalism, law office administration and client conferencing skills, telephone techniques in a legal setting, law office ethics, confidentiality and legal office accounting skills.

Emphasizes the application of skills required in the law office and develops skills in legal billing, specialized legal software, banking and filing procedures, tax matters, processing insurance and investments. Students prepare a legal portfolio.

LAW305 - Land Management and Administration

This course will impart the essential skills and knowledge necessary to work in the oil and gas industry. The development of essential title research skills and understanding title law will be a major thrust. Focus will also be on the acquisition and divestiture of individual producing or discovered non-producing assets or packages. Course will discuss some of the many techniques for evaluating the purchase or sale of oil producing property. Price determination, offer construction and agreement negotiation are all focused on. Case histories and lesson learned round out the coverage.

LAW310 - Legal Research and Writing

This course is designed to teach students to use a law library, perform legal research, analyze legal problems, and write a legal memorandum, draft pleadings and case briefs. Students are taught to locate and use primary, secondary and CALR legal research sources to solve legal problems, including federal and state cases, digests, statutes, regulations, treatises, encyclopedias, law reviews, citators and practice works. Students are expected to produce a written scholarly work at the course's end.

LAW320 - Litigation and Trial Evidence

This course will teach you the principles of civil litigation in federal and state courts. You will learn causes of action and defenses, and will be introduced to rules of procedure and discovery, along with ethical responsibilities. Pretrial practice, including discovery, pretrial motions and trial preparations, will be covered, together with the basics of a civil trial, post-trial motions and appeals. The principles learned will be applied to practical exercises.

LAW330 - Criminal Law for Paralegals

An introduction to substantive criminal law which includes a review of the social, philosophical and legal foundations of criminal codification encompasses the course. In addition, the course covers the historical development of criminal law in the U.S. Other subject matter includes parties to crimes including principals/accessories, criminal capacity, criminal elements, e.g. mens rea and actus reus, and the specific crimes against person, property and public order. The course captures criminal law from the defendant's perspective by reviewing the accused's mental states, potential defenses and uses of mitigation. More narrowly, the student will learn to prepare pleadings and other relevant documentation in the defense and prosecution of criminal cases.

LAW340 - Family Law

The purpose of the family law course is to give legal assistants a better understanding of domestic relations law and to show students how those laws governing family situations are applied. The content of the course covers

Course Descriptions

such areas as formation of the marital relationship, dissolution, child custody and support, adoption, abortion, paternity, domestic violence, child neglect, and surrogacy. Participants will also draft pleadings and documents relevant to family practice.

LAW350 - Real Estate Law

This course is an introduction to Real Estate Law and covers the processes, procedures, and legal concepts involved in residential and commercial real estate. A solid foundation of real estate law concepts, with a special focus on the oil and gas industry, is provided in this course. The student will learn the essentials of real estate law, including various forms of ownership and tenancy, title search and closing activities, and real estate sale and transfer procedures. Special issues such as leasehold estates, common interest communities and real estate development will also be covered.

LAW360 - Law, Business and the Workplace

This course is a survey of the basic principles of corporate law including their creation and operation as well as a review of partnerships and proprietorships as business entities. Student will be required to prepare the documents necessary for incorporation, amendment, by-laws, and the recording of director's meetings and minutes, dissolutions and liquidations. This course will cover the formation, operation, and dissolution of various kinds of business organizations including sole proprietorships, corporations, partnerships, the law of agency and employment agreements. Employee compensation agreements will also be reviewed.

LAW370 - Administrative Law

This course presents basic concepts of administrative law and procedure in federal and state agencies, with emphasis on the paralegal's role in the administrative process. Paralegal students will learn both formal and informal advocacy techniques, including representing clients before administrative bodies. Substantive topics will include administrative delegation of power, rule making, agency discretionary powers, remedies and judicial

Course Descriptions

review. Procedural topics include agency operation, adjudication, hearing preparation, and administrative and judicial appeals.

LAW380 - Estates and Trusts

This course will introduce students to the concepts and forms necessary for estate planning and its administration as well as the drafting of wills, trusts and other relevant documentation. This course will introduce students to an overview of postmortem estate administration, under either testate or intestate provisions. The process of administering a decedent's estate, from collection to valuation, to the appointment of a fiduciary, to the filing of final account and distribution of assets, will be examined.

LAW390 - Bankruptcy

The main focus of this course will be on bankruptcy law and procedure. It will cover commencement of a case, preparing of schedules, operating and liquidating procedures, adversary matters and litigation in bankruptcy court, debtors' and creditors' rights and obligations, technical terminology, and practical hints for paralegals. Forms utilized in bankruptcy court will be stressed as well as proceedings under Chapter 7, Chapter 13 and, to a lesser extent, Chapter 11. Also, proceedings under Chapters 9 and 12 will be reviewed. Additionally, the rights of creditors will be explored. This includes secured transactions, consensual and non-consensual liens, UCC transactions, and the unique position of real estate. An introduction to garnishments and other judicial attachments of property will be taught.

LAW400 - Constitutional Law for Paralegals

The Constitutional Law course is designed to give an overview of the interpretation of the constitutional articles and amendments. The student will explore the three branches of the federal government and the interpretation of the articles that created them and control their functioning. The course will also examine the individual's rights in society, the changes in society that impact individual rights, and the Supreme Court decisions interpreting

Course Descriptions

individual rights. In addition, students will analyze and assess fact patterns, investigate claims and arguments, prepare pleadings and other legal documents as well as conduct sophisticated legal research in matters of constitutional law.

LAW405 - Oil and Gas Law

This course will focus on understanding the legal principles that control oil and gas development in the United States. The legal rules that govern the development of privately owned mineral rights will be focused upon, with an emphasis on joint ownership. The course will then turn to the various legal issues in the conveyance and leasing of oil and gas rights. Topical coverage will conclude with a discussion of oil and gas taxation and oil and gas contracts.

LAW410 - Law and Ethics

An inquiry into the interplay of law, morality and ethical reasoning and Western legal tradition is the chief thrust of this course. The course exposes the tradition and foundations of the American legal system with special emphasis on its jurisprudential foundations. Questions of right, justice, equity, law as moral command and order, natural law reasoning, and the dignity of the human person are central to the instruction. This course will also introduce students to the types of ethical dilemmas that they will face in the work force; generally to the ethical rules developed by the American Bar Association, and specifically, to the rules adopted by this jurisdiction for the regulation of attorney and paralegal conduct and the model codes of paralegal associations; and to methods for researching the answers to ethical dilemmas.

LAW415 - Contract Law for Legal Support Staff

This course provides the student with a straightforward examination on the law of contracts. Complex area of law is clarified using numerous practical examples on how to draft and interpret different types of contracts.

The student will learn to draft the initial agreements, incorporate changes, conduct an initial contract analysis in

Course Descriptions

the event of a dispute to determine potential rights and liabilities, and help determine the appropriate remedies available. At the course's end, the student will be conversant with all of the elements of basic contract law and drafting.

LAW420 - Law and Conflict Resolution

This course provides students with an in-depth understanding of alternate forms of dispute resolution outside courtroom litigation. These alternate forms include mediation, negotiation and arbitration. It incorporates a community service experience in mediation allowing students a unique opportunity to apply theories, concepts and skills learned in the classroom to practical experiences in serving others in the community. The course provides students with a thorough and complete approach to understanding the psychological dimensions to conflict diagnosis. It also provides guidelines to evaluate and develop strategies and tactics to address interpersonal conflict. It also provides a comprehensive survey of all ADR processes.

LAW430 - Elder Law

This course concentrates on the legal problems associated with the elderly and issues of aging. It introduces students to the unique client needs of the elder client and their families. This course introduces substantive legal theories in modern elder law, including introduction to government program, such as Medicare, Medicaid and Social Security for old age retirement assistance; advanced planning for retirement; elder abuse and protective services legislation; and nursing home rights legislation. Topics include health care funding; health care decision making; long-term care; end-of-life decisions; elder abuse and neglect, both institutional and non-institutional, and guardianship.

LAW440 - Immigration Law

This course provides students with a theoretical and practical understanding of the process and procedures relating to immigration law. It also provides proper methodology for client interviews and client files, as well

Course Descriptions

as an introduction to preparation of petitions and agencies that are part of Immigration law. Students will have practice in completing standard immigration forms, researching immigration law, accessing government and other websites for immigration related materials, and reviewing current issues in immigration law. Students will be able to assess each Visa category, determining the type of filing required by client circumstance. Students will analyze hypothetical situations, allowing students to scrutinize actual problems and issues that arise when processing a case. United States immigration statutes, rules and regulations, and precedent and administrative policies relevant to immigration law are fully covered.

LAW450 - Labor and Employment Law

Law concepts of labor and employment law and their respective applications are the central themes of the course. The course spends considerable time identifying applicable federal labor and employment laws, distinguishing between exempt and nonexempt employers, and differentiating between public and private sector employees. The course continues by analyzing labor organization, unfair labor practices, collective bargaining, picketing and strikes, the rights of union members, and public sector labor relations. Additionally, the duties and responsibilities of government and business executives and human resource managers are analyzed; and the administration and enforcement roles of various federal (and state) commissions and departments are discussed.

LAW460 - School Law

This course is designed to provide a foundational understanding of the legal framework within which public schools operate, and to examine selected legal issues that arise in the organization and administration of public schools. Emphasis and focus will be placed on the relevant law as it pertains to students in today's schools.

LEA-Leadership

LEA100 - Introduction to Leadership Studies

This course is required for the leadership studies minor. It is an introduction into the definition of leadership and the ways in which leadership can exert itself. In addition to exploring examples of leadership in a wide variety of settings, students will engage in interactive exercises aimed at developing and understanding their personal leadership styles.

LEA397 - Internship in Leadership Studies

Students will be placed with leaders off campus. They will integrate what they have been studying with the duties and responsibilities assigned to them by leaders in various fields as well as an academic supervisor.

LEA399 - Selected Topics in Leadership

This course is a focused examination of historical or emerging issues in leadership, dynamic problems, current research and issues on the study and practice of leadership from an interdisciplinary perspective. The topic, which varies each time the course is offered, may include the study of African American leadership, Latino leadership, European and Asian leadership, women in leadership, presidential leadership, world political leaders, corporate leadership or military leadership.

LEA400 - Capstone Seminar in Leadership Studies

This seminar involves the use of case studies assigned for group discussion, formal presentation, analysis, and resolution. Class sessions involve the application of interactive exercises, using simulations, role-playing and decision-making scenarios. Guest speakers, drawn from a variety of disciplines will be used as additional resources. In addition to exploring examples of leadership in a wide variety of settings, students will engage

Course Descriptions

in interactive exercises aimed at developing and understanding their personal leadership styles, theoretical concepts, and developing the leadership in others.

LST-Liberal Studies

LST490 - Seminar in Liberal Studies

This is the capstone course for the Liberal Studies student. It will focus on the integration of information learned from diverse, but inter-related courses within the Liberal Studies Curriculum. Focus will center on individually selected and inter/cross discipline related theories, ethics, skill sets, and research methods.

LST492 - Liberal Arts Internship

Internship in liberal arts.

MAT-Mathematics

MAT100 - Survey of Mathematics

This course was designed to enhance the student's knowledge, understanding and appreciation of mathematics. Topics are selected from among a variety of areas and fields in mathematics: problem solving, set theory, logic, numeration systems, elementary number theory, statistics, geometry and probability. The student will examine the language, notation and applications relative to each area in mathematics.

MAT110 - Applications of Math

This mathematics course will cover how to apply mathematics to real world situations such as determining methods of fair voting and apportionment, finding the shortest path, scheduling meetings, determining the best return on investments, and collecting data to show patterns.

MAT120 - Elementary Topics in Mathematics I

This is the first course of a sequence of two mathematics content courses specifically designed for Pre-K to grade 8 teacher education candidates by providing an overview of fundamental mathematical concepts. The content covered includes basic algebraic work with equations and inequalities in one unknown, systems of equations, problem-solving, sets, concepts of logic, binary operations, systems of numeration, number theory, rational numbers, real numbers, measurement, and use of calculators and computers.

MAT130 - Elementary Topics in Mathematics II

This is the second course of a sequence of two mathematics content courses specifically designed for Pre-K to Grade 8 teacher education candidates by providing an overview of fundamental mathematical concepts. The content covered includes metric and non-metric geometry, coordinate geometry, introduction of statistics and probability, problem solving, and computer use.

MAT181 - College Algebra

Fundamental operations; factoring and algebraic fractions; exponents and radicals; functions and graphs; equations and inequalities; properties of graphs; systems of linear equations; synthetic division; rational zeros of polynomials; and logarithmic and exponential functions.

MAT191 - College Trigonometry

A thorough development of trigonometry. This course includes both circular and right-triangle geometry, evaluation of trigonometric functions, graphing trigonometric and inverse trigonometric functions, analyses of trigonometric graphs, verifying trigonometric identities, solutions of trigonometric equations, and applications of trigonometry.

MAT195 - Discrete Mathematical Structures for Computer Science

An introduction to the theories and structures of mathematics that are relevant in computer science. Topics include: set theory, formal logic, mathematical induction, Boolean algebra, number theory, matrix algebra, combinatorics, probability, algorithmic analysis, complexity, and graph theory.

MAT199 - Precalculus

This course is a study of numerical, analytical, and graphical properties of functions. The course content includes polynomial, rational, irrational, exponential, logarithmic, and trigonometric functions. This course is designed as a preparation for calculus..

MAT205 - Statistics for the Health & Social Sciences

For health and Social science majors only; not counted toward a mathematics major. This course is intended to provide just-in-time algebra reviews necessary to complete statistical analysis for various health and social sciences related problems. The following topics will be covered: frequency distribution, percentiles, measures of central tendency and variability, normal distribution and curve, populations, samples, sampling distribution of means, sampling distributions of proportion, null and alternative hypotheses, type I and type II errors, tests of means, confidence intervals, decision procedures, correlation, chi-square, simple analysis of variance, and design of experiments.

MAT207 - Data Preparation and Cleaning

This course provides students with an introduction to the need for and methods for data cleaning. The course presents methods for locating and handling invalid values, out-of-range values, and missing values along with methods for managing datasets. The course uses SAS software.

MAT213 - Data Visualization

This course explores techniques and tools for creating effective data visualizations. The course covers the creation and exploration of visualizations for categorical data, time series data, spatial and geospatial data. SAS software will be used for this course.

MAT215 - Statistics

For non-mathematics majors; not counted toward a mathematics major. Frequency distribution, percentiles, measures of central tendency and variability, normal distribution and curve, populations, samples, sampling distribution of means, sampling distributions of proportion, null and alternative hypotheses, type I and type II errors, tests of means, confidence intervals, decision procedures, correlation, chi-square, simple analysis of variance, and design of experiments.

MAT225 - Business Statistics

Statistical techniques relevant to business applications. Primary emphasis is placed upon identification of appropriate statistical methods to use, proper interpretation and appropriate presentation of results. Topics include descriptive statistics, probability concepts, the normal probability distribution, estimation techniques, tests of hypotheses, simple and multiple linear regression. Statistical software is used to implement many of the statistical methods.

MAT251 - Big Data Tools

This course covers an introduction to big data analysis tools. The course provides an overview of SAS, Hadoop and other big data tools. The course covers the structure and framework of data analytic tools and covers the use of these tools to perform various analyses.

MAT261 - Big Data Analytics

This course is intended to provide the student with an introduction to big data, big data analytics and several methods useful in big data analytics such as clustering, association rules and various forms of regression. SAS® statistical software will also be introduced and used to solve data problems.

MAT272 - Discrete Mathematics

Introduction to theories and methods of mathematics relative to computer science but taught from a mathematics perspective. Topics include logic, set theory, elementary number theory, methods of proofs and proof writing (direct, indirect and math induction), combinatorics, probability, relations and functions, and graph theory.

MAT273 - Applied Calculus

The techniques of differentiation and integration are covered without the theory of limits and continuity. Applications in business and biological science are considered.

MAT281 - Calculus I

A study of modeling, functions, limits and continuity; the derivative; application of the derivative.

MAT282 - Calculus II

The integral; fundamental theorem of calculus; applications of the integral; inverse functions; logarithmic functions; hyperbolic functions; techniques of integration.

MAT290 - Technology for Mathematics

This course, designed for both mathematics and science majors, and for prospective and practicing educators, details the use of technological tools in the study of mathematics and explores the effective and appropriate use of technology in the teaching, learning, and application of mathematics. The course is composed of three components: using graphing calculators; using calculator-based laboratories; and using mathematical software. The course will be taught from a laboratory-based perspective.

MAT303 - Geometry

Analysis of axiomatic systems, axiomatic development of elementary Euclidean geometry and non-Euclidean geometry.

MAT304 - History of Mathematics

This course is a historical summary of the development of mathematics. Emphasis is placed on relating mathematics to the development of world culture and its relationship with all aspects of our culture. The lives and discoveries of many mathematicians are discussed. Methods of incorporating the history of mathematics into high school mathematics courses are a major focus of the course.

MAT305 - Theory of Equations

This course deals with the development of the theory involved in solving algebraic equations. It includes complex numbers as an algebraic system, polynomials in one variable, cubic and biquadratic equations, limits of roots and rational roots, isolation and separation of roots, and the approximate evaluations of roots.

MAT341 - Linear Algebra I

This course covers systems of linear equations and matrices, determinants, vectors in n -space, vector spaces, linear transformations, eigenvalues, eigenvectors, and applications.

MAT345 - Cryptography I

This course is intended to provide an introduction to cryptography with the number theory portion tied in.

The following topics will be covered: modular arithmetic, classical cryptography, public key cryptography and introduction to complexity.

MAT351 - Abstract Algebra I

Fundamental concepts of logic; natural numbers, well-ordering property, induction, elementary concepts of number theory; groups, cosets, Lagrange's theorem, normal subgroups, factor groups; homomorphism, isomorphism and related topics including Cayley's theorem, natural homomorphism, and the three fundamental homomorphism theorems.

MAT353 - Intermediate Mathematical Statistics

This course provides an introduction to mathematical statistics. It re-introduces content from an introductory statistics course and develops the content in theory further. It adds an in-depth look at several statistical methods from introductory courses and introduces Bayes estimation and testing.

MAT361 - Nonparametric Statistics

This course provides an introduction to nonparametric statistics. It includes the introduction of nonparametric inference testing including the Wilcoxon Test, the Mann-Whitney test, the Ansari-Bradley test, the Kruskal-Wallis

Course Descriptions

test, the Kendall test and the Theil test along with their associated estimators. Students will also learn how to run analyses in the SAS® software program.

MAT371 - Applied Categorical Data Analysis

This course provides an introduction to categorical data analysis. Topics include contingency table analysis, inference for contingency tables, models for binary response data including logistic regression and probit models, models for multinomial responses, loglinear models and mixture models for discrete data. SAS® software will be used for analysis.

MAT373 - Applied Time Series

This course provides an introduction to time series analysis. The course covers models for stationary and nonstationary time series including model selection, diagnostics and forecasting. This course uses SAS® software for analysis.

MAT376 - Applied Regression

This course is an introductory level course in regression analysis. This course begins with simple linear regression and associated one-way analysis of variance tables for regression analysis along with diagnostic measures for simple linear regression. The course continues with more complicated regression models including general regression models, multiple regression, generalized linear models and a brief introduction to nonlinear estimation. The course will cover the necessary linear algebra for completing regression. SAS® software will be used to complete analysis.

MAT381 - Calculus III

Continuation of integration techniques, indeterminate forms and improper integrals, parametric and polar curves, and conic sections, infinite series, and the theory of infinite series and power series.

MAT382 - Calculus IV

Vector analysis in two and three dimensions. Topics include theory of curves and surfaces; partial derivatives; multiple integrals; and Greens, Stokes and the Divergence theorems.

MAT391 - Statistical Packages

This course provides an in-depth look at statistical packages used to complete a variety of statistical analysis. The course will focus on current and highly used packages such as SAS®, Hadoop, and R. The course will provide a basic introduction to each package and will also cover more in-depth topics within each package as applicable.

MAT400 - Mathematical Modeling

This course provides an introduction to mathematical modeling. Students will be presented with real-world problems from a variety of fields, such as physics, biology, earth science, meteorology, engineering, economics, etc. Students will learn how to select appropriate mathematical models to model the real-world situation, use the model to solve a real-world problem, interpret the results of the solution(s), and communicate their work orally and in written format.

MAT401 - Data Analysis Capstone Project

This course is designed for the certificate in Data Science to provide hands-on experience in the area of data science. This experience will enable students to apply their knowledge of data science and provide valuable experience in the application of methods studied within the program that should enhance their job opportunities upon graduation. Students will receive experience with real world data. Analysis will be completed using SAS®.

MAT406 - Differential Equations

Ordinary differential equations and their solutions. The existence and uniqueness of solutions. Various types of differential equations and the techniques for obtaining their solution. Some basic applications, including numerical techniques, computer solution techniques are discussed.

MAT419 - Math Internship

This course is designed for the BA in Mathematics majors who are seeking work experience in the Mathematics area. This intern experience will enable students to apply their knowledge of Mathematics in the real workplace. The internship will provide students with the valuable experience in the applications of Mathematics that should enhance their job opportunities upon graduation.

MAT441 - Linear Algebra II

Extends the concepts learned in Linear Algebra I. The content is not fixed, but usually includes the following topics: linear transformations, change-of-base matrices, representation matrices; inner-product spaces, eigenvalues and eigenvectors, diagonalization.

MAT451 - Abstract Algebra II

This course is a continuation of MAT 351 Abstract Algebra I. It continues the covering of algebraic structures such as fields, rings and groups. It is a blend of theory and application.

MAT461 - Statistical Analysis I

Basic concepts of both discrete and continuous probability theory. The concepts of a random variable is stressed, including distributions and mathematical expectation. A number of important probability models are studied in detail. Analyses will be performed using SAS® software.

MAT462 - Statistical Analysis II

Statistical theory and application of statistical estimation techniques and hypothesis and hypothesis testing methods. Simple linear regression, multiple linear regression and basic experimental design. Analyses will be performed using SAS® software.

MAT471 - Applied Multivariate Statistics

This course covers the basics for several multivariate statistical analyses. The course covers principal component analysis, canonical correlation analysis, factor analysis, discriminant analysis, and cluster analysis. SAS® software will be used for all analyses.

MAT474 - Complex Analysis

The course introduces the essential concepts in the Complex Analysis such as: Complex Numbers, Functions of complex variables, their Limits, Continuity, Derivatives, Integrals and Cauchy Integral Formula. 2. Shows students the importance of Complex Analysis Theory in pure mathematics, applied mathematics and Engineering Applications. 3. Develops the elements of Complex-Variable Functions in a rigorous and self contained manner.

MAT481 - Real Analysis I

This course covers logic and techniques of proof; relations, functions, cardinality and naive set theory; development of real numbers from natural numbers through topology of the line; and convergence and related ideas dealing with functions (sequences and series), including continuity.

MAT491 - Statistical Packages II

This course continues to consider statistical packages to complete statistical analysis and big data analysis. The course will focus on current and highly used packages. This course will provide an in-depth look at each package and give students hands-on experience with installing, working in and producing analysis using current software.

MAT496 - Senior Research Project

This course, which should be taken near the end of the student's bachelor's degree program, involves an in-depth investigation of a mathematical or computer science topic (theoretical computer science being mathematical in nature). The investigation will culminate in the presentation of a senior paper.

MBA-Master Business Admin

MBA700 - Business Foundations

This course builds the foundation for all Cal U MBA students at the outset of the program. It is designed to refresh and/or introduce essential aspects of business management, including: economics, accounting, finance, operations management, quantitative research techniques, business law, marketing, and statistics. Throughout the course students will practice APA writing format, create research-based documents and formulate a plan for academic success within the MBA program. MBA 700 is considered the starting point for all MBA students at Cal U.

MDI-Multidisciplinary

MDI300 - Dialogue and Differences

Communicating across differences of age, gender, language, culture, and political orientation, and in different contextual situations is a useful skill for every individual. It is also integral to the success of any attempt to resolve

Course Descriptions

conflict, whether individual, group/institutional, or global. By offering a context for students to learn with individuals from different cultural and linguistic backgrounds, we will all gain insight into the role of culture in dialogue. An understanding of culture and its influence on our perspectives is essential for effective communication. Through interactive exercises, students will develop an understanding of the challenges of intergroup dialogue across differences and the skills required to communicate effectively. Students will engage in a workshop on dialogue skill-building and multiple dialogue sessions with classmates and other students, first learning the theory and skills that underlie successful participation and facilitation of dialogue and then applying them in the exploration of issues such as gender, religion, and international affairs.

MFL-Modern Foreign Language

MFL460 - Modern Languages & Cultural Internship

This course is intended to provide the Spanish/French/Arabic student with an opportunity to work in a professional setting to learn about areas that are not available or not practical in an academic environment. The internship will enable the student to apply Spanish/French/Arabic language skills in the real work place and will provide an invaluable experience which should make the student more marketable upon graduation. Prerequisite: Students should have completed 12 credits of the language and have junior standing.

MFL470 - Special Topics in Language

This course is designed for language majors, minors, certificate seekers, or other students who wish to explore language topics that are not regularly offered. The subject matter presented will be a combination of historical and contemporary topics in relation to the studied language and culture. This course is repeatable up to 12 credits.

MFL479 - Field Studies in Modern Languages and Cultures

This course primarily involves study-abroad educational experiences in modern languages and cultures that differ from internships. Examples include immersion instruction in the target language and in a country where the target language is widely spoken; undertaking academic coursework in any subject matter that is taught in the target language; attending a series of professional conferences that are substantially presented in the target language; and participating in organized educational and academic travel programs where the target language is largely spoken and the cultural and social activities relate to target-language environments. The field experience will enable the student to apply his/her respective language skills in real-world environments and will provide an invaluable experience, which will make the student more marketable upon graduation.

MFL481 - Modern Languages Internship

This course is intended to provide the student with an opportunity to work in a professional setting and to learn about areas that are not available or practical in an academic environment. The internship will enable the student to apply his/her respective language skills in the real-world environments and will provide an invaluable experience, which will make the student more marketable upon graduation.

MGT-Management

MGT300 - Principles of Management

This course provides background and insight into the human factors involved in the day-to-day and long-term operations of an organization. It is built on the management functions necessary for success in any type (profit or nonprofit) organization. The course focuses on major issues that affect today's managers, such as global environment, corporate social responsibilities and ethics, organizational culture, employee empowerment, and employee diversity. It also explores how external environments affect the operations of organizations.

MGT301 - Organizational Behavior

This course is designed to provide students with a multidisciplinary view of the study of behavior in organizations to better understand and manage people at work. It focuses on describing and explaining the core concepts and foundation principles that are fundamental to understanding behavior in organizations. Emphasis is placed on topics that affect individual behavior, team and group behavior and behavior of the organization itself. Behavioral questionnaires and self-assessment instruments are used to help students gain self-insights and further develop the competencies needed to be effective employees and successful managers/leaders.

MGT303 - Entrepreneurship I: Small Business Fundamentals

This is a management course designed to address the steps in the entrepreneurial process to establish a new business or to launch a new product line in an established organization. This course is a study of how to successfully analyze opportunities for a new venture. The contents provide the complete analytical process for establishing a new and successful operation. The new venture decision provides a compelling reason for success. This course leads up to the establishment of a complete Business Plan.

MGT305 - Entrepreneurship II: Small Business Management

This course focuses on the characteristics of an entrepreneur and framework to develop and lead a successful entrepreneurial business. The impact of emotional intelligence in the workplace and sources of entrepreneurial finance are discussed. Students will learn how to develop and manage the human capital in the workplace.

MGT311 - Organization Theory and Design

This course provides a comprehensive macro-view approach to the study of organizations and their functioning. Topics covered include environment and open systems, technology, size and life cycle, organizational control,

Course Descriptions

culture and ethics, information processing, decision-making processes, power and politics, and organizational innovation and change. Emphasis is placed on how external and internal factors influence the structure and design of the organization.

MGT320 - Teamwork and Leadership

This course encourages leadership and teamwork through group interaction. The study of leadership through teamwork builds upon core concepts and active engagement. Students will practice and refine their interpersonal and leadership skills as they model professional communication delivering collaborative products.

MGT373 - Computer Based Management Information Systems

This course provides background and insight into the technical foundations of database management for business professionals. It concentrates on information technology systems that support managerial decision making. This course illustrates how the field of information technology systems supports customer relationship management and supply chain management. It demonstrates how information systems are developed and applied in solving various business dilemmas. The course stresses the importance of properly managing information technology, locally and globally, to obtain and maintain a competitive advantage in the business world.

MGT376 - Cyber Law and e-Privacy

This course provides a thorough review for business managers of the legal issues relevant to digital retention of data, cybersecurity and privacy. Students will learn the appropriate managerial tactics to help comply with most major privacy and cyber-related regulations.

MGT378 - Law of Privacy & Cybersecurity

This course focuses on developing students with a working knowledge of the legal & regulatory constraints & opportunities for privacy & security of IT systems, with particular emphasis on the regulation of network activities and data management. Students will be prepared to identify public policy constraints and opportunities; participate in the public policy debate over privacy and security issues; manage liability risks; and appreciate when and how to summon legal counsel.

MGT403 - Innovation Management

In this course, students learn how to identify strategic opportunities in which new innovations in technologies and business practices can be successfully implemented and how to do so. We focus on the practices and procedures by which both managers and entrepreneurs can manage innovation effectively. Through an in-depth grounding in the innovation and strategy literature, students learn the specific steps and processes needed to accomplish this goal. Through case study analysis of both successful and unsuccessful innovation management in a variety of industries, students learn the critical skills needed to profitably manage innovation. These are valuable skills which students can apply in their own current or future professional or career endeavors.

MGT431 - International Business Management

This course introduces to the Global exporting and importing process. The course contains information about trade internationally, by region and in global settings. The effects of cultural differences are highlighted showing how sizes, quantities, and types of sales in one country differ from those in another country. The foreign exchange process is described and students see the challenge from changing values in currencies.

MGT450 - Management Research

This course explores the fundamentals of business management. The focus is on practical application of commonly used techniques such as questionnaires and descriptive statistics. Students will utilize secondary

Course Descriptions

research to formulate solutions to managerial problems. They will also design a questionnaire, report data, and demonstrate academic writing skills. The course balances team activities with independent research, utilizing the techniques discussed in the course.

MGT461 - Integrated Supply Chain Management

The coordination and integration of functions across the supply chain are often more important than the individual functions themselves. As global supply chains increase their reach and complexity, there is increasing demand for the skills to manage them. This course develops fundamental supply chain principles and explains the role of global supply chain managers in managing the flow of goods and dealing with suppliers. Topics include supply chain metrics, production planning and inventory control, global supply chain design, logistics and outsourcing.

MGT492 - Management Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing management-related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

MGT720 - Leveraging Diversity

The impact of globalization on all areas of management cannot be overstated and should not be ignored. This course tasks students with examining the cultural impact of a global workforce. Students will be given the tools to ethically utilize diversity to the benefit of the company and its strategies. As a part of this study, students will evaluate how power is an important dynamic when executing human resource strategy.

MIS-Management Info Systems

MIS201 - Management Information Systems

This course provides background and insight into the information systems that business professionals and other organizations rely on. It concentrates on computer-based information systems that use various information technologies. This course illustrates how the field of information systems encompasses many complex technologies, abstract behavioral concepts and specialized applications in countless business areas, such as marketing, human resource management, finance, accounting and operations.

MIS321 - Accounting Information Systems

This course will provide students with the background to oversee accounting system functions, implement and review systems of internal controls, and understand how to ensure the organizations have valid, accurate, and timely financial information. Students will explore topics in Accounting Information Systems and use technologies to make decisions in specialized areas of accounting professionals, such as managerial accounting, financial accounting, auditing, and tax accounting. Topics will include types of systems, internal control issues, audit issues, and systems development issues.

MIS322 - Human Resource Information Systems

This course is designed to provide an introduction to the use of technology in the administration of human resources, and how new technologies can contribute significantly to the efficiencies in the management of a company's human capital. It is designed to help students understand the integration of technology into the human resource department. It will address the strategic needs of organizations and how they are met through the use of human resource information.

MIS375 - Information Technology Ethics

This course provides background and insight into the ethical challenges posed by rapidly changing Information Technology. Students will examine and analyze the issues and controversies that comprise the field of cyberethics and cybertechnology. This course illustrates the broad coverage of cyberethics since it covers not only the professional, business aspects of Information Technology Ethics but also the individual, personal aspects of Information Technology Ethics. Although designed for business majors, it addresses and analyzes issues that concern all students since everyone is affected by Information Technology.

MIS385 - Health Information Systems

The course will provide students with an overview of Information Systems used within the Healthcare industry and the challenges it faces. Students will explore current trends in Healthcare Information Systems along with government and security regulations that surround it. The goal of the course is to provide students with challenges facing the healthcare industry when selecting and implementing a Healthcare Information System.

MIS401 - Business Driven Management Information Systems

This course focuses on the management and technical components that are core to business applications and management control of information systems. Topics will include management information and decision support systems which assist in planning, organizing, and controlling business activities. It also emphasizes the physical and logical components of business information systems along with decision support / expert systems.

MIS421 - Strategic Issues in MIS

This course will discuss the strategic roles and responsibilities of IT Executives and Managers. Students will explore how firms can gain and sustain a competitive advantage using information systems. Additionally, the course will provide an understanding of how IT drives organizational value. Key concepts around approaches to

Course Descriptions

managing information systems functions in an organization and ensuring alignment with business strategies will be discussed while addressing real world current issues facing an IT organization.

MIS492 - MIS Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing management information systems related tasks. The internship experience offers a practical training ground for students that supplements academic training by permitting them to apply the theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

MKT-Marketing

MKT300 - Principles of Marketing

This course serves as an introduction to the marketing discipline. Foundational topics include identification of target markets, understanding of population demographics and psycho-graphics, the four P's (product, price, place, promotion) of marketing, social responsibility, marketing segmentation, environmental factors affecting marketing efforts, consumer behavior, marketing research, advertising, promotion and personal selling. Careers in marketing are also covered.

MKT311 - e-Marketing

This course presents a strategic framework for developing marketing strategies on the Internet. It extends the marketing mix framework to e-commerce using current theories and applications in online product, online pricing, web-based marketing communication and distribution strategies. Other topics include marketing research on the Internet, electronic retailing, Internet-based customer relationship management and legal-ethical dimensions of e-marketing.

MKT320 - Principles of Selling

This course serves as an introduction to the world of the professional sales representative. The focus of the course is on the development and execution of a professional sales presentation. Topics covered include professional self-presentation; the approach; features, advantages and benefits of the product; the marketing plan; the business proposition; handling buyer objections and closing the sales presentation.

MKT321 - Sales Management

This course serves to present the theories and concepts relevant for the management of a professional remote sales force. Topics covered include sales program planning; account prospecting; sales force organization; recruiting and selecting sales personnel; sales training, leadership, motivation, compensation and evaluation of the sales force.

MKT331 - Retailing

This course serves as an overview of the retail marketing environment. Topics include strategic retail marketing, situational analysis, retail institutions by strategy mix, non-store based retailing, trading area analysis, retail organization and the human resources function, development of merchandise plans and pricing, assortment planning, visual and image merchandising and retail promotional strategy.

MKT341 - Non-profit Marketing

A marketing course designed for both business and non-business majors that differentiates between for-profit and not-for-profit organizations, investigates the competitive environment facing nonprofits (e.g., hospitals, churches, charities, colleges, performing arts groups), and applies research techniques and marketing tools (product policy, distribution and delivery systems, monetary pricing, and communication strategies) to the nonprofit entity.

MKT351 - Advertising Management

This course serves to present the theories and concepts involved in the understanding of the advertising mix: advertising, public relations, sales promotion and professional selling. Topics include integrated marketing communication, branding, promotional opportunity analysis, theoretical frameworks, types of appeals, executional frameworks, media selection, trade and consumer promotions, sponsorship programs and the evaluation of the integrated marketing communication program.

MKT401 - Marketing Management

This course focuses on the description and analysis of the nature, strategies, and techniques used in marketing. It examines the impact of technology on marketing, and the strategic role of marketing in the overall goal of organizational success in highly competitive and volatile markets. The decision making process of managers will be explored as they lead the design and implementation of a marketing strategy that encompasses product planning, pricing, supply chain management and promotion strategies.

MKT421 - Consumer Behavior

This course presents a strategic framework for understanding and applying marketing strategies. It integrates the disciplines of psychology, anthropology, economics and sociology with the marketing discipline to explain, understand, and predict consumer decisions in the marketplace. This is achieved by exploring both the theoretical and practical implications of (1) individual behavior variables such as motivation, learning, perception, personality, and attitudes; (2) group influences such as family, culture, social class and reference group behavior; and (3) consumer decision processes such as cognitive dissonance, brand loyalty new product adoption and risk reduction. The field of consumer behavior is very broad. This specific course will focus on the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires.

MKT431 - Marketing Research

This course focuses on explaining and using the behavioral and statistical tools needed for designing, implementing, and reporting marketing research projects. Accordingly, this course will provide emphasis in the following areas: 1. Provide an understanding of the importance of marketing research 2. Describe the conceptual framework for conducting marketing research 3. Explain the components of a well-defined marketing research problem 4. Compare and contrast the various types of research design 5. The nature and scope of primary versus secondary data 6. Accessing online information databases 7. Deciding on survey data and the collection method 8. Using measurement scales 9. Designing Questionnaires 10. Identifying the optimum sampling method 11. Collecting data 12. Determining relationships among data 13. Preparing and presenting research results

MKT461 - International Marketing

On the completion of this course, students will be able to analyze, integrate and explain a variety of environmental forces that differential domestic from international marketing designs. For those students considering a career in marketing, this course will demonstrate that many of the prevailing assumptions regarding marketing need to be re-examined when applied to markets outside of the USA.

MKT492 - Marketing Internship

The student is placed with a business firm, bank, government agency or nonprofit organization performing marketing-related tasks. The internship experiences offers a practical training ground for students that supplements academic training by permitting them to apply theories, concepts and techniques learned through their other coursework to address actual problems in a real business environment.

MTR-Mechatronics

MTR300 - Manufacturing Processes

This course covers various methods of processing metals, plastics, ceramics, and composite materials with emphasis to the major processes used in manufacturing today: casting and molding, forming, separating, conditioning, assembling, and finishing. A final section provides students with an introduction to product design and process selection.

MTR310 - Principles of Automatic Control

This course covers key concepts of industrial control. The purpose of this course is to provide the student with an understanding knowledge of industrial control principles including: instruments, circuits, components and control techniques. The primary focus is on operation principles and the measurement devices. The student will have already learned basic electronic principles in Circuits I, II, and Digital Fundamentals.

MTR320 - Statics

This course will emphasize the study of forces acting on rigid bodies at rest. Concepts of force, moment, couple, force components, force resultants, concentrated and distributed loads, basics of static equilibrium of machines and structures, friction, centroids and moments of inertia will be covered. Emphasis will be placed on the concept of developing free body diagrams for simple mechanical structures and their resultant force equilibrium solutions.

MTR325 - Fundamentals of Programmable Logic Controllers

The course provides students with an introduction to programmable logic controllers through the design, troubleshooting, improvement, and optimization of mechatronic control systems. The course covers the component parts of a programmable logic controller, their function, and their interrelationship. PLC input/output

Course Descriptions

systems and requirements are examined. Ladder logic programming using I/O instructions, logic instructions, timers, counters, and sequential control are covered in-depth. Sequence of PLC operation, hardware installation, networking PLC systems and peripherals, troubleshooting, safety requirements, and industrial applications of PLCs are also introduced.

MTR330 - Dynamics

This course will cover the dynamics of particles and rigid (planar) bodies. Topics will include kinematic equations, Newton's Second Law, work and energy solutions, and impact and momentum solutions. Emphasis will be on particle analysis, with coverage of rigid bodies as appropriate, as assessed by course instructor. Students will hone problem-solving skills through dynamic system analysis, and learn professional preparation skills. Three hours of lecture

MTR335 - Advanced PLCs and Integration

The course provides students with additional and more advanced skills in Programmable Logic Controllers (PLCs). Students will learn how to program and apply zone control techniques, data transfer, math functions, and data communications. Also covered are sequencers, analog I/O, the use of HMIs (Human Machine Interface), programming special function modules, process control, and I/O bus networks. In addition to ladder logic programming, sequential function chart and function block programming will be used to program a PLC.

MTR340 - Fluid Power

Topics covered will include: fluid properties; manometry laws; fluid statics; fluid statics; buoyancy and stability of submerged objects; continuity equations; Bernoulli's principle and modifications for pumps and turbines; viscosity; Reynolds's number; Darcy's equation; Moody's diagram; series pipeline system, and pressure and flow measuring techniques. All lecture topics will be complemented by appropriate lab experiments, and/ or hydraulic, and pneumatic (fluid) system design circuits.

MTR370 - Properties and Strength of Materials

This course will provide survey of materials used in industry and their physical and chemical principles as they relate to structure, properties, corrosion, and engineering applications. An introductory level in stress analysis will include: shear and bending moment diagrams, Hook's Law as it relates to normal and shear stress and strain, stresses in bolted connections, shear stress and angle of twist in shafts, normal and shear stress in beams, and the concept of factor of safety. Additional topics covered will include bending stresses, shear stresses, combined stresses, Mohr circle, beam deflection, stress concentration factors and fluctuating loads (qualitative discussion only). All lecture topics will be complemented by appropriate lab experiments.

MTR400 - Machine Design Elements and Kinematics

This course covers the methods and theory of practical machine design with basic kinematics. The course will integrate the knowledge of statics, dynamics, strength of materials and engineering materials in the design process. The topics will include materials selection, load, stress, strain, deflection, fatigue and failure theories, design of shafts, keys, couplings, bearings, springs, screws, fasteners, and linkages. All design topics will be supplemented by appropriate case problems. The application of computer-aided design software to analyze design problems will be demonstrated. An introduction to finite element analysis software and application will be presented in this course.

MTR410 - Process Control

This course introduces students to the mathematical theory governing process control, and develops an understanding of the dynamic behavior of process control systems, including system stability. Simulation and practice are used to reinforce theory and apply it to practical industrial applications of varying complexity. Methods are presented for designing and tuning process controllers.

MTR420 - Computer-Integrated Manufacturing

This course will cover conventional and computer-integrated manufacturing processes. Students will develop an understanding of the manufacturing systems used to make products, the application and potential benefits of automation, and Computer-Integrated Manufacturing (CIM) concepts. This course provides the student with information on the way computer based systems support the operation of a manufacturing business. The course is designed to give students an integrated hands-on experience with tools and systems used in industry. Special attention is given to the roles of computer-aided design (CAD), computer-aided manufacturing (CAM), computer-aided process planning (CAPP), Manufacturing Resource Planning (MRP II), programmable logic controllers (PLCs), industrial robots, and supporting technologies including automated data capture as they apply to the modern manufacturing facility. Concepts will be reinforced using simulation, analog, and hardware.

MTR445 - Senior Project Proposal

A capstone course in the mechatronics engineering technology area where the students are required to propose a mechatronics engineering technology related project (problem statement and solution) they wish to pursue for completion later in their program of study. In this course, the students will research various design and/or manufacturing issues connected with mechatronics engineering technology. This course is intended to help students formulate a problem statement in the mechatronics engineering technology area for solution in a later class. An interdisciplinary approach with other engineering technology programs is highly recommended with the problem statement formulation.

MTR450 - Senior Project

This course is a continuation of MTR 445 where a proposal was submitted to address a mechatronics engineering project. Students will work in teams on “open-ended” design or manufacturing project proposed earlier. Students are given the opportunity in this course to realize original and creative solution to engineering problems. Students are encouraged to adopt an interdisciplinary approach to problem solving and may want to perform the project

Course Descriptions

under direction of one or more faculty. Course requirement will include oral presentations on progress throughout the semester with a required final comprehensive technical report in the end.

MTR495 - Mechatronics Engineering Technology - Internship

Student interns are placed with an industrial, corporate or governmental organization that most nearly approximates their goals for mechatronics engineering technology employment. The intent of the internship is to provide students with practical work experience solving actual problems in a dynamic environment, yielding enhanced job opportunities upon graduation. Students must follow the step-by-step procedure as outlined at the Cal U Intern site.

MUS-Music

MUS100 - Introduction to Music

The purpose of this course is to expose the student to the various historical, analytical and aesthetic elements of music, thereby providing an opportunity to broaden and enrich personal enjoyment. This exposure to music is made through the use of visual aids, audio recordings, radio, television, films and concerts.

MUS104 - Voice Class I

This course is designed for the student who wants to improve his/her unique singing (and speaking) voice as a musically expressive instrument. Understanding and practice of diaphragmatic breathing, breath management, vocal placement and deportment are emphasized.

MUS109 - Private Instruction

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS119 - Private Instruction: Piano I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS129 - Private Instruction: Percussion I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS149 - Private Instruction: Woodwinds I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS159 - Private Instruction: Voice I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS170 - Private Instruction: Guitar I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS179 - Private Instruction: String I

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS187 - Guitar Ensemble

The Guitar Ensemble will provide a music experience for students so they can actively engage in the artistic, cultural and social benefits of music presentations. This is a performance based course requiring the development of intellectual and physical demonstrations. Active participation by all members is required since the quality of the course and the experiences gained are dependent on the progress of all individuals. The University Guitar Ensemble performs at concerts both on and off campus. Membership in this ensemble is open to any interested guitarist. No audition is necessary, but a successful with and permission by the director is required. This course is repeatable to a maximum of 8 credits.

MUS188 - String Ensemble

The String Ensemble will provide a music experience for students so they can actively engage in the artistic, cultural and social benefits of music presentations. This is a performance based course requiring the development of intellectual and physical demonstrations. Active participation by all members is required since the quality of the course and the experiences gained are dependent on the progress of all individuals. The University Clavinova Ensemble performs at concerts both on and off campus. Membership in this ensemble is open to any interested

Course Descriptions

keyboard player. No audition is necessary, but a successful interview with and permission of the director is required. This course is repeatable to a maximum of 8 credits.

MUS191 - University Choir

The California University Choir provides an opportunity for students to sing a wide variety of music from both contemporary and traditional repertoire. The choir performs frequently on campus and throughout southwestern Pennsylvania. Choir membership is elective; an interview with the director is required. Repeatable up to 8 credits.

MUS192 - California Singers

A small (20-24 members) vocal ensemble, with membership determined by audition. The group performs entertainment music of all eras and many cultures; the style of performance is adapted to fit the music being performed, the audience and the season. Smaller groups within the ensemble, such as the A Capella Stella (all women a capella) and Vulcanize (all male acapella), may rehearse separately to prepare extra concert repertoire. Choreography, dialogue or mime is part of some performances. A student may participate with or without using credit. Repeatable up to a maximum of 8 credits.

MUS193 - University Gospel Choir

The California University Gospel Choir provides an opportunity for students to sing a wide variety of gospel music from both contemporary and traditional repertoire. The choir performs frequently on campus and at various venues throughout southwestern Pennsylvania. Choir membership is elective; an interview with the director is required. This course is repeatable to a maximum of 8 credits.

MUS196 - Jazz Ensemble

The Jazz Ensemble performs a wide variety of literature, from swing through fusion, funk, rock and ballad.

Entrance is by an interview with the Jazz Ensemble director. Attendance is required at rehearsals and all public performances. Membership granted only by audition. Course is repeatable for up to 8 crs.

MUS197 - Pep Band

The Pep Band performs at select basketball games, other spring sporting events, and various campus activities where the need for a smaller ensemble exists. Membership in this ensemble is open to any interested instrumentalist or equipment technician. The audition is a required interview with the director.

MUS198 - Marching Band

The University Marching Band performs at football games and parades, and is the featured band at numerous marching band festivals. Membership in this ensemble is open to any interested instrumentalist or equipment technician. There is no audition, but an interview with the director is required. Membership is also open to any student interested in auditioning for feature twirler or for a position on the auxiliary unit as a silk, dancer or rifle. Repeatable up to a maximum of 8 crs.

MUS199 - University Concert Band

The University Concert Band performs a wide variety of traditional and contemporary literature written for the idiom. The University Concert Band performs at convocations and concerts both on and off campus. Membership in this ensemble is open to any interested instrumentalist. No audition is necessary, but an interview with the director is required. Repeatable up to a maximum of 8 crs.

MUS209 - Private Instruction: Brass II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS211 - Keyboard Class

For the beginning level students interested in achieving facility at the piano. Includes playing of major and minor scales, patterns and fingerings, and chords (I, IV, V) in both major and minor keys followed by their inversions and the common tone chord sequence pattern. A student completing the course should be able to play simple songs by combining melody with chord accompaniment. It is expected that students will be at an entry level in keyboard experience.

MUS215 - Comprehensive Musicianship I

Provides a knowledge of the fundamentals of music and an ability to execute basic skills, including the study of notation, rhythms and meters, major and minor scales and key signatures, intervals and chords. Basic ear training and an introduction to piano keyboard is also included. Strongly recommended for elementary education students and any others interested in strengthening their knowledge of music fundamentals.

MUS219 - Private Instruction: Piano II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS229 - Private Instruction: Percussion II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS249 - Private Instruction: Woodwinds II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS259 - Private Instruction: Voice II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS270 - Private Instruction: Guitar II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS275 - Music & Recording Technology I

Careers in the music technology industry are often multifaceted in nature. This requires one to be prepared to utilize a wide range of skills in the workplace, rather than relying on a single skill set. Music and Recording Technology I is a course that is designed to provide students with a wide range of creative skills, so that they may

Course Descriptions

be confident as they forge their careers in this industry. Students are also introduced to digital music concepts that will be explored in greater depth in future courses. Specific topics that are to be covered include: photo editing, movie editing/production, MIDI recording/editing, audio recording/editing and music notation.

MUS279 - Private Instruction: String II

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS300 - Jazz: History, Form and Analysis

This course presents the historical background of jazz from 1900 to present; the important artists and ensembles and their contribution to the art form; and the analysis of jazz styles and forms via guided listening to recordings and live performances.

MUS304 - American Musical: History, Form and Analysis

This course presents the various historical, cultural and social elements of the American musical. This will be accomplished through the use of visual aids, audio recordings, television, video tapes, films and, whenever possible, attendance at live performances. Experts in the field will be utilized as guest lecturers.

MUS305 - African-American Gospel and Caribbean Music: History Form and Analysis

This course presents the historical background of gospel music, various styles of Caribbean popular and gospel music, and important artists and ensembles and their contributions realized through analysis of performance styles.

MUS306 - The Opera: History, Form and Analysis

This course will examine the origins, history and elements of opera and related dramatic works for voices with instruments. The analysis of various operas will reveal the relationship of plots and music to historical and national events taking place at the time of their composition. The entire class will attend a live opera performance if at all possible.

MUS307 - Special Music Project

This course revolves around a specific staged musical production. It encompasses all facets of this project from concept through delivery, including individual and ensemble performances, technical design and implementation, business and marketing.

MUS309 - Private Instruction: Brass III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS310 - Music in Media

This class will study the role of music in various media as a reflection and determinant of social behavior as well as an artistic expression. From its earliest roots to today's top-selling film and TV scores, jingles, video games and other marketing media, the interaction of music with drama and narrative has served to elicit and motivate behavior and reaction among audiences. Sociological theories interact with popular theater, film and other media to act upon its audiences at a visceral level. This course aims to explore the evolution of and contemporary uses of the sociological implications of music as used in the media.

MUS313 - Rock and Roll: History, Form and Analysis

The course presents the various musical, historical, cultural, and social elements of Rock and Roll. The student will acquire from this course an aural and intellectual grasp of this facet of music. This will be accomplished through the use of lecture/discussion and individual projects as well as the use of audio and video methods to study the important artists and ensembles and their contributors to the art form.

MUS314 - The Music Industry: History, Form & Analysis

This course presents the historical background of the Music Industry in America. It will cover an overview of the music industry including song writing, publishing, live performance, the record industry, music merchandising and publishing, contracts and licenses, and career opportunities.

MUS315 - Comprehensive Musicianship II

This course is designed for the student who wishes to acquire comprehensive musicianship skills. The student will learn the sol-fa system of note reading and interval identification, using both stationary and moveable tonic. Through sight-singing and ear-training exercises, students will refine their aural skills. Students will learn to notate simple melodies dictated, as well as to sing, whistle, or hum melodies and chords represented by notation.

MUS316 - Comprehensive Musicianship III

This course is designed to provide students with knowledge of the fundamentals of music and an ability to execute basic skills, including the study of notation, rhythms and meters, major and minor scales and key signatures, intervals and chords. Ear training and piano keyboard skills are also included. Comprehensive Musicianship III is designed for music majors as well as advanced music minors.

MUS319 - Private Instruction: Piano III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS329 - Private Instruction: Percussion III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS349 - Private Instruction: Woodwinds III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS359 - Private Instruction: Voice III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS370 - Private Instruction: Guitar III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS372 - Creative Arts for Elementary Education and Early Childhood

This course provides a survey of concepts, theories, and experiences for integrating Arts education into the elementary classroom curriculum. Students will have practical experiences in Art, Music, and Theatre along with Arts and Education theories. This course will enable future teachers to develop arts experiences and lesson plans for children.

MUS375 - Music & Recording Technology II

Music and Recording Technology II provides students with the foundational knowledge needed to begin a career in the recording arts. The primary focus of this course is to expose students to topics related to analog recording and engineering, including: acoustic and psycho-acoustic principles of sound, audio cables and connectors, connecting analog sound systems, operating principles of microphones, analog mixing console design and operation, analog recorders, signal routing and analog signal processing.

MUS379 - Private Instruction: String III

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS390 - Music Production I

Music Production I provides students with the foundational knowledge needed to begin a career in the music technology industry. This course will incorporate topics such as audio and MIDI theory, recording technology basics, and also introduce students to various “industry standard” software titles. Prerequisite: MUS 380.

MUS409 - Private Instruction: Brass IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS416 - Comprehensive Musicianship IV

Comprehensive Musicianship IV is the final theory course of the rotation and builds on the foundations of Comprehensive Musicianship I, II and III. It is the study of advanced theory of music including chromatic harmony. Stylistic differences between 18th- 19th- and 20th-century practice will be studied. Sight-singing and ear-training work will be continued. Ongoing practice of basic keyboard skills will continue to reinforce knowledge of these elements of music literacy. Original composition will be encouraged.

MUS419 - Private Instruction: Piano IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS425 - Commercial Music Arranging

Commercial Musical Arranging will call upon the application of previously acquired skills and apply them to the task of creating imaginative and practical commercial arrangements in various musical styles.

MUS429 - Private Instruction: Percussion IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS449 - Private Instruction: Woodwinds IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS459 - Private Instruction: Voice IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS470 - Private Instruction: Guitar IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS475 - Music & Recording Technology III

Music Production III exposes students to the concepts and skills used in the field digital audio production.

Students will accomplish this by exploring industry standard recording software titles as well as by completing

Course Descriptions

various independent and group recording projects. At the conclusion of this course all students will take the Pro Tools User Certification Exam, which, if passed, will award them with Pro Tools User Certification.

MUS476 - Music & Recording Technology IV

Music & Recording Technology IV introduces students to the topics of digital audio editing and mixing by exposing them to various post-production techniques commonly used in modern music production. Students will experiment with these techniques on recording projects they themselves completed in previous Music and Recording Technology courses throughout the semester. In addition to being exposed to these topics, students are also taught the official Avid Pro Tools 110 curriculum which further emphasizes the use of advanced production techniques specific to the Pro Tools software environment. Midway through the course, all students will take the Pro Tools User Certification Exam, which, if passed, will award them with Pro Tools User Certification.

MUS477 - Music & Recording Technology V

Music & Recording Technology V is the capstone course in the music department's music technology course offerings. Throughout the semester, students will complete a comprehensive recording portfolio that consists of detailed written reports which outline all technical and artistic decisions, processes that were utilized to create five recording projects (four guided, one self-guided). While the completion of the portfolio is generally self-guided, each student's work will be reviewed and critiqued by the professor of record three times throughout the semester (week 5, week 10, week 15). Once completed, the portfolio can be used as a tool for internship applications, future employment applications, and the like. All class lectures in MUS 477 will consist of discussions centered around the following topics: advanced editing and production skills used in Pro Tools software, figureheads in the fields of audio engineering and music production, proper engineering etiquette, communicating well with clients, understanding the role technology serves in helping to achieve artistic goals.

MUS479 - Private Instruction: String IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS479 - Private Instruction: String IV

This course is designed for private instruction in the mechanics and artistry of particular instruments or voice. The goals and materials are specifically chosen to strengthen the technical, musical, and performing abilities of the individual student.

MUS485 - Music Technology Practicum

Music Department Practicum offers the student the opportunity for practical, professional recording work and field experiences in various on & off-campus settings.

MUS488 - Music Tech Internship

Music Department Internship offers the student the opportunity for practical, professional recording work and field experiences in various on & off-campus settings. Internship are to be jointly administered by an on-site supervisor and a Departmental Internship Supervisor.

MUS499 - Senior Project/Recital

The Senior Project / Recital serves as the final demonstration of the student's specialization within the Commercial Music Technology Program. Under the supervision of a faculty advisor, the student seeks to make a substantive contribution to the discipline. Considerable latitude in the form of the contribution is permitted. Empirical and historical research as well as creative presentations are all appropriate. Other faculty members of

Course Descriptions

the Music Department are assigned to independently pass judgment on the student's scholastic effort. An oral defense, demonstration or display of the completed project / recital is required.

NMT-Nanonmanufacturing

NMT311 - Materials, Safety and Equipment Overview for Nanofabrication

This course provides an overview of basic nano-fabrication processing equipment and material chemistry and handling procedures. The focus is on clean room protocol, safety, environmental and health issues in equipment operation and materials handling. Topics to be covered will include clean room operation, safety and health issues; vacuum pump systems operation, turbo-molecular, cryo, diffusion, and dry mechanical pump systems; furnace operation, safety, environmental and health issues (covering horizontal and vertical tube furnaces, and rapid thermal annealing tools); chemical vapor deposition system operation, safety, environmental and health issues (covering gas delivery, corrosive and flammable gas storage, plumbing, regulators, and mass flow controllers); and vacuum deposition/etching system operation, safety, environmental and health issues (covering microwave and EF power supplies, tuners, heating and cooling units, vacuum gauges, valves, and process controllers). Specific materials handling issues will include DI water, solvents, cleaners, ion implantation sources, diffusion sources, photoresists, developers, metals, dielectrics, and toxic, flammable, corrosive and high purity gases as well as packaging materials.

NMT312 - Basic Nanofabrication Process

This course provides an overview of basic processing steps in nanofabrication (contact lithography, basic etching and deposition techniques). The majority of the course details a step-by-step description of the equipment and processes needed to fabricate devices and structures. Processing flow will be examined for structures such as microelectronic devices, including diode and the MOS capacitor. Students receive an in-depth introduction to basic lithography from wafer preparation to final inspection. Contamination issues in nanofabrication are

Course Descriptions

discussed in detail. Students will learn the similarities and differences in both equipment and process flows for each configuration by undertaking hands-on processing.

NMT313 - Thin Films in Nanofabrication

This course covers advanced thin-film deposition and etching practices in nanofabrication. Advanced deposition techniques covered in the first part of the course include atmosphere, low-pressure and plasma-enhanced chemical vapor deposition, sputtering, thermal and electron beam evaporation. Materials studied include dielectrics (nitride, oxide), polysilicon (doped and undoped), and metals. The second part of the course focuses on advanced etching processes and techniques emphasizing reactive ion etching (single wafer, batch), high-density plasma systems (ECR, MERIE, ICP), ion beam etching, and wet chemical etching. Students will receive hands-on experience in depositing and etching dielectric, semiconductor and metallic materials using state-of-the-art tools and practicing many of the steps critical to nanofabrication of semiconductor devices, including microelectronics, MEMs devices, display structures and structures used in the biotechnology fields.

NMT314 - Advanced Lithography and Dielectrics for Nanofabrication

This course covers all aspects of advanced lithography from design and mask fabrication to pattern transfer and inspection. The course is divided into three major sections. The first section describes the advanced lithographic process from substrate preparation to exposure. Most of the emphasis is on understanding the nature and behavior of photoresist materials. The second section examines systems and techniques that define patterns. This section will introduce specialized optical masks and reticles, aligners, steppers and scanners. In addition, critical dimension (CD) control and profile control of photoresists will be investigated. The last section will discuss advanced optical lithographic techniques, such as phase shifting masks and illumination schemes as well as e-beam, e-ray, EUV and ion beam lithography. A section about engineering dielectrics is also discussed.

NMT315 - Materials Modification in Nanofabrication

This course will cover in detail the processing steps used in modifying material properties in nanofabrication. Evaluate thermal budget requirements using state-of-the-art tools. An intensive study of metals used in nanotechnology aids the student in understanding the various methods of metalization, such as CVD, evaporation and sputtering. Metal applications for interconnect technologies will be examined. Aluminum, refractory metals and copper deposition techniques and characterization will be discussed in detail along with topics such as diffusion barriers, contact resistance, electromigration, corrosion, stress effects and adhesion. Other modification technologies such as ion implantation, diffusion, and surface preparation and treatment are integrated as well. An intensive study of dielectric properties and materials, including dielectric constant engineering, mechanical, optical and electrical characteristics, poly, BSG, PSG, SOG and BPSG, gives the student further insight into advanced device fabrication. Material properties and basic device structures will be discussed for the optoelectronic market.

NMT316 - Characterization, Packaging, and Testing of Nanofabricated Structures

This course examines a variety of techniques and measurements essential for controlling device fabrication and final packaging. We will revisit concepts such as residual gas analysis introduced in NMT 211; optical emission spectroscopy (OES) and end point detection will be discussed as introduced in NMT 213. Characterization techniques, such as surface profilometry, advanced optical microscopy, optical thin film measurements, ellipsometry and resistivity/conductivity measurements, will be implemented on nanofabricated samples. Basic electrical measurements on device structures for yield analysis and process control will also be stressed. These will include breakdown measurements, junction testing, C-V and I-V tests, and simple transistor characterization. In addition, we will examine mechanical as well as electrical characteristics of nanostructures for biological/ biomedical applications. The students will perform DNA analysis by learning and performing the polymerase chain reaction for DNA replication. They will also study and manufacture microfluidic channels for biological analysis. An extensive overview of biology will be given with emphasis on biocompatible materials. The student will also learn about the manufacturing issues involved in subjects such as interconnects, isolation and final device assembly.

Course Descriptions

The importance of planarization techniques, such as deposition/etchback and chemical/mechanical polishing, will be emphasized. Lastly, packaging procedures, such as die separation, inspection bonding, sealing and final test for both conventional IC's and novel MEM and biomedical devices, will be examined.

NRN-Nursing CCAC

NRN999 - Community College of Allegheny County Nursing at Cal U

For Community College of Allegheny County Nursing Students.

NSE-National Student Exchange

NSE200 - National Student Exchange

National Student Exchange (NSE) is a domestic based consortium (U.S. and Canadian institutions) through which students study full-time toward their Cal U degree at a member school of their choice. Students must apply for placement and receive approval for courses to be taken while on exchange. Students may exchange for up to one full academic year. NSE 200 denotes a student's first term of participation. A student is registered for 12 credits if paying tuition/fees to Cal U (Plan B) or 0 credits if paying tuition to the host school (Plan A).

NSE300 - National Student Exchange

National Student Exchange (NSE) is a domestic based consortium (U.S. and Canadian institutions) through which students study full-time toward their Cal U degree at a member school of their choice. Students must apply for placement and receive approval for courses to be taken while on exchange. Students may exchange for up to one full academic year. NSE 300 denotes a student's second term of participation. A student is registered for 12 credits if paying tuition/fees to Cal U (Plan B) or 0 credits if paying tuition to the host school (Plan A).

NUR-Nursing

NUR228 - Nutrition for Nurses

This course is for nursing students anticipating licensure as a registered nurse. The course focuses on the basics of healthy nutrition through the lifespan with selected cultural variation nutritional therapy, diet and physical activity, nutrition in selected diseases and medical conditions, and food safety.

NUR330 - Philosophy of Professional Nursing

This course focuses on the re-socialization of the RN student from a technical to a full professional nursing role through an overview/synthesis of the conceptual foundations of professional nursing practice. Facilitation of this change will be through incorporation of principles and concepts of self-awareness and self-directed learning throughout discussions of professional self-concept development, theoretical bases of professional nursing, and delivery of professional nursing as related to the various roles of the professional nurse.

NUR360 - Nursing Research & Evidence-Based Practice

This course is designed to increase the professional nurse's knowledge and use of the research process. Emphasis is on reading, interpreting, and evaluating research findings considering ethical and practical aspects as the basis for evidence-based nursing practice.

NUR361 - Nursing Research

This course is designed to increase the professional nurse's knowledge and use of principles, methods, and procedures related to the research process. Emphasis is on reading, interpreting, and evaluating research findings while considering ethical and practical aspects of conducting research as the basis for evidence-based nursing practice.

NUR375 - Leadership and Change in Nursing

This course focuses on analysis and synthesis of concepts in nursing and related fields regarding planned change and group development through study and experience in group process and leadership roles. Selected clinical experiences provide for application of theory in critical analysis of situations and decision-making within the practice of nursing to meet emerging health needs of consumers. *This course includes a clinical practicum experience.

NUR420 - Nursing Informatics

This course introduces the learner to the history and current state of health informatics, basic informatics concepts, health information management systems and the use of technology to improve healthcare within the framework of interprofessional communication. The course will provide the learner with the knowledge and skills needed to competently practice and provide patient care through the use of current and emerging healthcare technology. Content includes legal and ethical considerations associated with nursing informatics, as well as the exploration of patient care technologies to support clinical decisions, provide safe, quality patient care, document nurse sensitive indicators and the role of nursing informatics in communication strategies.

NUR430 - Evidence-based Practice in Nursing

This course is designed to enable professional nurses with the knowledge and skills to examine clinical/professional nursing problems with an evidence-based practice approach for the improvement in health and practice outcomes. Emphasis is on evidence-based practice steps and skills required to appraise different types of knowledge used in the process to determine strategies aimed to improve patient and/or professional nursing outcomes. Students will select a clinical nursing topic and critically appraise evidence-based practice knowledge. The results of their appraisal will be used by students to propose an evidence-based practice pilot plan for an improvement in clinical outcomes of their chosen topic.

NUR450 - Trends and Issues in Nursing

This course focuses on the analysis of professional nursing and bioethical issues within a systems framework. Implications for professional nursing practice in the health care delivery system are emphasized.

NUR465 - Nursing Assessment and Health Promotion for Individuals and Families

This course includes a clinical practicum experience and is designed to enable baccalaureate nursing students to deliver patient and family centered care as a member of an inter-professional healthcare team. Emphasis will be on family and individual health-wellness-illness, history taking and assessment using a systems approach, with consideration of multicultural and multi-identity perspectives. A variety of nursing and family theories will provide a framework for guiding individual and family assessment and intervention, and the significance that family nursing is conceptually and empirically distinct from nursing of individuals. Students will use Evidence Based Practice to guide their development of an inter-professional plan of care for the individual and family unit.

NUR475 - Community Health Nursing

This course includes a clinical practicum experience which focuses on the synthesis of wellness and population-based health concepts to promote, maintain, and restore health to communities/populations. Students will explore the various roles of the community health nurse. Theories from nursing and the public health sciences will be used to identify the needs of populations, including vulnerable populations, at risk for illness, disability or premature death. The course addresses the epidemiological processes and demography used to identify populations at-risk for the development of preventable illnesses. Emphasis will be placed on health determinants, health behavior theories, health disparity, social policy, social justice, legislative/political issues, human genetics, impact of globalization, environmental health, as well as, chronic disease prevention to impact the health of a population. Students will have the opportunity to participate in a community assessment, to identify health and

Course Descriptions

safety risks within the community/population. Students will be given the opportunity to propose specific strategies to educate people/populations about health and safety issues and to increase access to healthcare.

NURPOR - Nursing Portfolio

Transfer Nursing Credits.

PGM-Professional Golf Mgt

PGM100 - Introduction to Professional Golf Management

This course provides students with an overview of the PGA of America and the Cal U/PGM educational program. Students will be introduced to the PGA's qualifying level and the Cal U/PGM curriculum, which will enable them to become more informed about the educational requirements to become future PGA members and what is expected in Cal U/PGM Level I. In addition, students will be introduced to the working intricacies of the PGA of America.

PGM125 - Professional Golf Management Internship I

This course is one of the professional golf management student internship experiences. Students will secure internship sites based on their unique educational needs and experiences. Internship students will work directly with PGA golf professionals in one or more work settings.

PGM150 - Teaching of Golf I

This course provides the golf student with the theory and techniques of teaching the golf swing. Students will utilize technology to evaluate the golf swing and develop and deliver golf lesson plans. The course utilizes the classrooms in Hamer Hall as well as California University's indoor practice facility in Gallagher Hall and outdoor golf practices at Cedarbrook Golf Course.

PGM200 - Intermediate Topics in Professional Golf Management

This course will provide students with a detailed examination of the PGA of America and the Cal U/PGM educational program. Students will be introduced to PGM Level II, which will enable them to become more informed about the educational requirements to be completed in preparation for the Cal U/PGM Level II checkpoint.

PGM210 - Golf Shop Management

This course will provide the student with the basics of the operations and management of the golf shop. Topics include methods of merchandising, scheduling of play, implementing course regulations, development and management of the golf operations team, time management, and personnel management.

PGM225 - Professional Golf Management Internship II

This course exposes the student to proper golf course management techniques, including daily expectations while working on a golf course and proper protocol. It also provides the student with the unique professional educational experience by combining theoretical and hands-on training. The course will be completed at a recognized PGA facility chosen in conjunction with the faculty and the student. The student will spend a minimum of 455 hours or 13 weeks at the internship site in order to satisfactorily complete this requirement.

PGM250 - Golf Operations Management

This course provides the student with the content needed for the PGA's PGM Program Level II checkpoint. Golf Business Operations and Customer Relations are examined in their entirety within this course and focus on key concepts relating to: interaction strategies and interpersonal skills within a business context, moments of truth, policy and procedure development, yield management evaluation, supervising and delegation of staff, and techniques for motivating both customers and employees.

PGM260 - Golf Performance Coaching and Technology

This course teaches student how to use golf swing technology to collect and analyze data for the purpose of improving a golfers' ability. Enhancing student proficiency in using launch monitors, force pressure plates, 2D video, and 3D analysis software are key components of the course. Students will also learn how to use the acquired data to develop golf lesson programs and a physical exercise routine designed to improve overall player performance. Various communication platforms will be used to help students effectively deliver golf instruction in-person and online.

PGM300 - Advanced Topics in PGM

This course provides the student with the content needed for the PGM Level III checkpoint. Inventory, merchandising, food and beverage, and PGA membership are some of the topics covered.

PGM310 - Turfgrass Management

The course will provide the student with an overview and introduction to not only the science of turfgrass, but also the role turf management plays in the golf operation. Topics include grass selection, mowing, fertilization, irrigation, supplementary cultural practices and the management of botanical pests.

PGM325 - Professional Golf Management Internship III

This course is one of the professional golf management student internship experiences. Students will secure internship sites based on their unique educational needs and experiences. Internship students will work directly with PGA golf professionals in one or more work settings.

PGM350 - Food and Beverage Management

This course provides the student with an overview of the principles and techniques involved in establishing and maintaining a successful, profitable food and beverage operation at a golf facility. Some of the topics the course will examine include: (1) menu development, (2) menu descriptive copy, (3) principles and techniques of restaurant design, (4) staffing and training, (5) cost control measures, (6) beverage control and legal aspects of beverage control, (7) kitchen equipment and safety, (8) sanitation, (9) improving and enhancing customer service, and (10) the legal aspects of food and beverage operations.

PGM405 - Expanded Golf Operations

The course enables the PGM student to evaluate, design, implement and enhance the operations of a golf facility. The student will be introduced to the various elements of developing or enhancing existing golf facilities.

PGM410 - Teaching of Golf II

This course is designed to improve the golf instructional skills of golf professionals, especially those desiring to be quality coaches. Included in the course are such topics as teaching, coaching, training techniques, motivational strategies and the needs of special populations. Methods of recording student progress, management techniques for a successful instructional program, and the use of audio-visual and other electronic teaching tools are examined.

PGM415 - Trends and Issues in the Golf Industry

An analysis of professional golf industry trends as well as “grow the game” initiatives from historical, contemporary, and futuristic viewpoints with implications for global expansion and overall participation.

PGM425 - Senior Internship in Professional Golf Management

This course is one of the professional golf management student's internship experiences. Students will be assigned to an internship site based on their unique educational needs and experience. Internship students will work directly with PGA golf professionals in one or more work settings.

PGM435 - Capstone Internship in Professional Golf Management

This course is part of the professional golf management student's capstone experience. Students will be assigned to an internship site based on their unique educational needs and experience. Internship students will work directly with PGA golf professionals in one or more work settings.

PHI-Philosophy

PHI100 - Perspectives in Philosophy

This course is an introduction to such major philosophical issues as the nature of knowledge, reality, religion and morals.

PHI115 - Logic and Language

This course is an introduction to basic principles and techniques for distinguishing correct from incorrect reasoning.

PHI200 - World Religions

This course studies the seven world religions, including their origins and doctrines.

PHI220 - Ethics

An examination of selected ethical systems and their philosophical foundations, this course places special emphasis on understanding such basic moral concepts as good, right and duty.

PHI247 - Science, Technology and Society

This course examines the philosophical issues that stem from the impact that evolving science and technology have on people's beliefs, values and behavior.

PHI307 - Medical Ethics

This course extends the study of ethics – theoretical and applied – to moral dilemmas and decision making in the field of medicine and health-related professions.

PHI308 - Bioethics

This course examines ethical controversies arising from the study of biology and the development and application of biotechnology, and considers applications of theoretical ethics to those controversies.

PHI310 - 19th-Century Philosophy

A survey of the development of German idealism after Kant and the voluntaristic reactions to it, this course also considers British Empiricism and French Positivism.

PHI311 - Formal Logic I

An introduction to the syntax and semantics of truth-functional and first-order languages, this course also covers proof theories for such languages.

PHI312 - Formal Logic II

A continuation of PHI 211 Formal Logic I, with emphasis on the metatheory of truth/functional and first-order languages, this course also considers selected topics in the philosophy of logic and the philosophy of mathematics.

PHI325 - Philosophy of Science

A study of the methods, concepts and presuppositions of scientific inquiry, this course attempts to understand the historical development of science in the context of various theories of knowledge and reality.

PHI335 - Aesthetic Theory

This course examines the nature and basis of criticism in the fine arts and literature, the nature and function of art, aesthetic standards, the concept of beauty, artistic creativity, and the meaning of truth in literature and the arts.

PHI355 - Philosophy of Religion

This course considers the nature of religion, speculations and arguments about the nature and existence of God, the possibility of religious knowledge, claims to religious experience and revelation, the problem of evil, the belief in immortality, and the meaning of religious language.

PHI370 - The Philosophy of Law

A survey of the debate about the concept of law in the history of philosophy, this course examines the recent revival of the debate in greater detail. Specific topics include the nature of legal reasoning, the legal enforcement of morality, the problem of responsibility and the concept of justice.

PHI415 - Philosophy of Mind

An examination of important stages in the philosophical development of the notion of mind, this course discusses such contemporary problems as the relation of mind and body and the nature of consciousness, and analyzes such notions as will, emotion, action and memory.

PHI431 - Analytic Philosophy

An examination of selected theories of knowledge, this course includes contemporary discussions.

PHS-Physical Science

PHS120 - Basic Physical Science with Laboratory

Basic Physical Science (L) is a laboratory-oriented course in physical science for non-majors. Laboratory activities/experiments are assigned, providing a hands-on introduction to experimental methods of scientific investigation. Each activity provides opportunities for the student to discover the practical knowledge necessary for a well-rounded understanding of physical science.

PHS137 - Introduction to Environmental Chemistry

This course provides knowledge of basic chemical principles and applies that knowledge to a consideration of current environmental issues such as ozone depletion, global warming, air and water pollution, and the hazards of radioactivity. It will provide the student with an opportunity to begin to appreciate the chemical complexity of environmental issues.

PHY-Physics

PHY101 - College Physics I

Introductory physics. Vectors, mechanics, energy, momentum, conservation principles and oscillatory motion.

PHY121 - General Physics I

An introductory non calculus course dealing with mechanics and heat.

PHY122 - General Physics II

An introductory non-calculus course addressing the areas of sound, light, and electricity and magnetism.

PHY202 - College Physics II

A continuation of College Physics I. Heat and thermodynamics, hydrostatics, waves and acoustics, electricity, and an introduction to magnetism and ac circuits.

PHY203 - College Physics III

A continuation of College Physics II. Magnetism, AC circuits, Maxwell's equation and electromagnetic waves, light, atomic and nuclear physics, and special relativity. Some review of material from College Physics I and II.

PHY301 - Intermediate Electricity and Magnetism

Electric and magnetic fields and energy, the effects of matter on them, circuits, Maxwell's equations, electromagnetic waves. Vector calculus and differential equations used.

PHY321 - Intermediate Mechanics

Vector calculus, Newtonian kinematics and dynamics of many particle systems, with emphasis on integral relations, motion in a central potential, scattering theory, systems with constraints, variational principles in mechanics, small oscillations, wave equations and special relativity.

PHY331 - Modern Physics

Relativistic kinematics and dynamics, particle and wave aspects of radiation and particles, the structure of the hydrogen atom, and many-electron atoms. Introduction to quantum mechanics.

PHY341 - Mathematical Methods in Physics I

Vector calculus, complex variable analysis and conformal mapping, Fourier series and integrals, ordinary differential equations, partial differential equations, general series representations of functions and special functions.

PHY375 - Radiation and Optics

A review of Maxwell equations and wave analysis. Fraunhofer diffraction, radiation from atoms, polychromatic waves magneto-optic and electro optic effects, and introduction of laser and maser theory.

PHY405 - Quantum Mechanics

Formulation and application of the fundamental principles of quantum theory which evolved in the twentieth century. Planck's quantum postulates, DeBroglie hypothesis and wave particle duality. Momentum space and the Fourier transform. Formulation of the Schrodinger equation and its application to the treatment of particles in potential fields.

PHY455 - Solid State Physics

An introduction to the physics of solid materials, including crystalline lattice structures, band theory, conductors, semiconductors and superconductors. Recent developments in nanoscience as related to solid state physics will also be emphasized.

PHY462 - Fundamentals of Nuclear and Particle Physics

An upper-division course that focuses on the fundamentals of nuclear and particle physics including nuclear models, scattering, potentials, decays, particle accelerators and detectors, elementary particles and their interactions, mathematical symmetries and associated conservation laws, and a summary of the Standard Model. Some familiarity with quantum mechanics and multivariate calculus are assumed.

PHY475 - Astrophysics

Topics concerning stellar evolution including observations, physical states of the stellar interior, evolutionary phases and initial and final stellar structure, and cosmology.

PHY495 - Physics Seminar

An introduction to literature, history, teaching and research methods in the physical sciences.

POS-Political Science

POS100 - Introduction to Political Science

This course is designed to introduce students to key ideas, institutions, processes and actors in the political world. It is intended to be a general, not detailed, examination, and attempts to encourage understanding, reflection and critical thinking.

POS102 - American Government for Elementary Education Majors

American Government is a course for elementary education majors, and provides an introduction to the major institutions and processes in the American political system.

POS105 - American Politics

This is an introductory course in American government focusing on the major institutions and processes in the American political system. Topics discussed in the course include separation of powers, checks and balances, civil liberties, political parties, the Congress, the president, the Supreme Court, federalism, and policy-making processes.

POS300 - Public Policy

The course covers theoretical and applied components of public policy and analysis, including an examination of decision making concepts and models and their application to various policy areas, policy development, implementation, and adjustment, the political context, and report writing.

POS301 - Research Methods in Political Science

A scope and methods course with an emphasis on research methods, research design, writing techniques, and statistics used in political science.

POS303 - The Mass Media and American Politics

The interaction of politics and the mass media within American society is covered. Topics include media effects on political socialization, techniques of opinion manipulation, propaganda, press responsibility, public opinion polling

Course Descriptions

and government control of the media. Special attention is devoted to the use of television as an instrument of communication.

POS306 - Congress

In this intensive examination of the legislative problems and procedures of Congress, students are introduced to such topics as the representational functions of Congress, the role of parties and leaders in Congress, the importance of the committee system, and the forces affecting congressional decision making.

POS307 - Revolution

A comparative study of the phenomenon of revolution, encompassing the causes, events and principal actors in those periods that culminate in the outbreak of violent political change.

POS310 - The Presidency

Intensive study of the American presidency, focusing on personality, organization of the office, use and misuse of power, and policy making.

POS311 - Cyberpolitics

An examination of the impact of the Internet on American democratic institutions and processes, focusing on campaigns and elections, civil liberties, law enforcement, national security, and public policies, including cyber democracy, cyber terrorism, law enforcement issues of wire tapping and encryption, education, taxes, entitlements, business, and medicine.

POS312 - Politics of the World Economy

This course will be concerned with understanding the politics of the world economy. The emphasis will be on the contemporary structure of the international political economy, how it emerged, and what actions and policy responses – by international institutions, governments, multinational corporations and labor unions – continue to shape its order. Students will also gain knowledge of how their lives are impacted by the world economy and what future opportunity exists there.

POS314 - Constitutional Law: Governmental Powers

A study of the major provisions of the American Constitution and the growth of American constitutional law based on analysis and discussion of leading judicial decisions.

POS315 - Constitutional Law: Civil Liberties & Civil Rights

A study of the development and meaning of the rights and liberties guaranteed to persons under the Constitution of the United States. Special emphasis is placed on the antecedents of and the adoption of the Bill of Rights and a description of the court structure through which the meaning of civil liberties is determined in specific situations.

POS316 - Judicial Policy & Politics

Intensive study of the judicial process in the United States and the relationship between the judicial system and the larger American social system.

POS318 - Political Parties & Pressure Groups

This course examines the roles political parties and pressure groups play in electoral politics and policy making.

POS319 - Campaign Management

A course on political campaigns and elections that combines theory and practice. The emphasis is placed on campaign strategy.

POS322 - Politics of the Middle East

This course will consider the nature and types of politics found throughout the Middle East. Consideration will begin with the diversity of peoples in this area, both in terms of religion and ethnicity, and how these were shaped by the Ottoman and European imperial systems of government. This will be followed by an examination of how contemporary Arab, Israeli, Turkish and Iranian governments have dealt with this legacy even as they respond to the challenges of the modern world.

POS325 - Politics of Asia

A comparative analysis of the institutions, processes and policies of China, Japan, and India and how these nations relate to the system in the United States.

POS326 - Politics of Africa

A comparative analysis of the institutions, processes and politics of selected African nations and their place in the international arena.

POS327 - Contemporary Political Thought

A general survey of the major political ideas and representative thinkers of the 19th and 20th centuries, drawing connections between these ideas and contemporary developments in philosophy, religion, psychology, sociology, and the natural sciences.

POS329 - Internship in Political Science

Application of political science methodologies to various professional environments under faculty supervision.

POS330 - American Political Ideas

An advanced course in political theory: the major political ideas and controversies that are associated with the development of American political thought.

POS340 - The Politics of Empires

This course will explore the political ideas, traditions and institutions associated with the idea of empires and imperial organization in international order. It will also focus on how empires not only organize foreign policy and foreign affairs, but equally the social and economic lives and cultures of their citizens and subjects. The course will begin with an overview of political science thinking on the values and ethics associated with the idea of empire, and how much of this political thought views empire as the key to peace, progress and prosperity. The course then considers the evolution of the imperial idea throughout political history to its current manifestations in our own age. The classical expression of empire is will first be considered in the examination of the Egyptian, Greek and Roman empires. The course then subsequently will consider the Asian practice of empire in both its Islamic forms (Ottoman, Safavid and Mughal) and Chinese forms. Following this, the course will turn to a treatment of the great trading and colonization empires (British, French, Dutch) and their influence in determining the modern economic and Western international political order. The age of ideological empires will be the fourth section of the course and it will explore not only the Nazi and Communist empires, but those patterns of world and imperial international order influenced by the French Revolution and the liberal internationalism of the United States of America. The course will conclude with a consideration of imperial order and international organization in the current era of globalization and increasing economic integration. In studying the aforementioned, the student will not only meet the general objectives, but also the following political science objectives.

POS344 - Intergovernmental Relations

The course is an examination of the legal, political, fiscal, and administrative dimensions of intergovernmental relations in the United States.

POS346 - Introduction to International Relations

This course considers the nature of world politics and how it has evolved. Emphasis will be on the nature of power in international relations, and why this often leads to conflict, from war to economic competition. Following this, the student will consider what measures and institutions have been created to deal with such issues, from diplomacy to international organizations like the United Nations to the emergence of international human rights law and citizen advocacy groups. There will also be consideration of careers available in international relations, and the students will be exposed to this through playing the role of a diplomat in an international relations simulation or game.

POS347 - Development of Political Thought: Classical and Medieval

The basic ideas, values, and method of the profound political thinkers and philosophers from the Axial Age, including Zoroastrianism, Judaism, Daoism, Jainism, Buddhism, Confucianism, Platonism, Legalism, and Aristotelianism.

POS348 - Political Thought: Medieval and Modern

This course will explore and develop an understanding of the nature and content of political thought from the medieval period to the modern world. The student will also develop an understanding of how political thought shapes government and political institutions and through them, the larger world. Among the thinkers considered will be Dante, Machiavelli, More, Luther, Calvin, Jefferson and Burke. The course will conclude with an

Course Descriptions

examination of how the modern political world was, in large part, a creation of these thinkers and their institutions from modern representative government to trading empires to emergent international organizations.

POS355 - Public Administration

Topics covered in the course include both theoretical and applied components, with an emphasis on public bureaucracies, administrative leadership, intergovernmental relations, organized interests, and making rules and implementing government decisions.

POS375 - Public and Nonprofit Strategic Planning

The course focuses on strategic planning as it relates to public and nonprofit organizations, including theories and methodologies, organizational dynamics, and frameworks.

POS415 - Public Opinion & Political Behavior

A course on the fundamentals of public opinion research, including measurement methods. The study of political behavior as it relates to political participation and public policy.

POS450 - Seminar in Politics

A seminar designed to provide an intensive examination of a specific and narrowly focused problem or controversy in the discipline.

PRF-Perf Enhance Injury Prev

PRF700 - Orientation to Exercise Science and Health Promotion

This course is designed to provide an overview of online learning and the graduate program in Exercise Science and Health Promotion. Discussion will include various exercise science and health promotion models. The course will also introduce the student to various types and styles of learning via online education, and will orient the student to feature used in online courses.

PRF705 - Industrial, Clinical, & Corporate Wellness

This course is designed to develop knowledge and awareness of the major issues in the field of work site health promotion and clinical care. The focus of the course is on planning, administering and evaluating wellness and fitness programs based in clinical, industrial and corporate environments. The cost of unhealthy lifestyle choices for the individual and employer and their relationship to the workplace will be explored. Topics include "The Wellness Revolution," "The Industrial Athlete Model," benchmark programs and outcomes assessment strategies.

PRF715 - Business & Entrepreneurship in the Fitness Industry

This course offers a comprehensive discussion of the practical aspects of starting and running a business in performance enhancement and fitness. The course focuses on launching new ventures, as well as business and management practices for individuals who are already in business but want to learn how to improve their operations. Specific topics include management theory, financial management, personnel management, record keeping, risk management and technology issues.

PRF765 - Nutrition for Peak Performance

An in-depth examination of contemporary issues such as performance enhancement dietary supplements, dietary lipids and heart disease, dietary fiber and health, influence of lifestyle factors on nutrition. Controversies in nutrition, ergogenic aides, hydration, and eating disorders are also discussed. Energy and nutrient needs for activity with emphasis on particular physical and athletic activities; common myths and fallacies concerning diet and athletic performance; and appropriate dietary approaches for specific activities and active people. This course is a dually listed course applicable to the Master of Science, Exercise Science and Health Promotion, and to the Doctor of Health Science, Health Science and Exercise Leadership, within the department of Exercise Science and Sport Studies.

PRF780 - Current Topics in Performance Enhancement and Injury Prevention

The purpose of this course is to increase student understanding of various performance enhancement and injury prevention issues facing America and the world today. This course introduces students to the field of exercise science as a discipline and profession with a specific focus on contemporary topics facing all performance enhancement and injury prevention professionals.

PRF788 - Nutrition Through the Lifecycle

This course covers nutrition needs necessary for growth, development and normal functioning throughout the life cycle. Pregnancy, lactation, infancy, childhood, adolescence and aging will be studied. Specific concerns for each life cycle stage will be emphasized. Common chronic diseases during Adult nutrition and their corresponding interventions will be explored in depth.

PSE-Professional Studies in Ed

PSE200 - Introduction to Professional Studies in Education

This introductory course will provide students with an opportunity to explore the various career options available outside and within the education field. Students will identify their future professional goals and determine how to apply the knowledge, skills, and dispositions they will learn in education courses to a variety of fields.

PSY-Psychology

PSY100 - General Psychology

This course is an introduction to the scientific study of behavior and mental processes. It explores topics such as the biological basis of behavior, research methods, learning, emotions, cognitive processes, perception, personality, abnormal behavior and the treatment of mental disorders. Research as well as practical application is stressed.

PSY150 - Lifespan Developmental Psychology

Students completing this course will have an awareness of the biological, cognitive and social factors that impact physical, mental, social, and emotional development throughout the life-span. The course will present the research methodology common to this field of psychology as well as the major theories and their application to stages of life.

PSY205 - Childhood: Developmental Psychology

The purpose of this course is to provide students with meaningful scientific information in understanding infants and children and in providing practical principles for working with children. Theories and methods used to understand physical, emotional, cognitive and social development from conception to age nine will be discussed.

PSY206 - Adolescence: Developmental Psychology

Factors that influence the growth and development of adolescents. Emphasis on the relationship among physiological, psychological and sociological factors and theoretical systems used to describe, explain, predict and work with adolescents.

PSY207 - Adulthood: Developmental Psychology

This course discusses factors of a biological and environmental nature that impact a person's physical, mental, social, and emotional development throughout the life-span with an emphasis on early, middle and late adulthood, death and dying.

PSY208 - Educational Psychology

This course emphasizes the application of psychological principles to the classroom. Topics discussed include human development, learning, individual differences, assessment, education objectives, motivation and behavior management.

PSY209 - Industrial Psychology

This course is a comprehensive introduction to the field of industrial psychology. It demonstrates the application of psychological principles of behavior to work conditions. An examination of business and industrial activities and

Course Descriptions

the role a psychologist plays in such activities. A strong emphasis on the practical and everyday problems that confront people in the world of work.

PSY211 - Social Psychology

The interaction between the individual and social groups within a cultural context: the individual in a social role, social groups, and social institutions. The course will cover such topics as aggression, interpersonal attraction, group behavior, persuasion, and helping behavior.

PSY216 - Child Psychology: Birth to Age 4

The purpose of this course is to provide students with meaningful scientific information in understanding infants and children and in providing practical principles for working with children. Special attention is given to the study of the relationship of the physical, emotional, cognitive, and social growth from conception to age 4.

PSY217 - Child Psychology 5 to 9

The purpose of this course is to acquaint students with the basic principles and major issues of children age 5 to 9. Theories and methods used to understand physical, emotional, cognitive and social development will be discussed.

PSY220 - Descriptive Statistics in Psychology

This course presents the fundamentals of hypothesis testing. It covers computation and interpretation of descriptive statistics (measures of central tendency, variability, correlation and regression) as well as an introduction to typical statistical procedures utilized in the social sciences, particularly psychology.

PSY222 - Psychology of Stress Management

Sources of stress, effects of stress, manifestations of stress and methods of coping with stress will be examined, with the focus being on practical application.

PSY301 - Sensation and Perception Lab

Sensation is the process in which the sensory receptors receive stimuli from the environment and transmit it to the brain. Perception is the process in which the brain organizes and interprets that information. Sensation is a physical process; perception is a cognitive interpretation of sensations. This course will explore sensory and perceptual processes as they relate to psychological experience. Also, students will learn how to manipulate sensory information and measure the effects on perception and other psychological experiences.

PSY302 - Evolutionary Psychology

This course will examine the mechanisms of the human mind through the lens of evolutionary psychology. We begin with a brief historical review of key theories in psychology and evolutionary biology. We then proceed to substantive topics, including problems of survival, long-term and short-term mating, sexuality, parenting, kinship, cooperation, aggression and warfare, conflict between the sexes, status, prestige, and dominance hierarchies. The course concludes by proposing a unified field that integrates the different branches of psychology. All course topics will be approached from both theory-driven and applied perspectives.

PSY303 - Cross-Cultural Psychology

Cross-cultural research in psychology has demonstrated that many psychological processes once assumed to be universal (i.e., shared by members of all cultures) are actually quite culture-bound. Although a few topics on psychology have a relatively long history of cross-cultural investigation, psychologists are becoming more aware that all of the topics on psychology must be examined from a broad cultural perspective. In this course we will

Course Descriptions

focus on topics in personality, social, developmental and health psychology, examining them in light of various cultural backgrounds and orientations.

PSY305 - Psychology of Personality

This course explores the essential factors that result in creating individual differences in human behavior and mental processes. Current theories and classical theories are studied to increase understanding of the development and structure of personality. The characteristics of the normal and the maladjusted personality are identified, with special concern for developmental patterns.

PSY306 - Cognitive Psychology

This course examines human cognition, sometimes called higher mental processes. It explores how humans acquire, store, transform, and use knowledge, with topics including perception, memory, language, problem solving, decision making, life- span development of cognition and intelligence. The contributions of neuroscience to the understanding of cognition are stressed.

PSY310 - Mental Health/Psychology of Adjustment

Problems of personality and mechanisms of adjustment, including a study of the origin and resolution of conflicts, and the role of emotion in the patterns of behavior.

PSY311 - Psychology of Gender Roles

This course explores the development of gender roles throughout the life span, factors that sustain these roles, and how gender roles influence the daily lives of men and women. Aspects of life experiences where gender plays an important role---including sexuality, education, occupation/career, physical and mental health, and the media---are explored. Throughout the course, both multicultural and cross-cultural perspectives are used.

PSY320 - Black Psychology

This course presents the psychological principles shaping the personality of Blacks. The course includes a critique of “traditional” theories, statistics, racial myths, discriminatory thinking and behavior. Analysis of attitudes and behaviors which develop in prejudicial socio-economic, educational and political systems and ways to counteract them are reviewed. This course emphasizes proactive Black leadership and the life-style of individual Black people and their community.

PSY331 - Inferential Statistics in Psychology

This course presents the fundamentals of parametric and nonparametric inferential statistical procedures, including t-tests; analysis of variance, correlation and regression; and chi-square. It covers the testing of the assumptions of these procedures, as well as their computation and interpretation with regard to hypothesis testing.

PSY335 - Psychology of Learning

This course is designed to promote understanding of learning theory as applied to the classroom and other learning environments. Building upon the introductory learning theory presented in General Psychology; this course provides both a historical perspective and greater depth to the application of learning theory to the future professional's repertoire.

PSY336 - Forensic Psychology

This course is designed to give the undergraduate with a minimal background in psychology a basic overview of the field of forensic psychology. The course provides a broad examination of forensic psychology and concentrates on the applied side of the field, focusing on research-based forensic practice. Professional application of psychological knowledge, concepts and principles to both the civil and criminal justice systems are emphasized. The course exposes students to the many careers related to the field and utilizes the

Course Descriptions

multicultural perspective focusing on racial issues, mental and physical disabilities, sexual orientation, and gender discrimination in relation to the work of forensic psychologists.

PSY340 - Psychological Measurement Lab

Students will acquire knowledge and skills in the fundamental process of measuring psychological qualities in humans and non-humans. They will learn how to evaluate measures and select the best measurement strategy for the situation at hand (in the practice of counseling, teaching, supervising, research and program evaluation).

PSY345 - History and Systems of Psychology

This course explores the evolution of psychology starting with its philosophical roots. All major perspectives of psychology are explored, including structuralism, functionalism, behaviorism, gestalt, psychoanalysis, humanism and the cognitive view. Understanding the contextual forces that shaped the discoveries and thinking of the times in relation to the development of psychology as a science is emphasized.

PSY350 - Principles of Behavior Modification

Applications of the principles of contemporary approaches to behavior modification are explored. Behavior-change techniques that are based on operant conditioning are emphasized. Some attention is also given to behavior therapy, which involves procedures based on classical conditioning. Examples of the uses of these techniques in counseling, clinical and educational settings are reviewed. Students complete one or more applied projects.

PSY365 - Research Methods in Psychology

This is a survey course emphasizing the design of research strategies for evaluating hypotheses about behavior and the quantitative analysis of research results. Students will design, implement, and write up a research study using APA style and the statistical and research techniques of scientific psychology.

PSY375 - Psychopathology of Childhood

Intensive study of the cognitive, emotional and behavioral disorders in children and adolescents. Emphasis is on etiology, early recognition and approaches to treatment or intervention .

PSY400 - Psychopathological Disorders of Adulthood

A survey of behavior pathology including psychoses, mood and adjustment disorders, and personality disorders, including drug addiction and psychophysiological disorders together with a general consideration of etiology, treatment and prognosis.

PSY410 - Clinical Child Psychology

This course is a comprehensive introduction to the field of clinical child psychology. It will explore the major concepts, research findings and professional issues influencing the practice of clinical child psychology.

PSY415 - Childhood Trauma: Theory, Research, & Practice

The purpose of this course is to examine the impact of trauma and traumatic stress on children, adolescents, and families. Specifically, this course will explore theoretical foundations, current research and literature, and developmental considerations of the impact of traumatic stress on developing children. Further, evidence-based treatments for childhood traumatic stress will be reviewed and described as well as scientific information for understanding how to support children who have experienced trauma.

PSY420 - Social Psychology Lab

The course combines a review of the foundations of psychological research (e.g., hypothesis generation, experimentation), as well as a focus on advanced procedural methods and techniques for social psychological research. In addition, we will focus on data management, analysis, and presentation. Altogether, this course will

Course Descriptions

provide an in-depth, hands-on introduction to the world of conducting research in social psychology, from start to finish.

PSY421 - Theories of Psychotherapy

This course introduces the student to the theory and practical application of the major models utilized in the treatment of psychological disorders. Behavioral, Cognitive, Psychoanalytic, and Systems approaches (among others) are explored with emphasis on their theoretical assumptions, techniques of intervention and associated personality theory. Students will learn to take into account individual differences (race, gender, and age among others) when considering the theories, techniques, and other activities in clinical psychology endeavors.

PSY422 - Clinical Skills in Psychology

The focus of this course is on the specific techniques psychologists and other mental health practitioners use to create positive change in people. Students will learn the skills of active listening, empathy, cognitive reframing, crisis management, rapport building, and treatment planning, among others. Students will learn to enhance their effectiveness as positive change agents through self-reflection as well as acquisition of knowledge about the targets of intervention and their effectiveness. Videotaping is an integral part of the learning process in this class and students will be required to supply a videotape for the class work as well as a final assessment.

PSY425 - Senior Project

This course is an opportunity for the student to integrate and synthesize all aspects of their prior collegiate academic experience as it relates to their chosen major of psychology. The student will review research methods and current research literature in an area that is of special interest to them, develop a proposal for further research on an approved project in an area of interest, conduct the research proposed, write a thesis and present the findings in an appropriate forum.

PSY430 - Physiological Psychology

The biological foundations of behavior are explored in this course. Topics examined include the anatomy and physiology of the nervous system, sensory and motor systems, memory, higher cognitive functions, and psychological disorders.

PSY460 - Senior Seminar: Special Topics

Students of psychology will enhance their postgraduate opportunities by learning a variety of professional knowledge areas, skills, and abilities that pertain to a specific current topic in the field of psychology. Topics such as ethics, multicultural sensitivity, foundational research, applications, future trends in research and application and professional behavior will be covered as they pertain to the listed special topic offered in a given term.

PSY469 - Psychology Internship

Students will be placed with professional psychological agencies off campus. They will integrate, under supervision, what they have academically been studying with the duties and responsibilities assigned to them by practicing psychologists in the field.

PTA-Physical Therapist Assist

PTA100 - Introduction to Physical Therapist Assistant

An overview of the discipline of physical therapy and the role and function of the physical therapist assistant within the physical therapist-physical therapist assistant team. Additional topics include examinations of the history of physical therapy, physical therapy professional organizations, legal and ethical issues, and commonly encountered pathologies.

PTA101 - Basic Physical Therapy Procedures

This course provides an introduction to basic physical therapy patient care procedures in a laboratory format. Topics covered include body mechanics, positioning and draping, vital signs, basic exercise, transfer activities, wheelchair features and activities, ambulation aids and activities, infection control, wound care, emergencies, and a review of the Americans with Disabilities Act.

PTA110 - Introduction to Pathology

This course examines the disease process on the cellular, histological and systemic levels. Particular emphasis is placed on those pathologies commonly encountered by the physical therapist assistant in pediatric, geriatric, orthopedic and neurological impairments.

PTA150 - Clinical Internship I

This introductory clinical internship provides the physical therapist assistant student with extensive observation of activities such as patient care, administration, quality assurance and supervision of other supportive personnel. In addition, students begin to treat patients under the direction of the physical therapist using principles common to all procedures.

PTA200 - Professional Issues in Physical Therapy

This course is an examination of the legal, ethical and professional aspects of a career in physical therapy. Important issues such as liability, malpractice, proactive acts and reimbursement are discussed. Special attention is focused on the importance of research and preparation for the PTA National Physical Therapy examination.

PTA205 - Interventions in Cardiopulmonary Impairments

An examination of the anatomy, physiology and pathology of the cardiopulmonary system. Specific methods of examination and intervention, including indications and contraindications, for myriad cardiopulmonary conditions. The laboratory portion of the course emphasizes data collection skills and interventions specific to cardiopulmonary rehabilitation performed under direction of a physical therapist.

PTA210 - Interventions in Neurological Impairments

This course is an examination of the etiology, signs and symptoms, and effects of pathologies to the central and peripheral nervous systems. Emphasis is placed on how neurological diagnoses affect the physical function of patients. Specific treatment procedures and techniques within the physical therapist assistant scope of practice are demonstrated and practiced in the laboratory setting.

PTA225 - Interventions in Orthopedic Impairments

This course guides the physical therapist assistant student under the direction of a physical therapist from fundamentals and theory through practice in orthopedic rehabilitation. Emphasis is placed on rehabilitation treatment options for all major joints to reduce pain and swelling, increase motion and strength, enhance balance and proprioception, and restore function. The course will also examine the role of the physical therapist assistant in prosthetic and orthotic management.

PTA230 - Physical Therapy Interventions Across the Life Span

This course will explore anatomy, pathology, and pathophysiology of disease processes with increased prevalence in the pediatric and geriatric populations. Development of the pediatric population and characteristics of normal and pathological changes associated with aging will be discussed. Lab experiences will include mock case studies, functional and motor function training, postural assessment, application of assistive /

Course Descriptions

adaptive devices, interdisciplinary clinical observation hours, and activities to foster volunteerism, advocacy, and leadership.

PTA240 - Physical Therapist Assistant Special Topics

This course will illustrate the role of the physical therapist assistant in patient/client management in specialty populations, as well as the role of the physical therapist assistant in participation in health care environment, practice management, and wellness/prevention. Special conditions include women's health diseases, bariatrics, wound care, cancer, amputations, prosthetics, and orthotics. Additional topics include reimbursement, research methods, and educational theories.

PTA250 - Clinical Internship II

This clinical internship provides physical therapist assistants with the opportunities to perform their responsibilities under appropriate physical therapist or physical therapist assistant supervision and with positive role modeling. The experience provides exposure to a variety of patients and learning activities.

PTA260 - Physical Therapist Assistant Pharmacology and Imaging

This course will explore the mechanism of action, adverse effects, and physical therapy implications of drugs used to treat common cardiovascular, pulmonary, musculoskeletal, metabolic, and neurological conditions commonly encountered by the physical therapist assistant. In addition, this course will explore the essential information physical therapist assistants need to be able to accurately recognize patients' medical imaging studies in order to better understand the nature of their pathology or injury. Although an overview of imaging tests will be explored, emphasis will be placed on radiography, CT Scan, and MRI images related to various musculoskeletal conditions.

RAD-Radiography Technology

RAD101 - Radiography Theory and Lab II

This course continues to develop the student knowledge of the student to radiation production. Presented are the nature and characteristics of radiation, x-ray production, the fundamentals of photon interactions with matter, and a review of image quality characteristics. Radiographic procedures and principles necessary to perform diagnostic studies of the structures of the lower limb, pelvic girdle, and bony thorax. Content will establish a knowledge base in technical factors that govern the image production process.

RAD110 - Radiography Clinical I

This course introduces the clinical education practical experience through structured, sequential, competency-based clinical assignments in a clinical healthcare setting. Included will be the processing of radiographic images, practice in ethical situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD120 - Radiography Clinical II

This course is a continuation of RAD 110 Clinical I. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD130 - Radiography Clinical III

This course is a continuation of RAD 120 Clinical II. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD140 - Radiography Clinical IV

This course is a continuation of RAD 130 Clinical III. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD200 - Radiography Theory and Lab III

This course introduces the student to different types of imaging equipment, accessories, and systems. Presented are the significance of scatter control and considerations involved in selection of exposure techniques and their radiation induced biological effects. Radiographic procedures and principles necessary to perform diagnostic studies of the structures of the spine, fluoroscopy, surgical, and interventional studies.

RAD201 - Radiography Theory and Lab IV

This course introduces the student to radiographic procedures and principles necessary to perform diagnostic studies of the structures of the cranium, facial bone, and paranasal sinus studies. Also presented is an overview

Course Descriptions

of ARRT content: patient care, ethics and law in the radiologic science, pharmacology, venipuncture, imaging equipment, radiation production and characteristics, principles of exposure and image production, digital image acquisition and display, image analysis, radiation biology and radiation protection, radiographic pathology, radiographic procedures.

RAD210 - Radiography Clinical V

This course is a continuation of RAD 140 Clinical IV. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD220 - Radiography Clinical VI

This course is a continuation of RAD 210 Clinical V. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD230 - Radiography Clinical VII

This course is a continuation of RAD 220 Clinical VI. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also

Course Descriptions

apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

RAD240 - Radiography Clinical VIII

This course is a continuation of RAD 230 Clinical VII. It is designed to further enhance clinical education practical experience in a clinical healthcare setting, processing of radiographs, practice in ethical and situations during patient contact, patient care, and patient positioning for diagnostic radiographic studies. The student will also apply the principles of radiographic exposure. There will be sessions of image critique and radiation protection which will be emphasized and observed. Image critique covers the evaluation of radiographs for their diagnostic quality which includes positioning, technique, anatomy, etc.

REC-Recreation

REC165 - Introduction to Recreation and Leisure

The course will familiarize students with the interrelationship between leisure and Western culture. Specifically, students will be introduced to the many effects leisure has on society including, but not limited to, the economic impact of leisure, leisure as a modifier of culture, and leisure as it relates to life stages and health.

REC195 - Leisure and Wellness Recreation

An introduction to the philosophy and techniques of leisure education as a process towards achieving high levels of wellness through recreation. The class will address leisure in its historical and modern contexts as well as the relationships between leisure, work, health, and wellness in both individual and societal contexts. The course introduces students to methods for increasing a proactive lifestyle to greater wellness through leisure education.

REC220 - Youth Competitive Recreational Activities

This course focuses on the planning and management of competitive recreational activities for youth. The purpose of this course is help prepare students for management positions in youth serving recreation agencies by building competence in primary areas related to youth recreational activities that are competitive in nature.

REC225 - Recreation and Youth Development

This course provides a historical and contemporary analysis of youth culture in the United States. The role of recreation in shaping youth culture is examined. Through the investigation of various youth serving organizations, this course provides an understanding of free-time settings that can offer youth the supports, opportunities, programs and settings needed to successfully transition into adulthood.

REC230 - Camp Counseling and Administration

This course focuses on camp management and administration, emphasizing the role of organized camping and camp experiences as an important component of youth development. The purpose of this course is to help prepare students for careers in professional camp management and programming through competence building in several essential core areas of camp administration.

REC235 - Special Event Management in Recreation Settings

This course provides a philosophical and theoretical understanding of the impact that events and festivals have had on society. The role of festivals and events in boosting the economy, infrastructure and job market of host communities is also examined. This course equips students to pursue careers in the field of festivals and events through the investigation of various aspects of planning, promoting, financing, and managing special events within community, commercial, and outdoor recreation settings.

REC240 - Sustainable Communities and Ecosystems

A social science approach to dealing with relationship between humans and the organic and inorganic environment. Emphasis is placed on the physical, biological and cultural basis of society's adaptation to the environment.

REC246 - Scenic Areas of the U.S.

This course explores the physical settings, managerial framework and historical background of some of the more popular scenic areas of the United States including national parks (NPS), national forests (USFS), national refuges (FWS), national resource lands (BLM), wilderness, national trails, national rivers and other scenic resources. The course uses the management agency and ecosystem as major threads and examines inherent differences in management philosophy, uses, and missions/goals of the various land management agencies. Although there are no prerequisites for the course, some knowledge of the basic tools of the earth sciences, for example, maps, patterns, classification, analysis and synthesis, etc., is essential. The course is aimed at students of parks and recreation, tourism, geography, geology, biology, education and earth sciences.

REC250 - Non-Profit and Community Recreation

An analysis of the role of recreation programming and facilities in the community, With emphasis on the importance of inclusion of leisure services in community development.

REC270 - Introduction to Interpretation

This course prepares the student to develop and to supervise interpretive services and public outdoor education programs focusing the natural resources/environmental interpretation and historical/cultural interpretation. The course concentrates on interpretive knowledge, skills and abilities including displays and exhibits, interpretive walks, slide presentations, and interpretive trails.

REC275 - Sustainable Recreation & Green Parks

This course surveys the history, current status, case studies and best management practices for sustainable recreation and green parks. It examines the relationship of outdoor recreation and natural resources, especially the environmental impact of recreational pursuits on the resource base. Parks and outdoor recreation lands are the essential green infrastructure of our communities and nation. Parks and public recreation lands and facilities are carbon-reducing landscapes that help clean our air and water, recharge aquifers, and reduce stormwater runoff. Through energy efficiency, climate friendly operations, low impact techniques and other environmental management measures, sustainable recreation and green park resources that will sustain, protect, restore and expand these ecosystem services and environmental assets.

REC280 - Adventure and Outdoor Recreation Outfitting

This course will be a theoretical and experiential examination and analysis of adventure and outdoor recreation outfitting and all of the related elements. The course is designed to give students a broad theoretical, as well as practical, background in teaching and learning experientially. Concepts presented, experienced and discussed in this course include the basic premises of experiential learning through adventure and outdoor recreation activities according to a wide variety of educators and philosophers.

REC285 - Water-Based Recreation Management

An analysis of managerial and administrative practices and processes in water-based recreation agencies and departments, including: departmental organization, policymaking, liability and negligence, personnel management and staffing, fiscal management, budgeting, finance, office management, programming and public relations.

REC361 - Parks & Recreation for Diverse Populations

Leisure and recreation services for special population groups will be examined and studied with a focus on access/inclusion, barriers to participation, disabling conditions and special population groups, program development and service delivery, and legislation.

REC362 - Recreation Site Design and Management

This course will familiarize the student with the components of the park and recreation site design process. Instruction will center on the specific tools and procedures necessary to enable the student to be an effective planner of recreation and park facilities. The student will gain an understanding of the complete planning process from conceptualization through implementation, construction and maintenance.

REC365 - Recreation Resource Management

This course explores the relationship between outdoor recreation in behavior and the natural environment and how the relationship benefits people and society. The exploration of natural resources and facilities management (i.e., wildlife health and trail maintenance) in outdoor recreation are emphasized as well as key issues facing the field today.

REC374 - Commercial Recreation Management

An overview of the commercial recreation industry, specifically focusing on the procedures involved in the developing, marketing and managing of the enterprise. The student is introduced to the methods used in starting a leisure business. The management skills necessary for effective and profitable management of an enterprise are also discussed.

REC378 - Recreation Management and Leadership

An analysis of managerial and administrative practices and processes in recreation, park and agency departments, including departmental organization, policy making, liability and negligence, personnel management and staffing, fiscal management, budgeting, finance, records and reports, office management, and public relations.

REC412 - Recreation Program Planning and Evaluation

The course emphasizes the analysis of a community, assessment of its residential leisure needs, and implementation of recreational programs into the community. The course stresses planning, objectives, goal setting, structural organization, advertising and evaluation.

REC415 - Challenges and Trends in Parks and Recreation

An integrative course for detailed study of current issues in parks and recreation with emphasis on unique and imaginative solutions to the challenges facing the recreation/parks profession.

REC478 - Professional Development in Recreation

The course provides students with the opportunity to gain practical experience in an agency in the leisure services delivery system while being supervised by an agency professional and a faculty member. Students will be able to apply skills and knowledge as a volunteer at an agency that falls under their particular area of interest. Students are expected to utilize leadership and management skills to enhance participant involvement and agency operations.

RET-Robotics Engineering Tech

RET110 - Agile Robotics I

This course provides a basic introduction to the field of robotics technology with particular emphasis on first-generation agile robotics as characterized by remotely piloted mobile robots. Because of the multidisciplinary nature of robotics, the student is exposed to many facets of robotics including concepts from computer, electrical and mechanical disciplines with a focus on engineering processes. The laboratory component features activities to solidify lecture concepts and team-oriented, hands-on projects to solve basic robotic problems.

RET120 - CADD Concepts

An introduction to the principles of drafting and design, this course covers terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views and reproduction processes. This course provides students with a basic understanding of modern technical drafting and modeling fundamentals for engineering design. Students will be introduced to freehand sketching, multi-view orthographic projection, shape modeling and its applications in computer-aided drafting and design (CADD). Experiences will include geometry development and projection techniques, visualization methods and feature representation, as well as geometric modeling techniques for CADD, drafting practices, manufacturing processes and materials documentation.

RET160 - Agile Robotics II

This course continues from Agile Robotics I by delving into the details of second-generation agile robotics technology as characterized by mobile robots with autonomous behaviors. Course highlights include use of software tools, further details of robotic systems, application of robot control programming, motion planning and additional applied technician skills. The laboratory component provides discovery activities to solidify lecture concepts and team-oriented, hands-on projects to solve autonomous robotics problems.

RET210 - Robotic Teaming

Modeled from the third generation of agile robotics evolution, this course explores the concept of adding inter-robot communications to autonomous robotic platforms to support swarming behaviors. Swarming capability is a common requirement of both industrial and personal robotic systems to achieve collaborative tasks using a team approach. Sufficient coverage and application of a computer programming language and of an embedded robotic platform is included.

RET260 - Robotic Systems Project

This project-based course integrates learning objectives of the robotics engineering technology program along with project management principles. Under the approval of the instructor, students will identify and realize a semester-long project based on mobile robotic technologies. Major phases of the project include literature research, project specification, project design, implementation, documentation and presentation in alignment with established engineering technology methods.

SCM-Supply Chain Management

SCM301 - Fundamentals of Supply Chain Management

This course prepares students in the basics of supply chain and supply chain's roles within organizations. The course includes defining supply chain management and the various domains within supply chain, including logistics, manufacturing and operations management, order management, procurement and supplier relations, inventory management, warehousing operations, and transportation operations). It includes an explanation of how the supply chain supports organizations' strategic and financial goals.

SCM311 - Procurement, Materials Management, and Supplier Relations

This course will delve into purchasing policies, procedures, order specifications and agreements, and the role of purchasing in production planning and inventory management. The course will also explore the strategic role of procurement in supply chains, how to identify, evaluate, and select potential suppliers. Production-inventory planning and control, warehousing, and physical distribution will be discussed, as well as the impact of information technology on strategic procurement.

SCM321 - Production and Operations Management

This course is a broad-based introduction to the fields of operations and production management. Operations management can be described as the design and control of the recurring activities of the firm. Operations management encompasses a broad range of business activities involved in producing a good or service. Key aspects of operations management include product design, production and manufacturing processes, quality control, and inventory management. This course will aim to develop practical problem solving techniques crucial in the modern workplace.

SCM341 - Logistics and Transportation Management

This course delves into the crucial supply chain functions in the areas of logistics and transportation. Logistics and transportation management encompasses the various activities required to store, package, handle, and transport freight across a logistic network. Students will compare and contrast the various modes of shipping, including rail, truck, water, and air. Additional key topics include shipping documentation, warehousing, and pricing freight. At the conclusion of the course, students will be able to synthesize a multitude of factors to design an efficient logistics network.

SEC-Secondary Education

SEC210 - Introduction to Secondary Education

An entry-level course for prospective teachers designed to begin their professional development. Different instructional activities will allow the student to become proficient in the theories of modern secondary education instructional development, basic history and philosophy of secondary education and of pedagogy in general.

SEC220 - Standards-Based Education

The Pennsylvania Standards Aligned System (SAS) is a collaborative product of research and good practice that identifies six distinct elements which, if utilized together, will provide schools and districts a common framework for continuous school and district enhancement and improvement. There are many intangible components; however, research supports the notion that great schools and school systems tend to have six common elements that ensure Student Achievement: Clear Standards, Fair Assessments, Curriculum Framework, Instruction, Materials & Resources, and Interventions.

SEC310 - Instructional Strategies in Secondary Education

This course will allow the secondary education major to explore and develop many instructional strategies and methodologies that are accepted as valid. Instructional activities will allow the student to become proficient in the theories of modern secondary education instructional development, basic history and philosophy of secondary education and of pedagogy in general. Students will participate in observation at selected field sites, grades 7 – 12. Students will continue development of their professional portfolio.

SEC350 - Content Area Literacy

The purpose of this course is to help the prospective teachers of the secondary education academic subject areas develop an understanding and appreciation of the necessary reading skills needed by their students. Methods of

Course Descriptions

establishing awareness of general reading needs as well as the special skills unique to their subject area will be stressed.

SEC360 - Technology Integration in Secondary Education

The purpose of this course is to help the teacher candidates learn how to effectively analyze, select, and integrate current educational technologies into the design, implementation and assessment of learning experiences to engage a diverse student population. The course includes collaboration with teachers in a field experience setting to develop applications for technology for learning.

SEC391 - Teaching of Art

This course is designed to provide insight into the teaching of general art, art history, ceramics, crafts, drawing, painting, and printmaking in grades K through 12. Students become aware of and use the resources and methods of instruction for teaching art at the elementary and secondary levels.

SEC392 - Teaching of English and Communications

This course is designed to provide insight into the teaching of general English, writing, literature, public speaking, communication, media and theater in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching English and Communications at the secondary level.

SEC393 - Teaching of Foreign Languages

This course is designed to provide insight into the teaching of foreign language acquisition and cultural courses in grades K through 12. Students become aware of and use the resources and methods of instruction for teaching languages and cultures at the secondary level.

SEC394 - Teaching of Mathematics

This course is designed to provide insight into the teaching of general mathematics, algebra, geometry, probability, and statistics in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching mathematics at the secondary level.

SEC395 - Teaching of Science

This course is designed to provide insight into the teaching of Biology, Chemistry, Earth and Space Science, and Physics in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching science at the secondary level.

SEC396 - Teaching of Social Studies

This course is designed to provide insight into the teaching of general social studies, history, political science, geography, economics, anthropology, psychology, and world cultures in grades 7 through 12. Students become aware of and use the resources and methods of instruction for teaching social studies at the secondary level.

SEC400 - Classroom Management

This course will allow the Secondary Education teacher education candidate to explore different instructional methodologies and classroom management plans, from the physical set-up of the classroom, classroom rules to procedures for dealing with problem students in your classroom. It includes issues related to adolescent development and school safety.

SEC420 - Assessments & Interventions

Part of this course is designed to provide insight into the design, implementation, and analysis of assessment instruments used in 7-12 education. The second part of this course is to allow the secondary education candidate

Course Descriptions

to become aware of, and to gain experience in, the contemporary interventions that teachers use to prevent, minimize, or eliminate negative behaviors in the classroom.

SEC460 - Professional Practices in Secondary Education

The development and refinement of contemporary pedagogical skills constitute the primary learning purpose for student teachers. Specific teacher-learning skills that are developed are lesson planning, delivery methods, organizational procedures, class control, and educational measurement and evaluation. An integral component of the student teaching experience is a bi-weekly class. The class serves as a means of coordinating activities and exchanging ideas and experiences of the student teachers.

SEC461 - Student Teaching

This is the final and most extensive clinical experience. Students are assigned to a supervising teacher or teaching team at one of our clinical sites. The students spend full time in classroom teaching for a semester of 15 weeks.

SOC-Sociology

SOC100 - Principles of Sociology

This survey course permits students to explore the rich variety of topics studied by sociologists. Central to all the topics are the structures and processes of human interaction. Emphasis is placed on the relationship of natural and social factors in human behavior. Attention also is given to topics such as the meaning and function of culture; the origin, function and characteristics of social institutions; and the genesis and nature of social pathology. Sociologists investigate groups, organizations, and societies, and how people interact within these contexts. It is an expanding field whose potential is increasingly tapped by those who craft policies and create and evaluate

Course Descriptions

programs. Sociology is an active science: The concepts, theories, and research methods of sociology can be used in practical, concrete ways to create a better world, or simply a better corner of the world.

SOC205 - Contemporary Social Problems

This course encourages students to think critically and scientifically about a broad array of social problems that affect people throughout the world. These social problems, to name only a few, include those that concern inequality, conflict, and environmental issues. As we study these problems (e.g., assessing how extensive they are, what causes them, possible solutions and their implementation) we must go further than mere description and opinion-based analysis and reach a point where we understand them scientifically and can communicate this understanding to others. Our sociological understanding of social problems will be enhanced by our ability to apply the discipline's theoretical perspectives to them. Social issues of popular concern in America today, such as poverty, ecology, violence and homosexual rights, are discussed and analyzed from a sociological perspective. Attention is not only given to the content of the issues, but also to the place of statistics in data reporting and analysis; the objective data used in support of interest group claims; and the use of various theoretical schemes in providing alternative explanations for each issue being a social problem.

SOC210 - Social Inequality

We examine the distribution of key social resources--wealth, power, and status—to groups and individuals, as well as theoretical explanations of how unequal patterns of distribution are produced, maintained, and challenged. In addition to global inequalities, we give special consideration to how race, ethnicity, and gender intersect with social class to produce different life experiences for people in various groups in the United States.

SOC211 - Sociology Collective Behavior

This course is a descriptive and analytical inquiry into the relatively unstructured social responses to social change. War resistance movements, militia movements, stock market panics, popular fads and crazes are among

Course Descriptions

the topics considered. Attention is given to the processes, emergent structures and theoretical explanations associated with various types of collective behavior.

SOC225 - Sociology of Aging

Theoretical and research methodological issues in the sociological study of human aging are considered. Special emphasis is placed upon the interaction of pertinent biological and sociological variables as they relate to a variety of topics, including work, retirement, leisure, institutionalization and death.

SOC230 - Chaos, Change, & Sustainability

This course is designed for students who have selected the applied program in sociology. The course provides an overview of program evaluation research, i.e., needs assessment, formative evaluations, process evaluations and outcome evaluations. Students will carry out a mock program evaluation as part of their course requirements.

SOC240 - Social Institutions

Designed as a descriptive study of the basic institutions of society (particularly family, religion, economic, government and education), the course uses a cross-cultural and comparative perspective. American institutions form the core of the comparative analysis.

SOC290 - Gender and Work

This course examines the gendered nature of paid and unpaid work from a socio-historical and comparative perspective. Students will explore the forms and varieties of gendered work in the developed and developing countries with an emphasis on how concepts of masculinity and femininity influence the organizational structure, occupational categories and job tasks associated with formal and informal work arrangements.

SOC300 - Sociology of Deviance

This course discusses the various forms of deviant behavior, public responses to such behavior and the causes of such behavior. Particular attention is given to the interactive processes that result in behavior being labeled as deviant. How the criminal justice system copes with deviant behavior also is considered.

SOC309 - Sociology of Sport

This course approaches the study of sport from a sociological perspective. Students will learn to utilize the various theoretical sociological perspectives to examine the nature of professional and recreational sports as they relate to social reality.

SOC311 - Sociology of Crime

This course is designed to give the student a brief overview of crime and criminality and to enable the student to understand the relationship between administrative structure of the criminal justice system and crime causation. Included in this course is a description and analysis of various types of criminal behavior, the epidemiology of crime in the United States, the social basis of law and major etiological forces responsible for law breaking.

SOC312 - Sociology of Organizations

Sociologists have long documented that social life involves interaction with both informal and formal institutions. As such, human interaction with organizations forms the basis for this course study. Examples of these organizations include: churches, workplaces, universities, governments and communities in addition to primary group interaction. Throughout the semester, students will develop an understanding of organizational structure, influence, and empowerment. Activities and assignments during the semester will provide structured opportunities for the student to explore the sociological literature on organizations in contemporary society and to apply that knowledge critically. Specifically, the course material will engage the student with the concepts and tools necessary to analyze the physical and social structures of organizations, technology in organizations,

Course Descriptions

organizational environments and cultural influence on organizations. Cultural focus will explain concepts of power, control, and conflict within organizations while enabling the student to become proficient in organizational competency as it relates to the group process. A variety of theoretical frameworks will be investigated in order to investigate multiple perspectives on any given issue.

SOC315 - Social Minorities

Students will analyze the dynamics of social minority status specific to ethnicity, racial classification, gender, disability, and sexual orientation, and how minority status is socially constructed. Students will also examine societal responses to minority status and attempts to change this status. Finally, students will select one minority group in another country and compare it to one in the United States. Historically, every group of immigrants to the U.S. that did not come from England has experienced some degree of exclusion, discrimination, or racism that temporarily (or permanently) transformed them into “minorities.” This course examines the racial and ethnic experiences of those groups (and various other minority groups that are based in sex and gender, social class, sexual orientation, and disability) to see how their experiences have shaped and changed U.S. society. We will start by examining how we construct these categories of difference, then go on to how difference is experienced, what difference means, and finally how we might bridge these differences. Interspersed throughout these academic readings, we will read an urban ethnography that examines race relations in Philadelphia in order to practice applying our sociological concepts to a real-world setting. Students who take this course should gain a much better understanding of why various minority groups act as they do, allowing them to live and work effectively in different multicultural environments.

SOC316 - Urban Sociology

This course is an introduction to urban sociology with a focus on urban social problems. Topics covered include classic urban sociological theories, post-industrial urban economies, urban social networks, suburbanization, segregation, poverty, crime, subcultures, schooling, and public policy. Classes will be mostly discussion with occasional short lectures. The course will focus on U.S. cities with selected comparisons to Western Europe.

SOC317 - Substance Use and Abuse

The sociology of substance use and abuse, as well as the approaches for treatment are covered. Special emphasis is given to alcohol and the more commonly abused drugs (e.g., nicotine, marijuana, cocaine). The course focuses on the social processes that influence substance abuse and the societal costs and consequences.

SOC318 - Sociology of Addiction, Excess, and Exploitation

This course will examine societal addictions, exploitation, and excesses in relation to their specific defining variables, patterns and practices, and historical and contemporary influences, inhibitions, and acceptances. Particular attention to how socio-cultural forces influence use and participation, by using a wide array of sociological tools and theories. Students will engage in the critical analysis of social practice as it is governed and defined by norms and values. Topics will be situated within a larger sociological framework that is equally shaped by culture, environment, and individual characteristics and expectations.

SOC319 - Sociology of Technology

This course explores the ways in which society and its social structures shape the design and use of technology, and how technology in turn influences cultural and social experience. Students will examine the way in which technology is affected at a fundamental level by the social contexts in which it develops. The course will explore the sociological underpinnings of norms, values, class, status, power, gender, labor and time, as they relate to such topics and social institutions as employment, education, medicine, equality, virtual interactions, and community-organizational governing.

SOC320 - International Women's Movements

In this discussion-centered examination of women's movements throughout the world, students will analyze contemporary movements utilizing a case study approach. The course begins with an analysis of the

Course Descriptions

contemporary movement in the United States and then follows selected movements in Europe, the Middle East, Africa, Asia and Latin America.

SOC324 - Child Abuse and Neglect: A Societal Perspective

This course will examine the socially constructed variables that contribute to both the socialization and abuse of children (adults, community, social, political, and cultural contexts). The meanings and perceptions of childhood, inequality, abuse and neglect will be discussed in relation to their historical and contemporary underpinnings. Specific content will address the socially constructed definitions and categories of child maltreatment and abuse, family preservation, substitute and foster care, and permanency planning.

SOC325 - Sociology of the Family

This course explores the family in the United States from both theoretical and personal perspectives. Multiple sociological theoretical perspectives on the family will be examined. Students will explore primary issues most families encounter, such as choices about partnering, having children, stresses and crises, multi-generational/multi-identity perspective, aging, work and family, limitations of public policy, and many more. A multicultural/multi-identity perspective is used for analysis in the course.

SOC378 - Charismatic Leaders

This course examines the nature of the social relationship between charismatic leaders and their followers. Charismatic leaders are selected from a wide variety of religious, social, economic and political contexts for study. Charismatic authority, unlike traditional authority, is a revolutionary and unstable form of authority, especially if the leader cannot produce the changes promised or when confronted by the contradictory logic and demands of the other types of authority. Each leader is evaluated in terms of his/her charismatic qualities and success or failure in bringing about stated goals. Each leader is also evaluated in terms of his/her contribution to the concepts and theories of charismatic leadership.

SOC379 - Special Problems in Sociology

This course permits students to explore the rich variety of topics studied by sociologists. This course is offered when a topic germane to society arises and is discussed and agreed upon by the sociology faculty.

SOC380 - Society and the Sociopath

This course will examine the societal variables that serve as catalysts and consequences for the development of the sociopath. The sociopath will be analyzed in accordance with specific and malleable historical, cultural, and contemporary contexts, as well as in response to future social changes, challenges, and innovations. The spectrum and continuum of “bad” behavior will be scrutinized in relation to socially constructed definitions, perceptions, and contexts that range from immorality to malevolence to corruption.

SOC395 - Sociology of Elite Deviance

This course examines the concept of elite deviance from various sociological perspectives and isolates the structural aspects of political and economic systems as they relate to deviant behavior. Multiple examples of elite deviance will be identified including: political corruption, environmental pollution, organized crime, trafficking, insider trading, and other criminal acts which are by nature relegated to those in positions of power.

SOC400 - Structural and Institutional Violence: School, Workplace, and Eldercare

This course will examine violence as it impacts the social and structural institutions of school, workplace, and eldercare. The nature and extent, causes and consequences, and proposed remedies will be explored in relation to their social contexts and historical and contemporary, socially-defined, underpinnings. Specific content will include critical analysis of bullying, fighting, harassment, personal and social risk factors, institutional perceptions and values, inequality, and social status.

SOC405 - Resocializing the Deviant and the Marginalized

Entering a new community or returning to one's community is a complex transition for most people, as well as for their families and communities. A wide range of individuals face this social challenge, including but not limited to those learning English as a second language, military veterans, children transitioning out of the foster care system, those recovering from addictions to alcohol, gambling, and narcotics, those released from medical nursing facilities, released prison inmates, graduates of boarding schools, and consumers of services in MH/MR and meth clinics. Beginning with the sociological foundation of Erving Goffman's work on total institutions and resocialization, students will investigate the characteristics of these institutions and their impacts on the individuals in residence, especially when the individual returns to conventional society and community. Students will explore the challenges faced by individuals and communities in a variety of social contexts, evaluate existing reintegration programs, and design a new reintegration plan in a context of their choosing that makes improvements over a previous design.

SOC410 - Social Theory and Society

This course considers the historical development of sociological theory as well as how theories are constructed and used to explain social phenomena. Special attention is given to understanding and analysis of classical and contemporary theorists including: Comte, Durkheim, Marx, Weber, Simmel, and the Chicago School Theorists. The student will illustrate proficiency in the critical analysis of theories by comparing and contrasting them to various social conditions and problems.

SOC411 - Symbolic Interaction

This course offers an in-depth study of one of the three major theoretical perspectives in sociology. We will examine the breadth and depth of this perspective, its major theorists and concepts. Students will keep personal journals with observations and analyses of everyday life, review and assess relevant academic literature, and evaluate the new directions this perspective is taking. We will apply the symbolic interactionist perspective to

Course Descriptions

popular films and will also consider symbolic interactionism's relationship with social psychology. Students will compose a research design for an applied sociological study that integrates the symbolic interactionist approach and has the potential to lead to positive social change.

SOC415 - Social Science Research Methods

This course is designed to develop the technical and analytical skills necessary for conducting social science research. Upon completion of this course, students will develop the fundamental skills necessary to develop a research project using both qualitative and quantitative methods. Students will apply skills in framing research questions and appropriate methodology and will also differentiate between various types of statistical analyses intended to assess and evaluate research data. As such, students will justify the reliability and validity of their research and support that in comprehensive research projects.

SOC417 - Field Research Methods

This is an advanced research methods course that emphasizes the process of gathering ethnographic data and writing an ethnographic report. Ethnography is an approach to research that enables researchers to look at the social world through the eyes of their informants and requires students to use inductive thinking and reasoning skills. The primary methods used are field interviewing and participant observation: the basic field methodologies of qualitative researchers in anthropology and sociology. Students study a micro-culture of their own choosing throughout the semester then prepare a written report and deliver an oral report on the major findings.

SOC429 - Sociology Internship

This Special Experience Component course provides students with opportunities to demonstrate the application of knowledge and skills developed through both the discipline of sociology and the General Education program. This course is characterized by reflective thinking and the ability to synthesize information and ideas, to integrate knowledge, and to express ideas acquired throughout the college experience. This course emphasizes the overall

Course Descriptions

general education experience by emphasizing ethics, values and norms, and multicultural awareness as broadly defined. Designed to supplement the classroom studies of sociology majors with practical field experience, internships provide students not only with additional knowledge and skills, but with the opportunity to apply what was learned previously to onsite situations. Internships are intended to develop the major's professional competencies in observational, analytical and research skills.

SOC495 - Seminar in Sociology

As a capstone course for sociology and other majors, this course centers on a current theme in society. Students will analyze the theme, demonstrating the use of concepts, methods, and theories from sociology and other social science disciplines. Involves review of the discipline of sociology and focuses on key issues, including review of the tools of the discipline and the role of sociology in the student's future roles as individual, employee, and citizen.

SOW-Social Work-Undergrad

SOW150 - Introduction to Social Work

This course explores the social, political, economic and historical dimensions of poverty and welfare services in the United States. It complements other beginning courses in the social sciences by integrating this knowledge in a fashion which aids in the comprehension of welfare services while establishing a basis for movement toward higher level courses.

SOW201 - Interviewing for the Human Services

This class introduces students to the theory, value and skill components necessary for effective interviewing with diverse client systems. Communication techniques and personal attributes that enhance problem solving are explored. Demonstration and practice of core skills are thoroughly integrated in the classroom and skills lab.

SOW208 - Diversity in a Changing World

This course provides an analysis of the historical, economic, and political relations of American religious, ethnic, and racial minorities in terms of social change and social structure. Special attention is given to Puerto Rican, Chicano, and Indian subcultures, as well as minority experience in the rural environment. Sources of prejudice and discrimination and social processes, including conflict, segregation, assimilation, accommodation, and cooperation, are examined.

SOW215 - Human Behavior and the Social Environment: The Life Course

Human Behavior and the Social Environment: The Life Course is the first of a two-semester course content area that is designed to provide the perspectives, frameworks and theories necessary to understand human behavior in the social environment from a social work perspective. This course emphasizes ecological, systems, and life course perspectives to work effectively with individuals and families across the lifespan. Approaches to understanding human and family growth and behavior are presented, with an emphasis on diversity and difference and the impacts of oppression and discrimination across the life course. Person-environment transactions and person-environment fit are stressed as the basis for understanding individuals and families from a social work perspective.

SOW300 - Dialogue and Differences

Communicating across differences of age, gender, language, culture, and political orientation, and in different contextual situations is a useful skill for every individual. It is also integral to the success of any attempt to resolve conflict, whether individual, group/institutional, or global. By offering a context for students to learn with individuals from different cultural and linguistic backgrounds, we will all gain insight into the role of culture in dialogue. An understanding of culture and its influence on our perspectives is essential for effective communication. Through interactive exercises, students will develop an understanding of the challenges of inter-group dialogue across

Course Descriptions

differences and the skills required to communicate effectively. Students will engage in a workshop on dialogue skill-building and multiple dialogue sessions with classmates and other students, first learning the theory and skills that underlie successful participation and facilitation of dialogue and then applying them in the exploration of issues such as gender, religion, and international affairs.

SOW302 - Social Work Practice with Individuals

This course assumes that generalist social workers perform varied tasks with basic skills, attitudes and knowledge, and that this development will increase self-awareness with subsequent emergence of a professional self. Students learn problem assessment, caseload management, and a variety of counseling theories and intervention strategies, with special emphasis on the unique characteristics of the rural client.

SOW303 - Human Sexuality and Society

Humans evolve as sexual beings from a continual interplay among biological, cultural and psychosocial factors. This course provides content on enhancing personal well being, establishing psychologically healthy relationships, making responsible sexual choices, protecting reproductive health, preventing sexual dysfunction and trauma. Included in the course is accurate information and open discussion regarding the ways in which sexuality both contributes to and affects overall health and well-being. The course covers diverse groups and the human lifespan including sexuality and sexual expression among the elderly.

SOW304 - Social Work Practice with Families

This course is the second in a four-course practice methods sequence. It builds on the skills developed in Social Work Practice with Individuals, utilizing the ecological-systems approach to assessment and problem solving. The course covers the history of social work with families, the stages of family development, assessment of goals and objectives for families, and the principles and values for intervention and problem solving with families.

SOW310 - Trauma Informed SW Practice

This seminar focuses on selected topics of particular significance or current importance and interest to the social work profession. Students can receive credit for more than one seminar provided that each seminar focuses on a different topic. Open to sophomores, juniors, and seniors only. This course provides knowledge, skills and values needed to engage in family work as a generalist social worker. This course is a special interest course in the social work curriculum that provides opportunities to explore the role and function of the generalist social worker learning about trauma-informed practice. Trauma across the lifespan is essential knowledge for social workers because it is a risk factor increasing the overall quality of life for both those who experience or work with populations who have been a survivor of traumatic experiences. Given that most people from poorer countries migrate to more prosperous countries, individual who are from the lower socioeconomic income are increasingly vulnerable. As articulated by CSWE: "A reciprocal interaction exists between social, political, and legal systems and the individuals and families traumatized. It affects the systems' capacity to respond effectively to the needs of affected individuals or families and the capacity of the systems themselves to adjust and recover. Inequities embedded in these systems lead to accumulated disadvantages in access to tangible and intangible sources of social support. The resulting inequality contributes to the overrepresentation of individuals who are traumatized among the populations affected by major social problems, such as homelessness, substance abuse, low educational attainment, joblessness, and chronic poor health."

SOW315 - Human Growth and Behavior: Birth to Young Adult

This course provides foundation knowledge, contribution of studies, research, and theory in understanding human development. SOW 315 begins the life cycle from prenatal influence through young adulthood. Emphasis is on both normal development/behavior and on differences. The course illustrates how diverse groups are affected in their development through the life cycle, with examples from rural experience.

SOW316 - Human Behavior and the Social Environment II: Groups, Organizations and Communities

Human Behavior and the Social Environment II: Groups, Organizations and Communities is the second of a two-semester content area that is designed to provide perspectives, frameworks and theories necessary to understand human behavior in the social environment from a social work perspective. Approaches presented emphasize diversity and difference and the systemic impacts of oppression and discrimination at the group, organizational and community levels. The nature of systems, environmental transactions, and goodness-of-fit are stressed as the basis for understanding groups, organizations and communities from a social work perspective. A strengths-based, empowerment perspective is also used throughout the course to better understand reciprocal relationships at the group, organization and community levels.

SOW325 - Social Services Internship & Seminar

Under the supervision of a qualified social services provider, students will gain experience in an area of interest relevant to work in social and human services. In this semester-long class, students will discuss ethical and current practice issues related to work in the human services field. The importance of professional behavior and the value of networking within the human services field are emphasized. Students complete 100 hours of service in addition to completing weekly assignments related to the core competencies in social work experiences. All students will be required to complete 100 hours of service. Students must also meet the local requirements of their field or community placement. Internship settings are obtained for the student based on their professionalism, dedication to working with a specific population and match in terms of agency population and student adaptability.

SOW330 - Child Welfare

In this class, students learn about societal efforts to insure the welfare of children, the rights of children and parents, child welfare policies, programs, and service delivery problems. Students examine historical and current practices, working with natural parents, supportive services, substitutes, and residential care.

SOW340 - Poverty and Related Social Problems

This course examines poverty as a dependent and independent variable in its relationship to other social problems and human behavior. Social policy and programs that attempt to respond to the variety of conditions that are both causes and effects of poverty and related behavior will be studied.

SOW345 - Social Work Practice with Groups

This course is the third in a four-course practice methods sequence. It builds on the skills developed in Social Work Practice with Individuals, utilizing the ecological-systems approach to assessment and problem solving. The course covers the history of social group work, the stages of group development, assessment of goals and objectives for groups, and the principles and values for intervention and problem solving with groups.

SOW349 - Social Work Practice with Organizations and Communities

Macro practice methods refer to those skills that enable the generalist social worker to act at an organizational and community level to effect change in larger social systems. These skills encompass planning, organizing and administrative tasks. Proficiency at the macro level is particularly important for the rural practitioner who may be relatively isolated from other service providers. Through a semester-long class project, students gain hands-on experience in committee work, program development, action, research, budgeting and many other specific skills.

SOW350 - Social Work with the Aging

This course examines the development and current status of policies and services related to the elderly, the service delivery systems, and implications for social work practice concepts for working with the elderly.

SOW360 - Social Welfare History, Policy Analysis & Social Service Delivery

This course examines the history and philosophy of social welfare policy and the basic process of policy development. Students apply a conceptual framework to analyze and evaluate policies and their consequences. Students pay particular attention to the impact of social policy on people and human service organizations. Built on an interdisciplinary base (economic, political, science, and sociological theories), the course prepares students for policy practice skills taught in Policy Practice in Social Work.

SOW370 - Policy Practice in Social Work

In this class, students learn about the social change process, strategies, reactions to change, the impact of change on social policy and social welfare institutions.

SOW405 - Social Work Research Methods

This course prepares the student to understand social work research methods and the use of research methods. The student will be able to understand the philosophy of research, the reasons for doing social work research and the components of the research process including strengths, limitations, ethics and interpretation of research findings. The course will progress from the general discussion of research principles and methods to the more specific elements of professional social work research.

SOW410 - Social Work in Mental Health

This course builds on psychosocial study, assessment, and treatment introduced in Social Work Practice with Individuals. It acquaints students with DSM-IV-R terminology and its uses for generalist social-work practice. It also explores the scope and depth of individual psychopathology, community concerns, prevention, and intervention approaches.

SOW425 - Field Education

This course provides a supervised placement in a practice setting under the supervision of a MSW social worker. The application of theoretical knowledge and skills, along with demonstrated competencies in working with various client systems, is emphasized. The course requires a minimum of 480 clock hours.

SOW435 - Field Education Seminar

This capstone seminar is paired with a supervised placement in a practice setting (SOW 425) under the supervision of a MSW social worker. This seminar is focused on professional reflection and synthesis of prior coursework with praxis in a field setting. The application of theoretical knowledge and skills, along with demonstrated competencies in working with various client systems, is emphasized. Ethical professional practice is emphasized.

SOW495 - Seminar in Social Work

This seminar focuses on selected topics of particular significance or current importance and interest to the social work profession. Students can receive credit for more than one seminar provided that each seminar focuses on a different topic.

SPN-Spanish

SPN101 - Elementary Spanish I

This course is designed for the student without previous knowledge of Spanish who wishes to achieve a command of language fundamentals. Acquisition of speech skills in the classroom is reinforced in the language laboratory. Progressively greater emphasis is placed on reading and writing.

SPN102 - Elementary Spanish II

This is a continuation of Spanish 101.

SPN203 - Intermediate Spanish I

This course reviews the essentials of Spanish grammar through intensive oral and written practice to facilitate the use of Spanish grammar and to develop the use of words and expressions accepted throughout the Spanish-speaking world.

SPN204 - Intermediate Spanish II

Students develop control of the principal structural patterns of the language through dialogue, and reading as well as through oral and written exercises based on selected readings.

SPN304 - Spanish for Law Enforcement

This course focuses on the applied aspects of the Spanish language in a law enforcement context. Significant emphasis will be on the practical exercises such as arrest situations, assisting victims of crimes, conducting searches, undertaking criminal interviews and interrogations, and reading Miranda rights. Students will also learn about the Hispanic community in terms of crimes, prison population, and how to work with citizens and community

Course Descriptions

leaders toward mutual goals and objectives. While some background is provided in terms of the criminal justice system, such information is intended to assist in the language capabilities of justice personnel as opposed to undertaking substantive studies in that regard.

SPN305 - Spanish for Business

This course focuses on the applied aspects of the Spanish language in a business and international trade context. Significant emphasis will be on practical communicative activities that involve business scenarios, learning about business integrity and values that are recognized in the Hispanic community, analysis and discussions of Spanish commercial readings, analysis and discussions of business-cultural reading that impact the Hispanic market. While some background is provided in terms of the business and international trade such information is intended to assist in the language capabilities of business personnel as opposed to undertaking substantive studies in this regard.

SPN306 - Spanish for Medical Personnel

This course focuses on the applied aspects of the Spanish language in a health care context. Significant emphasis will be on practical vocabulary such as obtaining patient information, evaluating patients, conducting physical examinations, explaining diagnoses, implementing and explaining treatment, explaining the use of prescriptions, interacting with the elderly, and issues involving pregnancy and birth. Students will also learn about the Hispanic community in regard to demographics and the impact on the medical field. Further, students will learn about working with community members and leaders toward mutual goals and objectives in health promotion and prevention. While some background is provided in terms of the health care system, such information is intended to assist in the language capabilities of health care professionals as opposed to undertaking substantive studies in this regard.

SPN307 - Spanish for Social Services

This course focuses on the applied aspects of the Spanish language in a social work context. Significant emphasis will be on practical vocabulary such as obtaining client information, evaluating and speaking with clients, financial aid screenings, applying for work permits, discussing child abuse and abusive parents, discussing injury and disability benefits, discussing Medicare and welfare, and offering advice to clients. Students will also learn about the Hispanic community in terms of state population and its impact in the social services field and how to work with community members and leaders toward mutual goals and objectives in the well-being and promotion of clients. While some background is provided in terms of the social work field, such information is intended to assist in the language capabilities of social work professionals as opposed to undertaking substantive studies in this regard.

SPN308 - Spanish for Educators

This course focuses on the applied aspects of the Spanish language in the teacher education context. Significant emphasis will be on practical vocabulary such as communicating with parents and students, classroom management, managing behavioral issues, teaching various subject areas, enforcing school rules, and cooperation between school and parents. Students will also learn about the Hispanic community in terms of state population and its impact in the education field and how to work with community members and leaders towards mutual goals and objectives in promoting social and academic learning. While some background is provided in terms of the education system, such information is intended to assist in the language capabilities of education professionals as opposed to undertaking substantive studies in this regard.

SPN311 - Spanish Conversation, Composition & Phonetics

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In this course, students will acquire a genuine command of the language and the ability to communicate by listening, speaking, reading and writing. There is intense practice in conversation, composition and phonetics

Course Descriptions

based on modern prose, as well as on natural spontaneous speech models, including colloquialisms. Class is taught in Spanish.

SPN312 - Spanish Conversation, Composition & Phonetics II

This course is a continuation of Spanish 311 on a higher level of proficiency accepted by educated speakers of the Spanish world. Students will acquire a genuine command of the language and the ability to communicate by listening, speaking, reading and writing. There is intense practice in conversation, composition and phonetics based on modern prose, as well as on natural spontaneous speech models, including colloquialisms.

SPN346 - 20th Century Spain 1939 to the Present

This course is dedicated to the study of the exciting revitalization of today's Spanish society following the repression of the postwar years. It will trace the various faces of that revolution of Spanish culture when the Spaniards decided to forget the war and the desperate state of Spain and focus on new forms of artistic expression. The course will also examine the relationships among different forms of art during that period (e.g. the surrealist style in Spanish cinema, as well as in painting and in music). It will present the two major tendencies among the intellectuals of the time: those who had an inclination toward social protest and those who manifested an attitude of avoidance of the Spanish reality and produced works of universal significance.

SPN348 - Romanticism in Latin America

This course examines the new art and cultural trends of post independence Latin America. It looks at the role of painting, music and literature in the process of construction of a national identity: the "Americanista" ideology. It will study the origins and tendencies of the romantic movement, which breaks all classical rules and gives free rein to excited feelings. The course will follow the artistic-cultural work and activities of the prominent figures whose talent and efforts contributed to the creation of the new Spanish-American nations.

SPN349 - Mexico and the Chicano Movement in the 20Th Century

This course surveys a general, critical introduction to the political, social, and cultural changes in the Mexican society from the Pre-Columbian times to the present through art and literature. The course explores the concern that Mexican intellectuals have with social and political issues, and the impact that socio-political events have had on Mexico's contemporary cultural achievements. The course will also present the opportunity to examine the social awareness of today's Mexicans and the effect that this consciousness will have on the country's relationship with the United States through Chicano art and literature.

SPN350 - Contemporary Argentina

This course will attempt to give the student a multiphasic view of the culture of Argentina, the Latin American country with the most widespread artistic activity. It will begin with the nationalistic trend in the arts, which evolved from the so-called "gauchesco" tradition. It will then examine the vanguardist current in the literature, music, and the visual arts. The goal of SPN 350 is also to give the student a greater awareness of the ever-increasing attention the world is giving to Hispanic America, the recent boom in Spanish intellectual productivity, and an appreciation of the future impact this will have on the world.

SPN421 - Survey of Spanish Literature I

This course is an introduction to the masterpieces of Spanish literature, ranging from Poema de Mio Cid to current authors. Represented will be all of the important Spanish literary genres: narrative poetry (epic and ballad), lyric verse, short story, and selections from novels and dramas. Class and readings are in Spanish.

SPN422 - Survey of Spanish Literature II

A study of representative selections from the Colonial period to the present, this course emphasizes the salient characteristics and the distinctive contributions of each literary form in the period or movement under study.

SPN469 - Studies in Spanish Literature

Subject matter to be arranged. This course is designed for Spanish majors who wish to take additional credits and/or study abroad.

SPT-Sport Management

SPT100 - Introduction to Sport Management

An introduction to basic skills and competencies required to successfully manage in the sport management industry, the course utilizes general management theory and principles that make direct application to the sport management field.

SPT101 - Intro Sport Mgmt Prac Appl

Integrates coursework from Introduction to Sport Management (SPT 100) with planned and supervised professional experiences. Experiences will take within and outside regularly scheduled class meeting times.

SPT199 - Practicum in Sport Management

A supervised observational/work experience in a sport administration and management cognate (administration, aquatics, promotion, marketing, directing, fitness). The professor must approve the practicum experience in advance. This course consists of a minimum of 70 hours of work experience.

SPT300 - Psychology of Sport

This course is designed to cover diverse concepts associated with formal recreational or sport activity. These include, but are not limited to, motor skill learning, coaching characteristics and techniques, nervous system

Course Descriptions

correlates of athletic activity, research on relaxation, imagery and cognitive techniques, and peak athletic performance.

SPT305 - Ethics in Sport

This course will provide background in ethical theory to sport. Ethical problems, dilemmas and conflicts in sport will be discussed, as well as coaching practices, funding practices, management problems and social (cultural) roles. At the completion of this course, the student should be able to practice applying these ethical theories to typical problems in the world of sport.

SPT310 - Sport Marketing

A study of basic marketing science as it applies to all realms of the sport industry, this fundamental course is intended to give students the depth and breadth of marketing principles and practices as they apply to the sport industry.

SPT311 - Sales Techniques in the Sport Industry

The sport industry requires students who are trained in all aspects of sport business, including the critical area of sport sales. This course will provide practical professional sales techniques and philosophies utilized in several areas of sport including personal selling, ticket sales and sponsorships. Subsequently, the dynamics associated with building and fostering relationships necessary for consumer loyalty and a vibrant sport organization will be thoroughly examined.

SPT312 - Sales Techniques in Sport – Practical Application

Integrates coursework from Sales Techniques in Sport (SPT 311) with planned and supervised professional experiences. Experiences will take within and outside regularly scheduled class meeting times.

SPT315 - Facility and Event Management

This course is designed to provide students with the basic knowledge of the facility planning process, as well as how to manage specific sport facilities and the events staged in these facilities.

SPT316 - Facility & Event Management – Practical Application

Integrates coursework from Facility & Event Management (SPT 315) with planned and supervised professional experiences. Experiences will take within and outside regularly scheduled class meeting times.

SPT320 - Administration of Intercollegiate Athletic Programs

This course reviews the many administrative tasks an athletic administrator encounters in the administration of an intercollegiate athletic program and department. The course is designed for students majoring in sport management studies, business administration, or students who might be interested in a career in athletic administration at the collegiate level.

SPT325 - Sport & Society

An examination of sport as a social institution in America. Students will address controversies and issues regarding the development of sport at all levels of formality and organization. Sport as a social institution will be analyzed from the primary theoretical orientations of the discipline, namely the functionalist, interactionist and conflict approaches.

SPT330 - Globalization & International Sport

This course examines the organization, governance, business activities, and cross-cultural context of modern sport on an international level.

SPT340 - History of Sport

This course examines the organization, governance, business activities, and cross-cultural context of modern sport on an international level.

SPT360 - Sports Communication

An examination of the interrelationship between sports and media in today's society. This course draws on theories of rhetoric and social criticism by examining the media's role in telling the story of sports and, in telling that story, shaping and reinforcing cultural values. The course will utilize various broadcasts and print, and electronic media to examine how they are vital to the success of the sport organization.

SPT400 - Legal Aspects of Sport

An introduction to basic skills and competencies required to successfully manager in the sport management industry. The course utilizes general management theory and principles, which make direct application to the sport management field.

SPT405 - Finance and Economics of Sport

Designed to provide a detailed examination of the relationship between sport finance, economic and corporate sponsorship in sport. Topics covered will include the theoretical premise of sponsorship, alignment marketing, strategic communication through sponsorship and fundraising, and determining the value of an organization and its activities, as well as the evaluation of sponsorship activities. Perspectives from the event holder (i.e., property)

Course Descriptions

offering a sponsorship and from the organization functioning as the sponsor will be considered. This course is an analysis of how economic models are used to measure the impact of sport on various economies.

SPT410 - Governance in Sport

This course is a study of the growth and development of sport throughout the world, as well as how the governing bodies involved affect the structure, organization and delivery of sport.

SPT425 - Organization and Administration of Sport

This course is a study of the application of organizational theory to the understanding and management of sport organizations.

SPT430 - Sport Management Senior Seminar

This course provides the student with a basic understanding of the developments, trends and social processes that explain the widely popular sporting experience of society today.

SPT499 - Internship in Sport Management

This course is the sport management student's capstone experience. Students will be assigned to an internship site based on their unique educational needs and experience. Internship students will work directly with sport management professionals in one or more work settings.

TED-Technology Education

TED100 - Introduction to Technology Education

This course initiates the professional development of each technology education student. Activities will afford each student the opportunity to become well grounded in the philosophy, theory and practice of technology education curriculum and pedagogy. Following extensive modeling activities within a campus-based classroom/laboratory environment, all students will participate in similar activities at selected K-12 schools for 15 hours of field experience.

TED126 - Engineering Materials and Product Design

This laboratory-based course is an introduction to material properties and product design. Design engineering requires knowledge of the selection, properties, uses and impacts of materials choices, and processing methods. A process of research, design, creation, use and assessment of products will be used. The lab activities of the course will focus on the safe and efficient processing of polymer materials.

TED210 - Design and Appropriate Technology

This course focuses on developing a basic understanding of design and appropriate technology. Students engage in design and problem-solving activities to develop, produce, test and analyze technological systems while assessing the multiple interactions between such systems and their impacts on societies, values, economics, environments and basic human needs.

TED211 - Design and Sustainable Technology

This course focuses on developing a basic understanding of design and appropriate technology. Students engage in design and problem-solving activities to develop, produce, test and analyze technological systems

Course Descriptions

while assessing the multiple interactions between such systems and their impacts on peoples' societies, values, economies, environments, and basic human needs.

TED300 - Assessment & Instruction in Technology Education

To address the standards, it is critical that technology education students be able to instruct and assess student learning in a standards-based environment. This course will enable students to explore and develop instructional methodologies and assess student learning in both a traditional and authentic sense. Students will also be introduced to a variety of classroom management and discipline issues that classroom teachers face each day. All students will participate in instructional activities at a selected middle school for 15 hours of field experience.

TED304 - Design in Bio-related Technology

This course provides a broad overview of bio-related technologies as it relates to technology education. Students will study these systems from historical, current and potential future applications of bio-related technologies in a broad spectrum of industries/agencies. Students will participate in various laboratory and research activities as they identify and analyze bio-related products, services and processes. They will work individually and in groups to design, test, analyze and evaluate bio-related processes and products.

TED316 - Structural Design

Students will develop a basic understanding of the design and behavior of structures. Through laboratory activities, students will learn how structures are designed; why certain materials are used; how structures withstand loads; and the impacts of structures on societal, biological and technological systems.

TED335 - Transportation Systems

This course focuses on developing a basic understanding of the behavior of land, water, air and space transportation systems. Students engage in problem-solving activities to design, produce, test and analyze transportation systems while studying the technical subsystems of propulsion, structure, suspension, guidance, control and support.

TED426 - Manufacturing Enterprises

The class begins with an introduction to manufacturing technology, technical systems, and the historical evolution of manufacturing. Students will examine the organization and management of manufacturing endeavors. The class culminates in the design and production of a product in a manufacturing enterprise situation which closely parallels the functions of a manufacturing corporation.

TED435 - STEM Senior Project Proposal

This senior course provides the student with an opportunity to integrate several concepts of different STEM areas and it allows him/her to pursue specialized interests. The student will submit a written proposal for a project. After approval of the project, the student will be assigned a faculty advisor and select complement faculty members for area support. Minimum requirements for the proposal are submission of a functional specification and time schedule for completion.

TED436 - Engineering Design and Development

This course provides individual and/or small groups of students within a laboratory class the opportunity to conduct a focused investigation of a particular technological system or subsystem. The nature of this investigation requires direct contact by the student with corporate, university and governmental libraries, laboratories and associations. The scope of the research and development problem could relate to local, national or international topics. The time frame of the research could be historical, contemporary or futuristic. Each student and/or group

Course Descriptions

is required to design, build, operate and analyze some type of technological model, prototype or simulation that demonstrates with precision the essence of the research problem. Portfolio documentation of the progress of the research and development problem is required.

TED450 - Teaching Technology in the Secondary School

Students will use their technical skills and knowledge in the area of communication, transportation, manufacturing, construction, bio-related technologies and develop curriculum plans, design laboratories, and instructional activities appropriate for teaching technology in the secondary school. In addition, enhancing technical skills, teaching techniques, program assessment, and evaluating student learning will be emphasized along with safety, liability, school law and the integration of math, science, technology, and social science in learning activities.

TED451 - Teaching Technology in the Elementary School

This course is designed for students who are technology education majors. It is designed to offer each student the opportunity to design and build teaching/learning activities that integrate concepts related to mathematics, science, communication and social science with technology.

TED461 - Technology Education Student Teaching

Student teaching is the culminating experience for technology education majors. The student teacher is assigned to and works under two different master teachers at two different field locations during the semester. The development and refinement of contemporary pedagogical skills constitute the primary learning purpose for the student teacher. Specific skills that are developed are lesson planning, laboratory management, safety practices, record keeping, classroom management and educational measurement and evaluation. An integral component of the student teaching experience is a regularly scheduled practicum. This serves as a means of coordinating activities and interchanging ideas and experiences of student teachers.

THE-Theatre

THE100 - Introduction to Theatre

A study of the art and craft of theater from play script to play production. The course surveys theater history, literature, architecture, acting, directing and design for the student who wants to know what goes on in theater and what it means. Students can expect to participate in classroom performances.

THE101 - Voice and Speech

A practical and useful course for the performer or anyone who wants a flexible, strong, controlled voice. The focus of the course is the natural way in which the body produces vocal sounds and primarily studied for clear and articulate speech, which is free of regional qualities, affectation, imitation and annoying physical habits. An introduction to phonetics (IPA) and to voice production and control, with exercises to develop adequate quality, loudness, pitch, rate, and articulation will be utilized to achieve desired results. An Introduction to the Estill Voice Craft will be introduced to demonstrate the production of various vocal qualities.

THE120 - Entertainment Audio I

Entertainment Audio I introduces students to the foundational knowledge necessary for successful careers in theater sound design and/or audio engineering. Specific topics of focus in this course include: acoustic/psychoacoustic principles of sound, analog/digital audio cables and connectors, proper configuration of analog/digital audio equipment and sound systems, microphone design/implementations, mixing console design and operation, proper understanding of gain-staging and signal path, and signal processor function/implementations.

THE126 - Makeup

This course teaches techniques for modeling the face and body with makeup, hair and three dimensional prostheses. A full range of theatrical techniques from street and fashion to character and fantasy makeups will be explored. Qualified students will create three dimensional prosthesis from face and body casts.

THE131 - Fundamentals of Acting

An introduction to the basic tools of the actor's craft and personal discipline for the student through the use of acting exercises, sensitivity exercises, theater games and improvisation.

THE140 - Script Analysis

Students will read and analyze several plays and musical theatre scores and librettos, give regular reports, write research papers supporting their analysis, and contribute to class discussion regarding the nature and needs of various scripts. Class work will include analysis of a script's historical, structural and biographical qualities, as well as possible production needs for performance, directing, design and technical requirements.

THE141 - Stagecraft I

Introduction to the theory and practice of stagecraft, involving basic set construction, painting, and production technologies. Practical experience for students majoring in performance media.

THE143 - Drafting & Rendering for the Theatre

This entry level drafting and rendering course prepares students for more advanced tasks and topics in future design courses. It will create a foundation of necessary skills and good practices and illustrate the ways designers communicate with directors, production staff and other stakeholders. This course incorporates both hand

Course Descriptions

and digital rendering as well as computer aided drafting using VectorWorks, employing conventions typical to theatrical design work.

THE145 - Private Instruction: Estill Voice Training for Theatre Performers I

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model™ and the techniques/methodologies of Estill Voice Training™. Vocal goals and materials are specifically chosen to strengthen the technical and performing abilities of the individual student, whether singing or non-singing.

THE150 - Introduction to Theatrical Design

This course is an overview of all areas of theater design including scenic, lighting and costume. Students will explore a variety of theatrical styles and historical periods. Particular emphasis is placed on the design tools, including basic scale drawing, drafting, script analysis and color rendering.

THE201 - Voice and Interpretation

Methods of analysis and presentation for effective oral reading and performance of non-literature and dramatic literature, prose, and poetry will be explored.

THE203 - Musical Theatre Performance I

Building upon the skills acquired in MUS 104, Musical Theatre Performance I will begin the specific and focused study of the voice as it relates to musical theatre performance. Not only will the course provide continued focus on the voice and its use in both speaking and singing, but it will incorporate the study of selected musical theatre repertoire and its application of the Cohen method of acting. Using the Estill Voice Model™, students will study in greater depth the anatomy and physiology of the vocal mechanism, demonstrate voluntary control of vocal

Course Descriptions

structures, and apply these skills and knowledge to both spoken text and sung lyrics. Likewise, students will develop a working philosophy and vocabulary that emphasizes maintaining vocal health and utilizing vocal tools to achieve artistry in musical theatre performance.

THE211 - Lighting I

The basic theory and practice of lighting for the stage, film, and television. Practical experience for students majoring in performance media is stressed.

THE220 - Entertainment Audio II

Entertainment Audio II builds upon topics introduced in Entertainment Audio I by focusing upon digital audio integration within audio and sound design workflows. Specific topics of focus in this course include: Analog-to-Digital Conversion, Digital Audio Transmission Through Ethernet (DANTE) Integration/Operation, Musical Instrument Digital Interface (MIDI) integration/operation, Digital Mixing console integration/operation, remote digital mixing and instrument miking techniques. This course culminates with students preparing a professional sound design for a short, one-act production. Working in small groups, students will showcase their creativity in sound design and live-sound reinforcement to their classmates and department faculty.

THE221 - Theatrical Foundations: Physical Theatre and Creative Movement

This course offers an introduction to physical and experimental theater in a creative laboratory approach. The course invites students into the role as creative practitioners by physically investigating the creative elements that can be applied to all aspects of theatre making. Creating theatre in a organic and collaborative manner students will develop a more conscious and able body, and improve their capacity to transform themselves in their craft as an actor. Students will develop their skills of organic movement, physical experimentation, focused play, observation, collaboration, group trust and cohesion, and their ability to transpose experiences in the world

Course Descriptions

into visual, written, vocal and physical forms. Coursework will focus on individual and collaborative movement, the interconnectedness of the body and mind, and ways the body and voice communicates intention in time and space.

THE225 - Costume Construction

Basic pattern drafting and sewing techniques applied to the construction of costumes.

THE226 - Makeup II

This course builds upon the basic techniques learned in THE 126: Stage Makeup. Students will explore advanced topics including creating prosthesis, applying bald caps and airbrushing. They will also learn about period makeup and hair styles and create and realize characters using script analysis, research and rendering.

THE231 - Intermediate Acting

The development of a personal and useful acting method to develop believable characters for the stage. The acting method is developed through intense scene work that includes character and script analysis.

THE245 - Private Instruction: Estill Voice Training for Theatre Performers II

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model™ and the techniques/methodologies of Estill Voice Training™. The student will build upon the foundational concepts acquired in THE 145. Vocal goals and materials are specifically chosen to further strengthen the technical and performing abilities of the individual student, whether singing or non-singing.

THE255 - Puppetry

The planning and production of puppet plays.

THE271 - Scene Design I

This course is an introduction to theatrical scenic design. Students will explore a variety of theatrical styles and historical periods. Script will be read, analyzed and designed. Digital design tools for drafting and rendering will be used.

THE272 - Properties Design for Theatre

This course will explore the tools, materials and techniques used for the creation of props for theatrical productions. The course will survey different time periods and emphasis will be placed on creating commonly needed props such as food props, weaponry and paper props. Techniques will include foam carving, carpentry, painting and 3D printing.

THE301 - Voice and Speech II:Stage Dialects

A practical and useful course for the performer who seeks to effectively, consistently, and safely produce common stage dialects other than Standard American English. This course will build upon concepts acquired in THE 101 to expand the students' knowledge of International Phonetic Alphabet to include speech sounds utilized in dialects other than their own. The Estill Voice Model™ will be utilized for identifying a generalized vocal quality of the dialects under study that is consistent and vocally healthy in production. Application of the speech sounds and qualities to various appropriate texts will further illustrate the acquisition of the dialect under study.

THE302 - History of Theatre I

The development of theater from the Classics through the Baroque, including representative plays.

THE303 - Musical Theatre Performance II

Musical Theatre Performance II will provide continued development of skills and concepts necessary for performing vocally in musical theatre as introduced in Musical Theatre Performance I. The course will offer increased exposure and study of selected musical theatre repertoire, further application of the Cohen method of acting, and rigorous application the Estill Voice Model™ to both speaking and singing. The course will place great emphasis on using the voice to create character and achieve a higher level of artistry in performance.

THE304 - World Drama

Classical to 19th-century plays (excluding Shakespeare) studied as blueprints for theatrical presentation.

THE305 - Shakespeare in the Theatre

Representative Shakespearean plays studied as theatrical presentation.

THE306 - Modern Drama

19th- and 20th-century plays studied as blueprints for theatrical presentation.

THE309 - Reader's Theatre

Advanced theory and practice of oral interpretation techniques. Focus moves from solo to group performance and the basic staging techniques of both Reader's Theatre and Chamber Theatre.

THE311 - Lighting II

Advanced theory and practice of lighting design for stage, television and film. Practical experience is stressed.

THE312 - History of Theatre II

The development of Western theater from the Baroque to the present, including representative plays.

THE320 - Fundamentals of Directing

The comprehensive study of the director's pre-production planning of a dramatic production for the stage. The directorial analysis of plays and basic fundamentals of composition, picturization, movement, and improvisation with gesture, costume and properties is studied. The in-class preparation of a complete directorial script of a one act or a cutting from a longer play may be directed as part of a public program of student-directed plays.

THE325 - Costume Design

Basic principles of costume design. Students complete various design projects for specific plays selected from a variety of historical periods.

THE327 - Stage Management

This course will examine the role of the Stage Manager as a key artist within the theatrical event. The course will provide a practical application of the essential communication, organization, planning and leadership skills necessary to manage a theatrical event. Lastly the course will review current professional stage management practices.

THE328 - Scene Painting

The practice of scenery painting for the theater. Students work with a variety of paints, texturing materials and application techniques. Particular emphasis is placed on the enlargement of existing art works to a size suitable for stage use.

THE331 - Advanced Acting

This course challenges the actor's ability to demonstrate a personal and useful acting method through a wide range of textual problems, historical and modern plays, and acting styles.

THE340 - Advanced Theatrical Design

Explore a areas of production design including scenic, costume, lighting, sound and projections in collaboration with other students using various methods of communication including rendering and model making. Survey the history of theatrical design.

THE341 - Stagecraft II

Advanced practice and principles of scenery and property construction. Practical experience with plastics, metals, drafting and advanced woodwork is stressed.

THE345 - Private Instruction: Estill Voice Training for Theatre Performers III

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model™ and the techniques/methodologies of Estill Voice Training™. Vocal goals and materials are specifically chosen to strengthen the technical and performing abilities of the individual student, whether singing or non-singing.

THE350 - Theatre Practicum: Performance

This variable credit course is intended to provide the student with performance experience in theatre. This includes student actors, singers, dancers, musicians or other performers

THE351 - Theatre Practicum: Dance

This variable credit course is intended to provide the student with practical experiences in Dance. The students will audition for a departmentally approved production, obtain a role(s), learn and perfect the choreography and pantomime then perform for the university or community audience. The course may be repeated for credit provided the assignment varies. The grade is based on; quality of the work, the completion of the contract specifications, and completion of the project to the satisfaction of the instructor. A grade may be assigned retroactively within the student's next regularly enrolled semester provided an agreement is made between the student and the instructor before the assignment is undertaken.

THE352 - Theatre Practicum: Directing and Choreography

This course provides practical experience to students in the roles of director, assistant director or choreographer. They will work on the conceptualization, rehearsal process and the technical implementation of a production.

THE353 - Theatre Practicum: Design

This variable credit course is intended to provide the student with practical design experience in theatre. Students will create realized or theoretical designs in areas including but not limited to scenic, lighting, costume, sound, projection, properties, makeup or puppetry design. Students will complete a design including all requisite paperwork. They will work with faculty, staff and other students on the production team to revise work and implement feedback. Students serving as assistant designers would also register for this practicum.

THE354 - Theatre Practicum: Management

This variable credit course is intended to provide the student with practical management experience in theatre. Students will take leadership roles including but not limited to stage manager, assistant stage manager, scenic charge artist, wardrobe supervisor, props coordinator, technical coordinator, technical director, assistant technical director, master carpenter, master electrician or other management position as assigned. Students will complete

Course Descriptions

all the requisite paperwork, calendars, budgets, drafting, etc. and present it to advisor at the end of the process.

They will learn how to collaborate with and manage their peers. They will work with faculty, staff and other students on the production team to revise work and implement feedback.

THE356 - Theatre Practicum: Technical Production

This variable credit course is intended to provide the student with practical experience in theatre. Students will serve as a production or run crew member in an assigned area including scenery, lighting, costumes, etc.

THE357 - Theatre Practicum: Tour Theatre

This variable credit course is intended to provide the student with practical experience in touring theatre. Students will participate in aspects of touring theatre in performance, directorial, technical or other roles. They will work with faculty, staff and other students on the production team to revise work and implement feedback. A grade may be assigned retroactively within the student's next regularly enrolled semester provided an agreement is made between the student and the instructor before the assignment is undertaken.

THE372 - Creative Arts

This course is designed to meet the needs of Elementary Education majors and those students who are looking for a broad based all inclusive fine arts course. Students will have practical experiences in Art, Music and Theatre along with Arts and Education theories.

THE401 - Finding Your Voice

This course is designed for any student interested in developing versatility and strength in the creation of a character's voice. Students will develop a working philosophy and vocabulary that emphasizes maintaining vocal health and utilizing vocal tools to achieve artistry in theatrical performance. Areas of study include: tools

Course Descriptions

to eliminate poor vocal qualities and habits, work with the International Phonetic Alphabet for the production of proper speech sounds, and the Estill Voice Technique for vocal strength and health.

THE402 - Estill Voice Training: Levels 1 & 2 Combined Intensive

This course will provide a focused experience for vocal performers to explore and optimize voice production for musical and theatrical performance utilizing the Estill Voice Model™. By examining the acoustic, physiologic, and perceptual correlates of voice and by learning to enhance control of the vocal structures that influence vocal quality, the students will acquire tools offered by the Estill Voice Training™ system for adding color, strength, clarity and stamina to the performing voice.

THE403 - Musical Theatre Performance III

Musical Theatre Performance III will provide continued development of skills and concepts necessary for performing vocally in musical theatre, but with advanced application of both the Cohen acting method the Estill Voice Model™. In addition to refining technique and achieving even greater artistry in performance, the course will serve as a final phase of preparation for transition into professional musical theatre.

THE404 - Cultural Studies in Theatre

Performative elements are present in every society; regardless of its complexity and sophistication. The impact of these performative elements influences a society and its people. This course will focus on a specific region of the globe and study its theatre; specifically the impact its performative elements had on the society and, subsequently, the society had on its performative elements.

THE431 - Acting in Musical Theatre

This is the final course in the acting sequence and is directed solely to the performance of musical theatre. This course combines physical and vocal acting methods utilized in previous coursework with a repertoire specific study in order to create a more well-rounded musical theatre performer. Students aspiring to careers in musical theatre require a firm understanding of the specific needs of the character within a given style of musical theatre.

THE445 - Estill Voice Training for Theatre Performers IV

This course is designed for private instruction in the mechanics and artistry of voice utilizing the Estill Voice Model™ and the techniques/methodologies of Estill Voice Training™. Vocal goals and materials are specifically chosen to strengthen the technical and performing abilities of the individual student, whether singing or non-singing. This level of study builds upon concepts gained in previous levels and challenges the student to explore more challenging material.

THE450 - Senior Thesis

This capstone course will demonstrate, in a practical manner, the students training and ability in the theatre arts to graduate schools and prospective employers. Grading is based upon research, the quality and timely completion of the assigned production duties, and a written thesis.

THE480 - Digital Performance

This capstone course for the upper-class person uses emerging technologies to convey thematic ideas within live theatrical productions. The course will provide background and framework for students to create and present original live performance pieces employing multiple forms of media. Creativity, collaboration and technical innovation will culminate in a live public performance.

TOU-Tourism

TOU101 - Intro to Tourism Studies

An overview of the travel and tourism industry is emphasized. Topics include introductory principles, measuring and forecasting demand, tourism planning, tourism marketing, tourism development, and the role of the geographer.

TOU102 - Hospitality Industry and Operations

The course provides an introduction to the broad world of hospitality services and its relationship to the tourism industry. The course will provide an overview of the history, direction, and organizational structures of the hospitality industry and its role in the global tourism industry at various geographical scales. The nature and scope of this industry and basic operational concepts will be examined. Principles of sustainable operations will be emphasized

TOU277 - Casinos & Gaming Entertainment

Casinos and gaming entertainment are a growing sector of the tourism and hospitality industries. This course examines the history and development of gaming and casino operations. Managerial, technical, and operational concepts of casinos and gaming entertainment will be reviewed. Other topics will include regulatory issues and implications for game protection. Within a global context, the socio-cultural, environmental, and economic impacts of casinos and gaming entertainment will be examined. Responsible gaming operations and management will be emphasized.

TOU330 - Meetings Expositions Events and Convention Operations

Through a global approach, this course examines the structure and role of conventions and events management at various geographical scales. The course content will explore the theories and practices relevant to successful conventions and the role these play in destination management. Strategies required for successful planning, development, implementation and evaluation of conventions and events will be introduced. Issues will be considered from the perspectives of the planner, service providers, and attendees.

TOU350 - Hotels Resorts and Lodging

This course provides an understanding of the hotel, resorts, and lodging sectors of the tourism industry within a geographical context. This sector's growth and development, planning, design, and operations will be reviewed. The course will also review sustainable practices, industry opportunities, and future trends.

TOU385 - Dark Tourism & Extreme Topics

This course explores some of the more extreme phenomena of the tourism industry, which is one of the world's largest and fastest growing industries. This course will focus on growing special interest markets within the tourism industry with an emphasis on more extreme topics that touch upon death, destruction, and the macabre. In this course, students study the impacts of dark and extreme tourism development on the culture, society, economies, and environments at different geographical scales.

TOU400 - Impacts and Sustainability of Tourism

This course will cover the principles of sustainability and sustainable tourism development. The material will cover the economic, social, cultural, and environmental impacts of tourism. Case examples will be used to illustrate the characteristics, methods of measurement, management, and evaluation of sustainable tourism

TOU450 - Research Methods for Tourism Studies

This course will lay a foundation for senior-level course work in the tourism studies concentration. Secondary research techniques will be reviewed. Qualitative, quantitative, and observational methodologies will also be examined. The focus will be practical skill development for data collection, analysis, and interpretation.

TOU460 - Comprehensive Tourism Planning

Students will become familiar with the process of tourism planning as a mechanism for sustainable tourism development. An understanding of the principles, practices, and procedures of tourism planning at various geographical scales will be introduced. The student will apply concepts of tourism planning through experiential activities, which include the submission of a written tourism plan

UAS - Unmanned Aerial Systems

UAS110 - Intro to Unmanned Aerial Vehicles

A first course in unmanned aerial vehicles (UAVs), aka “drones”, and the technologies involved in their operation. Coverage includes UAV components, command and control (C2) communication systems, basics of flight, regulatory and regulations, safety and societal considerations. Laboratory activities provide opportunity for students to gain hands-on experience in working with UAVs.

UAS120 - Principles of Aviation

A study of the concepts and factors involved in the flight of aircraft in the National Air Space (NAS). Topics include flight theory, airfoils, aerodynamic forces, navigation, aviation meteorology and weather factors, and aviation law. An overview of FAA Federal Aircraft Regulations (FARs) with particular emphasis on the Small UAS Rule (14 CFR part 107) is included.

UAS160 - UAS Design and Construction

Unmanned aerial systems are realized in a variety of forms such as fixed-wing, rotary wing, multirotor, and dirigibles. This course explores the materials, construction methods, sensors, actuators, and control systems used in various aerodyne and aerostat platforms. Students will also learn power system specification, payload accommodations, and safety considerations relating to aerial vehicles. The laboratory component facilitates student design and construction of their own UAV.

UAS210 - UAS Ethics, Law & Regulations

This course provides students with a basic understanding of legalities of UAS operations and their ethical implications in modern society. An overview of aviation law and more detailed coverage of UAS-specific regulations are presented with emphasis in areas included on the Part 107 exam.

UAS220 - UAV Operations

A performance-based course involving safe and methodical operations of unmanned aerial vehicles consistent with FAA regulations. Students will learn flight planning, crew resource management (CRM), flight line operations, UAV maintenance, and acquire instructor-supervised experience in simulated and hands-on piloting of UA platforms to gain proficiency in UA operations.

UAS270 - UAS Avionic Systems

Avionics are the electronics designed for and used in aerospace vehicles. This course covers the avionic systems as used in unmanned aerial vehicles including telemetry, camera stabilization systems, first-person view (FPV), on-screen displays (OSD), ground control stations (GCS), long-range communication systems, flight software and autopilots. F

UAS310 - UAS Sensing and Analysis

Many applications of UASs from simple situational awareness to areas such as real-estate, disaster reconnaissance, search-and-rescue, photogrammetry, precision farming, wildfire containment, land erosion, and aerial inspections require data acquisition from various sensors and processing / interpretation of the data to extract meaningful information. This course first covers the collection of imagery data from UAS cameras or other electro-optical, infrared, and synthetic aperture radar (SAR) sensors. Subsequent computerized post-processing of the acquired data is then explored for various goals such as spatial analysis, anomaly detection and still-image mosaicking.

UAS320 - Mission Planning

Mission planning for UASs includes those activities to plan, prepare, execute, and record an application based operation involving an unmanned aerial system. Students will learn to specify mission particulars, perform hazard and risk analysis, develop a written mission plan, and create a flight plan with flight planning software tools.

UAS350 - UAV Operations II

This course continues with UAV Operations I with emphasis on fixed-wing aircraft operation and procedures. A performance-based course involving safe and methodical operations of unmanned aerial vehicles consistent with FAA regulations. Students will gain increased knowledge of flight planning, CRM, flight line operations, UAV maintenance, and acquire experience in piloting of fixed-wing UA platforms.

UAS400 - UAS Senior Project Proposal

The capstone senior project sequence provides the student with an opportunity to integrate various concepts from the program while supporting pursuit of specialized interests. In this course, the student will develop and submit a written proposal for a project involving a UAS. Minimum requirements for the proposal include mission analysis, UAS component specifications, cost analysis, and implementation schedule.

UAS450 - UAS Senior Project

Following UAS400 Senior Project Proposal, this course focuses on the realization of the student's capstone project. Course objectives include implementation, testing, evaluation, and documentation of the project culminating in a formal presentation.

UAS495 - UAS Internship

Upon acceptance to an internship site, the student will work with an on-site supervisor in the application of UAS technologies in a real-world scenario. Actual nature of the work depends on the application and may involve technician-level skills, mission planning, UAV piloting, and/or processing/analysis of acquired data.

UNI-Co Curricular Activities

UNI093 - GO-GR Tentative Schedule

Used by Calu GO for tracking purposes.

UNI094 - GO-GR Schedule Confirmed

Used by Calu GO for tracking purposes.

UNI098 - Attendance Unconfirmed

Used by Student Success for tracking purposes

UNI099 - Attendance Confirmed

Used by Student Success for tracking

UNI100 - First-Year Seminar

First-Year Seminar helps students to achieve their educational goals through the utilization of a full range of institutional and community resources.

UNI101 - Introduction to University Studies

UNI 101 is the first step to student academic success. The premise of this course is to build a strong academic foundation. The course seeks to help students develop and apply essential academic success skills, enhance critical thinking and communication skills, plus explore interests, abilities, values and options regarding the choice of a major and career.

UNI200 - Career Readiness

This course provides knowledge of a practical preparation for the world of work. Students conduct self-assessment for career planning; learn how to research particular jobs, careers and employers; develop skills needed for obtaining a job; learn how the workplace is organized; and explore the options for combining career and life expectations.

UNI499 - Internship Intent

Internship Intent. Register for this class if you would like to have an Internship. You must have Junior or Senior standing to be considered. Some department require Senior only.

VET - Veterinary Technology

VET101 - Introduction to Veterinary Technology

This course introduces students to the Veterinary Technology profession, medical terminology and record keeping. The technicians' role in veterinary ethics, legal regulations, the veterinary team, and the human animal bond will be emphasized throughout the course. Common animal breeds, general principles of behavior, hospital care, handling equipment, and hospital management are presented. This course includes a 45 hour clinical experience observing in an animal hospital.

VET160 - Care and Management of Exotic and Laboratory Animals

This course will introduce students to the many facets of exotic and laboratory animal care and management. Emphasis will be placed on the laws and ethics governing animal research as well as the unique features of each species and how these features affect housing and nutritional needs. Common diseases of each species will be explored in regard to signs, prevention and treatment. Registration for both the lecture and lab is required. Lab exercises will include basic clinical procedures and essential skills. In addition, students are required to participate in animal care rotations in the vivarium.

VET202 - Small Animal Management and Clinical Procedures

This course will focus on the fundamentals of veterinary nursing knowledge and skills for dogs and cats. Topics will include behavior, nutrition, handling, disease recognition, prevention and treatment as well as other topics associated with canine and feline health. The laboratory exercises will focus on the clinical skills associated with nursing in the small animal practice such as blood draws, catheter placement, bandaging, and CPR. Registration for both the lecture and lab is required. In addition, students will be required to participate in animal care rotations.

VET210 - Veterinary Clinical Technology and Laboratory Procedures

This course illustrates the importance of laboratory procedures and clinical technology in veterinary medicine.

The clinical examination of blood, urine, feces, and cytological samples will be used to demonstrate the diagnostic value of laboratory results and the physiological response of the body to disease. Laboratory procedures will focus on proper sample collection, handling, processing, and storage of biological specimens. The identification, life cycles, and pathogenesis of ecto- and endoparasites will be explored.

VET220 - Large Animal Management and Clinical Procedures

This course will focus on the fundamentals related to the veterinary technician and large animal practice. Topics will include anatomy and physiology, nutrition, handling, disease recognition, prevention and treatment as well as other topics associated to equine and production animals. Clinical procedures will be practiced in the laboratory portion of the course at area large animal facilities. Registration for both the lecture and lab is required. 45 hours of clinical experiences will be gained during this course.

VET230 - Digital Diagnostic Imaging

This course emphasizes techniques involved in the acquisition, digital management, and manipulation of radiographic, electrocardiographic and ultrasound images. Focus will be placed on the skills necessary to produce images of diagnostic quality and the theory of how these images are produced. Registration for both the lecture and the lab are required

VET240 - Veterinary Pharmacy and Pharmacology

This course will familiarize the student with dosage, mechanisms of action, routes of administration, and known toxicities of the commonly used drugs in veterinary medicine. Emphasis will be placed on dosage calculations and drug dispensing as it relates to the veterinary technician.

VET250 - Surgical Nursing, Anesthesia and Pain Management

This course acquaints the student with pre-operative, surgical, and post-operative responsibilities of the veterinary technician. Topics include drug and fluid calculations, patient monitoring, and care of the surgical suite and surgical instruments. Laboratory procedures will include surgical preparation, anesthesia, surgical assisting, post-operative care and client communication. Registration for both the lecture and lab is required. Students will also be required to participate in animal care rotations. This course includes 45 hours of clinical experience.

VET292 - Clinical Experience

This course enables the student to apply knowledge and hone skills by spending 120 hours in the veterinary clinic setting. Experience will be gained in duties that are regularly performed by a licensed or certified veterinary technician under the guidance of veterinarians and qualified clinic personnel. Clinical sites must be approved by the veterinary technology program director or designee.

VET301 - Contemporary Issues in Veterinary Medicine

This course will explore the trends and issues that relate to veterinary medicine. Emphasis will be placed on the role of the veterinary technician and the issues that directly affect the veterinary technician profession.

VET302 - Animal Behavior for the Veterinary Technician

This course will familiarize the student with the role of the veterinary technician in regard to companion animal behaviors commonly encountered in practice. Topics addressed will be the underlying cause of common behaviors, companion animal communication, strategies for behavior modification, client communication, and creating a safe and comfortable environment for the patient, client and veterinary team.

VET303 - Shelter Medicine I

Shelter medicine has emerged as a veterinary specialty as a result of the realization that medicine and care of the animals within shelters is far different than caring for pets. This course will introduce the student to the basic principles in shelter medicine. Topics will include housing, husbandry, behavior, and infectious disease of various species of animals that inhabit animal shelters.

VET321 - Animal Reproduction

The study of animal reproduction is of great importance in veterinary medicine. This course will cover reproduction in several companion species, both large and small, but will emphasize large animals where reproduction is of the utmost importance in production. In this course students will be familiarized with the many aspects of animal reproduction including topics such as cycle manipulation, embryo transfer, timed insemination, dystocia, and pregnancy support methods.

VET326 - Zoonotic Diseases

It has been postulated that approximately 75% of emerging diseases are zoonotic. This statement makes the role of the veterinary professional pivotal in preventing, and recognizing, diseases in both animal and human populations. This course will explore the type, transmission, immune response, recognition, prevention, and management of zoonotic diseases.

VET450 - Case Studies in Veterinary Medicine

This course is intended to challenge student understanding from earlier courses in the veterinary technician program. The course will require students to apply previous knowledge and evaluate decisions from case study presentations.

VET492 - Specialty Internship

There are many areas within veterinary medicine that lead to specialties. This course will enable students to explore these specialties and develop skills that will help prepare them if the student chooses to pursue certification in a veterinary technician specialty

WFD-Workforce Development

WFD199 - Special Topics in Workforce Development

These courses provide opportunities for students who have enrolled in or have completed structured certificates, apprenticeships or in-house workforce training programs, as well as life experiences, to document and demonstrate their competencies in order to obtain academic credit for degree-seeking purposes. These classes will plug directly into flexible options of the Associate of Science degree in Workforce Development, as well as the Bachelor of Science degrees in General Studies: Science and Technology and Industrial Technology.

WFD299 - Special Topics in Workforce Development

These courses provide opportunities for students who have enrolled in or have completed structured certificates, apprenticeships or in-house workforce training programs, as well as life experiences, to document and demonstrate their competencies in order to obtain academic credit for degree-seeking purposes. These classes will plug directly into flexible options of the Associate of Science degree in Workforce Development, as well as the Bachelor of Science degrees in General Studies: Science and Technology and Industrial Technology.

WFD399 - Special Topics in Workforce Development

These courses provide opportunities for students who have enrolled in or have completed structured certificates, apprenticeships or in-house workforce training programs, as well as life experiences, to document and demonstrate their competencies in order to obtain academic credit for degree-seeking purposes. These classes will plug directly into flexible options of the Associate of Science Degree in Workforce Development, as well as the Bachelor of Science degrees in General Studies: Science and Technology and Industrial Technology.

WFD499 - Special Topics in Workforce Development

These courses provide opportunities for students who have enrolled in or have completed structured certificates, apprenticeships or in-house workforce training programs, as well as life experiences, to document and demonstrate their competencies in order to obtain academic credit for degree-seeking purposes. These classes will plug directly into flexible options of the Associate of Science degree in Workforce Development, as well as the Bachelor of Science degrees in General Studies: Science and Technology and Industrial Technology.

WST-Women's Studies

WST200 - Introduction to Women's Studies

Women's Studies 200 examines both the diverse and the collective experiences of women and men. The complex intermingling of privilege and inequality that intersect and diverge among women's and men's identities and roles will be analyzed. The impact of gender in arenas such as education, work, family, sexuality, identity, entertainment, sports, religion, and social policy will be explored.

WST320 - Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) Studies

Women's Studies 320 engages students in Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ) studies. The course includes some historical perspective of LGBTQ issues and examination of identity development related to sexuality, gender, and sexual orientation (including the "coming out" process). The primary focus is on contemporary issues related to education, the military, family, education, the media, entertainment, government and public policy in the United States.

WST330 - Examination of Gender, Race, Sexuality and Class in Media

Women's Studies 330 engages students in critical analysis of gender, race, class and sexuality issues as related to media. Students will first be exposed to theory, offering diverse lenses from which to examine media, such as feminism, critical race theory, cultural consciousness, and social psychological stereotyping. Students will engage in critical consciousness, using the theories to examine media, and the representations/misrepresentations that reflect and create socially constructed identities and roles regarding gender, race, sexuality and class.

WST350 - Finding Our CHEA: Compassion, Happiness, Empathy, and Activism; The Science of Improving Our World

This course affords students a focused examination of emerging and dynamic fields that highlight how do we make ourselves, our communities, and the world happier, more empathic, more compassionate places? Science finds that increasing our empathy, compassion, and connection with others, while focusing on experiences and relationships are central to these goals. This course uses content from women's/gender studies, social work, sociology, psychology, political science, history, medicine, and more. Women's Studies courses, including this course, engage students in critical analysis of gender, race, class and sexuality, and social justice issues. By the

Course Descriptions

end of the course, students will hold some of the scientific “secrets” to making themselves and others happier and to making communities better places to live.

WST400 - Capstone, Advanced Women’s Studies

This course will explore feminist theory in its present and past strands, and the impact that feminist scholarship has had and can have on the pursuit of knowledge, both in content and methodology. This course will also include analysis of some of the most prominent issues in the field today, as selected by the students (with guidance from the instructor). From a general investigation of feminist theory, each student will apply elements of feminist theory to her/his own major field, culminating in a major research project.

XCP-Career Planning

XCP194 - Career Planning

A self-discovery course that provides first and second year students the opportunity to develop career interests and goals. Students will gain an understanding of their interests and personal preferences by completing and critically analyzing various career inventories. Topics include the role of career planning in life planning, decision-making, sources of career information and the relationship between careers and a college education.

Student Affairs

Student Affairs is a critical component of a student's learning experience that goes beyond the classroom and provides a safe and healthy living and learning environment. Student Affairs oversees life on campus, including student organizations, activities, wellness, housing, dining, recreational sports and much more. The professionals who work in Student Affairs are committed to helping all students enrich and deepen their lifetime journey of growth and self-exploration.

Phone: 724-938-4439

Email: stuaffairs@calu.edu

Mission

Inherent in the University's educational mission is a commitment to the total development of all students. The division of Student Affairs, under the direction of the vice president, is administratively responsible for the implementation of this commitment. The central focus of the Student Affairs division, therefore, is the personalization of the university experience, with concern for not only individual intellectual development, but for personal, social and physical development as well. The division is committed to recognizing and assisting in the realization of human potential, which includes promotion of the concepts of safety, freedom, justice, individual dignity and the right of the dissenter and openness of mind.

Student Affairs Committees

- The **Student Affairs Council** serves as a recommending body for strategic plan development; coordination of division-wide assessment efforts; and committee oversight.
- The **Student Affairs Assessment Committee** leads the coordination for assessment within Student Affairs.
- The **Student Affairs Communications Committee** works to educate, innovate and enrich communication among Student Affairs, SAI and University stakeholders.
- The **Student Affairs Diversity Committee** serves as a catalyst for change through awareness and understanding of diversity and inclusion.
- The **Student Affairs Professional Development Committee** serves as a catalyst for professional development, personal growth and community among the members of the Student Affairs Division.
- The **Student Affairs Retention Committee** serves to identify opportunities to create and enhance engagement to support student retention and success.
- The **Targeted Programming Committee** identifies trends and hot topics to forecast division-wide programming opportunities.

Services

Student Affairs works to personalize your Cal U experience and develop your personal and professional skills by providing a full range of University support services and programs, including:

- Auxiliary Services
 - Banking
 - Bookstore
 - Dining, Hospitality and Vending Services
- Cal Card Services
- Center for Volunteer Programs and Service Learning
- Commuter and Non-Traditional Student Services
- Conference Services and Convocation Center
- Fraternity and Sorority Life
- Natali Student Center
- Office for Students with Disabilities

Division of Student Affairs

- Recreational Services
 - Herron Fitness Center
 - Indoor and Outdoor Recreation
 - Intramurals and Group Fitness
 - Sports Clubs
- Student Association, Inc./SAI Farm/Clubs and Organizations
- Student Activities, Programming and Leadership
- Student Media Services
 - Multimedia Access Center (Mac Lab)
 - CUTV
 - WCAL Radio
 - Cal Times Newspaper
- University Housing/Residence Life
- Vice President's Office/Dean of Students
 - Class Excuses
 - Administrative/Medical Withdrawals
 - Student Conduct
 - Student Liaison Services and more
- Wellness Center
 - Alcohol and Other Drug Education
 - Counseling Center
 - End Violence Center
 - Health and Wellness Education
 - Student Health Center
 - Student Wellness Support Services
 - The PARC (Alcohol and Drug Recovery Center)
- Women's Center

Vice President's Office / Dean of Students

Student Affairs can help you get answers, discover resources and explore student life, all of which will enhance your life while at Cal U. The primary goal of the division is to provide essential support services that assist students as they pursue their academic goals. The Student Affairs office is located on the third floor of the Natali Student Center, and our main phone number is 724-938-4439.

Attendance Concerns

Except in cases of emergency, it is your responsibility to inform your professors in advance if you expect to be absent from class. If your absence is the result of sudden illness, hospitalization or an emergency family concern, contact the Dean of Students for an attendance memo as soon as possible at 724-938-4439.

The Dean of Students will verify documentation related to your absence, contact your instructors regarding the issue and provide support to you during the time of crisis. The Dean of Students may not be able to provide a memo if you do not make contact for support within a reasonable timeframe.

Remember, it is still your responsibility as a student to be in contact with your professors when you are able to return, or during your absence, if able. Ultimately, it is up to you and your faculty member to determine any course adjustments and approval of excused absences.

Medical Withdrawals

Students who are unable to complete the semester due to personal medical or emergency family issues should contact the Dean of Students at 724-938-4439 to discuss the possibility for an administrative/medical withdrawal.

Office of Student Conduct

The Student Code of Conduct is intended to provide guidance and structure for students in their relations with others, use of University and other's property, and development of appropriate decision-making abilities. Students learn from each situation they are involved in to refine decision-making and problem-solving skills and reflect on actions and decisions. In addition, students come to understand how their actions affect others and future career goals. All students should review the [Student Code of Conduct](#) and the University's policies on reporting and handling alleged violations. Additional information is found at <https://www.calu.edu/inside/student-resources/student-conduct/index.aspx> or call 724-938-4439.

Student Handbook

For additional information, the Student Handbook offers students a quick and easy guide to University programs, activities and services. While not always encyclopedic in its descriptions, it does tell you where to go for information: https://www.calu.edu/inside/policies/_files/general/Student-Handbook.pdf

Accommodations for Students with Disabilities

Office for Students with Disabilities

California University of Pennsylvania welcomes otherwise qualified students with disabilities. The University recognizes its responsibility to these students and is committed to providing reasonable accommodations to ensure equal access and full participation as guided by Section 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA/AA).

Students with disabilities follow the same admission procedures and standards as required by Cal U's Admissions Office for all students.

Accommodations

Accommodations for students with disabilities are approved through the Office for Students with Disabilities (OSD). It is the responsibility of the student to adhere to OSD procedures for self-identifying, providing documentation to substantiate requests and requesting reasonable accommodations in a timely manner. Students must meet the academic/technical standards of the classes/programs for which they are applying and/or in which they are enrolled. In those instances where class/program requirements simulate responsibilities of in-service personnel, students must meet the essential functions of the job. Inquiries regarding disability access for students should be directed to:

Office for Students with Disabilities
Carter Hall, Room G35
Phone: 724-938-5781
Email: osdmail@calu.edu
OSD website: www.calu.edu/current-students/student-services/disability/index.htm

Parking

Parking spaces for persons with disabilities are marked as such on campus. These spaces are solely for the use of persons who have the required state DOT-issued ADA parking credentials displayed. Persons who wish to request a temporary disabled parking permit (six weeks or less) must submit appropriate documentation to the Department of Parking and Transportation (724-938-4677). Persons with disabilities needing to obtain required DOT-issued credentials can make application to the respective state Department of Transportation in which the vehicle is licensed. Additional information regarding parking on campus at www.calu.edu/parking.

Contact Us

Inquiries regarding disability access for students should be directed to:

Office for Students with Disabilities

Carter Hall, Room G35

Phone: 724-938-5781

Email: osdmail@calu.edu

OSD website: www.calu.edu/current-students/student-services/disability/index.htm

(or use the search word "disability" on the Cal U website: www.calu.edu)

Center for Volunteer Programs and Service Learning

The Center for Volunteer Programs and Service Learning, located in 119 Natali Student Center, serves as a catalyst for students to connect with, build and sustain meaningful service initiatives in partnership with communities surrounding Cal U. Students enhance their learning and leadership development by engaging in educationally purposeful and diverse co-curricular experiences through volunteer opportunities. Student service hours are tracked through a volunteer management system to document students' volunteer experiences both on and off campus.

Cal U Cupboard

The Center also operates the Cal U Cupboard, a food pantry for students experiencing food insecurity. The Cal U Cupboard assists our students by providing food, academic supplies and personal hygiene items, so they can continue on the path toward graduation. Operated by Cal U's Center for Volunteer Programs and Service Learning and supported by our generous donors, the campus-based food pantry helps to meet students' basic needs.

Commuter and Non-Traditional Student Services

The Office of Commuter and Non-Traditional Student Services provides commuting and non-traditional students with resources and encourages student involvement.

The office offers resources for students commuting via public transportation and supports all commuting students, no matter what the means of transportation.

Commuter pods are areas located throughout campus with amenities for students, such as microwaves, lockers, printing, vending, seating and charging stations.

Commuter and non-traditional students are encouraged to get involved in organizations and participate in campus programs and activities. The office provides programming and information to students throughout the semester and is located in 123 Natali Student Center.

Counseling and Psychological Services

Counseling Center services are available for students seeking confidential help for personal as well as interpersonal difficulties. Services are free of charge to Cal U enrolled students. The Counseling Center, located in the Wellness Center, provides an array of short-term counseling and psychological services to University students with problems that interfere with their adjustment to campus life, personal development or effective educational performance. The Counseling Center provides the following services to students:

- Evaluation.
- Consultation.
- Brief therapy.
- Emergency intervention.

Division of Student Affairs

Students requiring intensive or specialized care will be referred to community mental health providers. All therapists working in the Counseling Center adhere to federal and state ethical and legal standards and laws concerning confidentiality. Enrolled students can make an appointment by calling 724-938-4056 or email studentwellness@calu.edu for referrals and resources.

Dining Services

The goal of the University dining services is to provide a quality, cost-effective, innovative dining program for students living on and off campus. The University encourages student involvement and awareness to help provide quality, nutritious meals at a reasonable cost. Dining locations provide an important environment for student interaction and socialization. Students living in the residence halls, as well as commuters, may choose from a variety of meal plans. All students who live in lower-campus University residence halls must participate in the meal program. Detailed University dining services information is available on the Cal U website. Call 724-938-4555 for further information or check out: <https://www.calu.edu/student-life/living-at-calu/dining/index.aspx>.

End Violence Center

The End Violence Center works proactively to raise awareness and provide prevention education for the campus community on the issues of sexual violence, intimate partner violence and stalking. In addition, the Center works reactively to offer survivors and secondary victim's advocacy, crisis intervention, supportive services and outreach.

The End Violence Center is located in Room 117 of Natali Student Center or call 724-938-5707.

Housing

Cal U has some of the best university housing in the nation: modern housing that's convenient, safe and exceptionally comfortable.

Staying in University housing fosters academic success and personal growth; studies show that students who live on campus during their first years outperform students who choose to live off campus. Residence halls provide a living environment that complements classroom learning. Students are encouraged to participate in learning communities with study groups and computer labs readily accessible.

Students tell us one of the best things about living in University housing is that you meet so many people and learn so much about yourself and others.

Check out our website for housing options: <https://www.calu.edu/student-life/living-at-calu/housing-options.aspx>

For further questions, email housing@calu.edu or call 724-938-4444.

Recreational Services

Herron Recreation and Fitness Center is located in Herron Hall and serves the University community. Students are admitted upon presentation of their valid CalCard. Students may purchase memberships for their spouse and/or children (age 16 or older) for a fee. The facility includes a lap pool, a steam room, a whirlpool, saunas, weight training equipment, fitness classes, cardiovascular equipment, two gymnasiums, a climbing wall, an indoor walking track and a variety of exercise machines. The facility also coordinates and manages University sports clubs; intramural and extramural sports; and the outdoor recreation program.

For additional information, visit: <https://www.calu.edu/student-life/living-at-calu/sports-recreation.aspx>

For additional information, call 724-938-5907.

Wellness Center

Student Health Services

- Monday-Friday: 24 hours
- Saturday and Sunday: 12 hours (7 p.m. - 7 a.m.)

A full-time staff of registered nurses is on duty during hours of operation. A University physician conducts regular hours and a nurse practitioner is available Monday-Friday.

A University health form must be completed by your family doctor and returned. For a copy of the form, visit: https://www.calu.edu/inside/forms/_files/medical/medical-information-form.pdf

For additional information, call 724-938-4232.

Alcohol and Other Drug (AOD) Services

AOD programs are located on the ground floor of Carter Hall in Suite G-45. Intervention, education and prevention comprise the operational components of Cal U's AOD programs. The BASICS and CASICS programs provide intervention, while education and prevention are provided by the Health and Wellness Education Center and the AOD education specialist. Call 724-938-4775 for additional information.

PARC

The Prevention Awareness Recovery Center (PARC) is on campus for students who are in recovery from drug and alcohol addiction as well as students who are allies and supporters of those in recovery. PARC is a safe, worry-free lounge area where students are welcome to hang out, meet other students in recovery and hold Cal Clean and Sober groups. The PARC is full of resources and referrals for students in need of support or treatment services. Call 724-938-4775 for additional information.

Student Wellness Support Services

Student Wellness Support Services offers support and guidance for all University:

- Students experiencing an acute crisis or who are in a situation that is greatly impacting their ability to successfully engage in daily activities.
- Students who require information or guidance to navigate University and/or community resources.
- Faculty and staff who are concerned about a student and would like some additional expertise or guidance.

Email studentwellness@calu.edu or call 724-938-4775 for referrals and resources.

Counseling and Psychological Services

Counseling Center services are available for students seeking confidential help for personal as well as interpersonal difficulties. Services are free of charge to Cal U enrolled students. The Counseling Center, located in the Wellness Center, provides an array of short-term counseling and psychological services to University students with problems that interfere with their adjustment to campus life, personal development or effective educational performance. The Counseling Center provides the following services to students:

- Evaluation.
- Consultation.
- Brief therapy.
- Emergency intervention.

Students requiring intensive or specialized care will be referred to community mental health providers. All therapists working in the Counseling Center adhere to federal and state ethical and legal standards and

Division of Student Affairs

laws concerning confidentiality. Enrolled students can make an appointment by calling 724-938-4056 or email studentwellness@calu.edu for referrals and resources.

Financial Aid

Mission Statement

The primary mission of the Financial Aid Office at California University of Pennsylvania is to provide financial planning and assistance to students and their families in meeting the costs of education. In fulfilling this mission, each student will be given careful consideration, and the University will determine financial assistance based on federal state and institutional guidelines. Financial aid programs have been established to provide access to higher education with guidelines to ensure fairness in disbursing available funds to qualifying students. The Financial Aid Office strives to ensure that courteous, timely and accurate financial aid services are delivered to all students seeking assistance from our office.

For current information on the following items, please visit the Financial Aid Web pages at www.calu.edu/financial-aid:

- Eligibility requirements.
- Financial aid application process, including FAFSA.
- Cost of attendance.
- Grants.
- Student employment.
- Scholarships.
- Loans.
- Disbursement of financial aid.
- Financial aid warning, financial aid suspension, financial aid probation.

Location and Office Hours

The Financial Aid Office is located on the first floor of Dixon Hall. The office hours are 8 a.m. to 4 p.m., Monday through Friday. Appointments are encouraged, but a daily on-call counselor is available to assist walk-ins.

Students can contact the Financial Aid Office by phone at 724-938-4415 or by fax at 724-938-4551. In addition, general financial aid information may be obtained at www.calu.edu/financial-aid. Specific financial aid and student account information is available 24 hours a day through the Vulcan Information Portal (VIP).

Academic Success

Office of Academic Success

The Mission of the Office of Academic Success is to foster and support students in all phases of their academic endeavors by providing comprehensive programs, resources and assistance. We support these endeavors through initiatives such as:

- Academic Scheduling and Placement Testing
- Four-Year Graduation Plan
- Starfish Early Alert System
- Peer Mentoring
- Academic Support Programs
- Mid-Term Grade Reports and Progress

For more information, call 724-938-1523 or visit the website at www.calu.edu and search Academic Success.

Academic Advising

The purpose of academic advising is to provide students with appropriate counsel in pursuing their academic degrees. The University has embraced developmental academic advising, which is a goal- and growth-oriented process helping students assess their strengths and weaknesses; set realistic academic and other goals; and monitor progress toward achievement of these goals.

In this process, seven elements are essential and are discussed with students. They are:

1. Advising is a continuous process with accumulation of personal contacts between adviser and student — these contacts have both direction and purpose.
2. Advising must concern itself with quality-of-life issues, and the adviser has a responsibility to attend to the quality of the student's experience in college.
3. Advising is goal related. The goals should be established and owned by the student and should encompass academic, career and personal development areas.
4. Advising requires the establishment of a caring human relationship, one in which the adviser must take primary responsibility for its initial development.
5. Advisers should be models for students to emulate, specifically demonstrating behaviors that lead to self-responsibility and self-directiveness.
6. Advising should seek to integrate the services and expertise of both academic and student affairs professionals.
7. Advisers should seek to utilize as many campus and community resources as possible.

Faculty advisers are available to assist students in planning their academic programs, but students have the responsibility for meeting all requirements for their degrees. Students are urged to take advantage of the advisory and consultation services available at the University. They should feel free to consult with professors, academic advisers, department chairpersons, academic deans, staff of the Scheduling Center in Noss Hall and the provost. All of these University representatives maintain regular office hours for student consultations.

Schedules for new students are developed based on preferred schedules approved by the academic departments. All schedules are reviewed by faculty and students before confirmation. Currently enrolled students are expected to seek the appropriate resources. All may register online and some departments place holds on registration until students have visited an adviser. Fulfillment of program requirements for a degree is ultimately the responsibility of the student.

Academic Scheduling and Placement Testing Center

Scheduling Center

The Scheduling Center, located in Noss 210/211, coordinates schedule development for all first-time and transfer students and registration in developmental courses and monitors successful completion of work. The Academic Scheduling Center does not replace faculty advising, but helps to coordinate and supplement a student's academic experience. Students may contact the Scheduling Center by emailing schedulingcenter@calu.edu.

Placement Testing Center

The Placement Testing Center ensures that students begin with courses that meet their academic needs. If provided, students' SAT or ACT scores (or transfer credits) will determine whether they are required to take a placement test. The Center serves to coordinate placement testing to determine students' level of ability in mathematics and writing. Students who do not submit SAT/ACT scores or transfer credits must take placement tests. The Center also provides retesting opportunities for students after waiting a period of time.

Students who do not achieve predetermined scores on these tests must enroll in appropriate developmental courses, such as ENG 100 (English Language Skills) and DMA 092 (Introductory Algebra). Because these developmental courses are preparatory to a university academic experience, the credits awarded do not count toward the fulfillment of the number of credits for graduation, nor may they be used in fulfillment of General Education requirements. However, the grades achieved in these courses are used in establishing a student's grade point average, class standing, eligibility for financial aid and eligibility for participation in co-curricular activities. Moreover, students who do well in preparatory courses also do well in college-level classes.

The University offers the opportunity to earn undergraduate credit through the College-Level Examination Program (CLEP) and DANES Subject Standardized Tests (DSST).

The CLEP Program includes General and Subject Examinations:

- The General Examinations are a series of tests in separate areas: English Composition, Natural Sciences, Mathematics, Humanities and Social Sciences/History.
- The Subject Examinations comprehensively test a single subject, such as General Psychology, Microeconomics, etc. A student who passes one of these examinations is awarded credit for a comparable course at the University.

The DSST Program offers over 30 different examinations on a single subject, such as Principles of Statistics and Fundamentals of College Algebra. A student who passes one of these examinations is awarded credit for a comparable course at the University.

The CLEP and DSST Programs are administered by the Placement Testing Center. A maximum of 30 credits can be earned through CLEP and/or DSST. In addition to the test fee, there is a one-time fee for evaluation and recording of the examination results on a student's transcript. For additional information, please call 724-938-5779.

Academic Support Programs and Services

Four-Year Graduation Plan

The Four-Year Graduation Plan (FYGP) is a commitment to help students stay on track and earn their undergraduate degree in four years. The no-cost program helps students set academic goals, create clear academic plans and stay on their path by following program guidelines and requirements. The plan provides eligible students with a unique combination of advising, priority course scheduling and individual attention, which helps students graduate in four years.

Eligible students will be automatically enrolled after attending a New Student Orientation. During the fall semester, students must attend one mandatory meeting, in which an FYGP contract is completed and signed. Exploratory Studies students must declare a major by the last day of their first semester to maintain eligibility and enrollment in the program. The Four-Year Graduation Plan reinforces Cal U's commitment to student success.

Starfish

Starfish is an online software tool that provides students with a central location to connect to the people and services that can help students stay on the path to success. Students can access the Starfish system via the Vulcan Information Portal (VIP) and click the Starfish link. Starfish will automatically provide students with connections to current instructors, advisers and campus services.

If students have a question or need help, they can "Raise your Hand" in Starfish. The mobile-friendly tool helps faculty, staff and other Cal U community members support students when help is needed. Examples include, but are not limited to, how to schedule classes, identifying an academic adviser, checking faculty office hours and so much more.

Success Center in Noss Hall

The Success Center in Noss Hall is a centralized campus academic resource for all students, offering students the opportunity to be engaged and competent learners by providing a path to develop and strengthen academic skills for success. Cal U proudly provides a wide range of student support services, one-on-one training, workshops and academic resources that can be tailored to meet individual student needs.

Support for Success

Support for Success (S4S) is designed for new students identified as those who would benefit from academic support from the very start. Students are notified of their participation through their acceptance letter from Cal U. During the summer, students receive additional information about the program and meet with their Success Center leaders. Throughout the fall semester, students meet with their Success Center leaders and attend workshops to strengthen areas including, but not limited to, proper note taking, the development of study skills, and strengthening writing and speaking skills.

Peer Mentoring Program

The Peer Mentoring Program is designed to help new students with their transition into Cal U. The program assigns first-semester freshmen and transfer students with current students who have volunteered to be peer mentors. Students are often asked to complete a profile and are matched with current students based on hometown, interests, activities and primarily major of study. The peer mentor serves as a support and resource person who provides information, encouragement and guidance during the student's first year at Cal U. For more information on peer mentoring, contact mentoring@calu.edu.

Vulcan Learning Commons

The Vulcan Learning Commons (VLC) is available to all students. Even the highest-achieving students may need academic assistance at some time during college. The Writing Center, STEM Lab, Reading Clinic and Tutoring Center offer no-cost assistance designed to help students perform at their academic best. Trained peer tutors assist students in most curriculum areas. The VLC can be found on the first floor of Noss Hall.

Supplemental Instruction

Supplemental Instruction (SI) is a nontraditional tutoring method that emphasizes teamwork, group study and engagement to help students succeed in "traditionally challenging" courses. SI is a free program that is available to all students. Students who take part in SI learn both how to learn and what to learn.

FERPA and Parent/Guest Portal

The Family Education Rights and Privacy Act (FERPA) is a federal law that protects students' education records and grants students the exclusive right to view and share their education records. Education records include, but are not limited to, transcripts, grades, class schedules, financial aid documents, billing statements and emergency contact information.

In VIP, students may register parents and/or other trusted individuals for the Parent/Guest Portal. The portal is Cal U's secure, online option for authorized parents and individuals to view student education records. Students may add and remove Parent/Guest Portal users at any time (and decide which items can be accessed). For more information about FERPA and the Parent/Guest Portal, search "parent/guest portal" on our website. Students, parents and guests with questions about the Parent/Guest Portal may email family@calu.edu.

Prior Learning Assessment

Prior Learning Assessment (PLA) allows students to receive academic credit for learning acquired through qualifying life experiences when they meet the goals of a particular Cal U course. Qualifying experiences may include:

- Work or military training.
- Personal educational growth.
- Volunteer work.
- Independent certifications and/or credentials.

Credit is awarded when a student is able to demonstrate transferable learning or knowledge that can be applied to new or different situations. Contact the Office of Academic Success at vadella@calu.edu for further information and forms.

Office of Diversity, Equity and Inclusion

The Office of Diversity, Equity and Inclusion (ODEI) is committed to infusing diversity and social justice principles throughout every facet of the University. The office strives for an environment that fosters cultural humility, where individuals practice ongoing self-reflection and can express their authentic selves while recognizing others' cultural identities.

ODEI is committed to advancing diversity and inclusive excellence at Cal U through collaboration with University partners and by applying best practices and strategies to develop and maintain policies to prepare our students for a pluralistic world.

Human Resources

The Office of Human Resources supports the University's goal of creating and maintaining a learning environment in which the rights of all are respected. This office encourages the entire University to become personally involved in enriching the campus through support of enhanced equal opportunity and diversity. The Human Resources office reaffirms the University's commitment to equal opportunity through the promotion of understanding, tolerance and respect for others, and ensures that the University community understands and complies with federal and state laws and California University policies with respect to Equal Opportunity, ADA and Title IX.

Services

The Human Resources office helps students and employees resolve concerns and complaints regarding harassment, discrimination and disability. It strives to help any student, faculty member or employee who needs information or assistance or has a concern about Equal Opportunity, ADA, Title IX or Sexual Harassment policies. For more information, visit: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/>

The Human Resources office's support services are provided in the following areas in compliance with state and federal laws:

Equal Opportunity, Compliance and Equity

The Director of Equal Opportunity, Compliance and Title IX Coordination (who is also the Title IX Coordinator) strives to enhance opportunities at the University by working with diversity committees/groups, special projects, trainings, etc.

Discrimination and Title IX Complaints

The responsibility for investigating complaints is vested in the Human Resources office under the direction of the Director of Equal Opportunity, Compliance and Title IX Coordination (who is also the Title IX Coordinator). The **Complaint Intake Form** is available at: https://www.calu.edu/inside/forms/_files/human-resources/titleix.pdf

Complete information regarding policies, procedures, and the informal and formal complaint processes can be found in both the **Campus EEO Policy** (*Policy Statements and Compliance Procedures on Equal Education and Employment Opportunity*) and the **Gender-Based/Sexual Misconduct (Title IX) Policy**, which are both available at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/equal-opportunity/social-equity-policies.aspx>

Equal Opportunity: Online Training Programs

Pennsylvania's State System of Higher Education mandates that all universities conduct sexual harassment awareness training with new students. Additionally, the University is committed to providing an environment free from discrimination on the basis of sex. *Title IX of the Education Amendments of 1972* protects persons from gender/sex discrimination in educational programs and activities at institutions that receive federal financial assistance. Cal U provides many resources to administration, faculty and staff, as well as students, to address concerns relating to discrimination on the basis of gender/sex, which includes sexual misconduct, stalking and dating/domestic violence. To this end, Cal U also offers through the Human Resources office an online training program(s) regarding Title IX legislation. In addition to the Title IX online training program, the Human Resources office is requiring that **all personnel** (*administration, faculty and staff*) and **all students** complete the required E.O./discrimination prevention training courses annually.

Location and Hours

Human Resources is located in Dixon Hall, Room 408, 724-938-4427. Office hours are 8 a.m. to 4 p.m. Monday through Friday.

Nondiscrimination Statement

California University of Pennsylvania is an academic community dedicated to the ideals of equal opportunity for all. In compliance with federal and Pennsylvania state laws, the University is committed to providing equal educational and employment opportunities for all persons without regard to race, color, sex, sexual orientation, religion, national origin, age, disability or status as a veteran or disabled veteran. The University will not tolerate any type of discrimination, harassment or violence. Sexual harassment is considered by law to be a form of sexual discrimination and is, therefore, unacceptable, which includes stalking and domestic/dating violence.

Direct **discrimination/sexual harassment, equal opportunity, and Title IX inquiries or complaints** to the Director of Equal Opportunity, Compliance and Title IX Coordination, Office of Human Resources, Dixon Hall 408, 724-938-5425.

Direct **student ADA inquiries** regarding services or facilities accessibility to the ADA/504, Compliance Officer, Office of Student Affairs, Carter Hall G-52, 724-938-1603, or a message can be left at the Counseling Center, Carter Hall G-53, 724-938-4056.

Direct **faculty and staff ADA inquiries** regarding services or facilities accessibility to the Director of Human Resources, Office of Human Resources, Dixon Hall 408, 724-938-4427.

Policies

The Office Human Resources' policies are available at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/> and you can access the complaint form at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/equal-opportunity/complaint-form.aspx>

Equal Opportunity

Our equal opportunity statement is available at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/equal-opportunity/index.aspx>

The campus EEO policy, *Policy Statements and Compliance Procedures on Equal Education and Employment Opportunity*, is available at: <https://www.calu.edu/inside/faculty-staff/administrative-offices/human-resources/equal-opportunity/social-equity-policies.aspx>. This document also includes Cal U's *Anti-Discrimination Policy*.

Sexual Harassment

The *Gender-Based / Sexual Misconduct (Title IX) Policy* is available at: https://www.calu.edu/inside/policies/_files/social-equity/TitleIX.pdf

ADA/504

Services for students with disabilities are provided through the Office for Students with Disabilities (OSD). For more information, visit the OSD at Carter Hall G-35, or call 724-938-5781, or view online at: <https://www.calu.edu/inside/student-resources/disabilities/>. This page includes information on ADA compliance.

Contact Information

Direct discrimination/sexual harassment, equal opportunity and Title IX inquiries or complaints to the Director of Equal Opportunity, Compliance and Title IX Coordination, Office of Human Resources, Dixon Hall, Room 408, 724-938-5425.

Direct student ADA inquiries regarding services or facilities accessibility to the ADA/504, Compliance Officer, Office of Student Affairs, Carter Hall G-52, 724-938-1603, or a message can be left at the Counseling Center, Carter Hall G-53, 724-938-4056.

Office of Human Resources

Direct faculty and staff ADA inquiries regarding services or facilities accessibility to the Director of Human Resources, Office of Human Resources, Dixon Hall, Room 408, 724-938-4427.

Military and Veterans Affairs

The Office of Military and Veterans Affairs offers **comprehensive support** for veterans, eligible dependents, service members of the National Guard and Reserve and active-duty service members.

We understand the unique demands of service members' and veterans' lives. Whether you are attending classes through Cal U's Global Online programs or are pursuing your education on campus, let us help you achieve your best. Connect with diverse and dynamic veterans who are attending Cal U and share many of the same struggles, excitement, concerns and points of pride. Cal U understands the complex challenges of transitioning from combat or the formal structure of the military to the world of higher education. This new journey requires a great deal of determination, dedication, responsibility, perseverance and support to get through. The Veterans Club is also here to give you that support with regular meetings that build a strong community that will assist you throughout your Cal U experience. Please visit the Office of Veterans Affairs website: calu.edu/veterans.

For more information, call California University's Office of Military and Veterans Affairs at 724-938-4076 or email veterans@calu.edu.

State Authorization

Information about current legal authorization for California University of Pennsylvania to offer online education nationwide and the steps that Cal U is taking to achieve necessary authorizations in all 50 states, the District of Columbia and U.S. Territories is located at: <https://www.calu.edu/online/state-authorization/index.aspx>

Questions may be directed to Doug Hoover, Associate Provost, at 724-938-4096 or hoover@calu.edu.

Global Online Complaint Process

Global Online undergraduate and graduate students who have a grievance, complaint or concern related to Global Online courses (or who have other Global Online concerns unrelated to courses) can follow the steps outlined at: <https://www.calu.edu/online/state-authorization/complaint-process.aspx>

Questions may be directed to Doug Hoover, Associate Provost, at 724-938-4096 or hoover@calu.edu.

Tuition and Fees

For the most up-to-date information on tuition, fees, and room and board charges, visit:

- <https://www.calu.edu/inside/student-resources/student-accounts/>
- www.calu.edu/current-students/housing/index.htm

Payment of Tuition and Fees for Semester Registration

All fees will be assessed approximately four weeks prior to the beginning of the each term. Payment in full is expected for each term or enrollment in an online payment plan (with initial payment) by billing due date. Cal U accepts American Express, Discover, MasterCard and Visa along with electronic (ACH) check payment online at calu.edu/paymybill. Paper checks and money orders payable to California University of Pennsylvania payable in U.S. dollars should be mailed to:

California University of Pennsylvania
Student Accounts Office
Box 83
250 University Ave.
California, PA 15419

Please include the student's CWID (Campus Wide ID Number) on all correspondence.

Billing Information

Cal U utilizes online e-billing. Students who take advantage of early/rolling registration should receive a Cal U email announcing that the billing statement is available for viewing online through the VIP approximately four weeks prior to the start of the term. Students who enroll within four weeks of the first day of the term should be prepared to make payment at the time of registration. A paper bill will be sent for the initial term billing for each term and last term billing for past due balances only.

Payment Plans

Payment plans are available each term. Payment plans enable students to pay their costs on a monthly basis. Enrollment for the payment plan can be completed online via VIP. For the most up-to-date information on tuition, fees, and room and board charges, visit calu.edu/paymybill and calu.edu/current-students/housing/index.htm.

Third-Party Billing

Some companies and government agencies pay tuition directly to the University. If tuition is to be paid in this manner, authorizing forms or letters must be sent to the Student Accounts Office. This payment must be received by the Student Accounts Office during the semester in which charges originate and cannot be used in lieu of a personal payment for an authorized payment plan. This payment option does not apply to corporate tuition reimbursement policies or when the payment amount is based on grades and received after the term has ended.

Refund Policy

Tuition and fees are adjusted for class withdrawals during the first week of the fall and spring semesters. After the add/drop period ends, adjustments are made ONLY if a student withdraws from all enrolled classes. Refunds are made to the amount of the charge, not the amount that has been paid to date. The refund policy is available online and in the Student Accounts Office.

Financial aid recipients should refer to "refund/repayment policies" on the Cal U website for the financial aid adjustment policy.

Tuition and Fees

Advance Deposit

All first-year, transfer and readmitted students are required to submit a \$100 advance deposit payable to California University of Pennsylvania. It is to be paid in advance of registration and is credited to the student's account for the first semester. This is a nonrefundable fee.

Housing Application Service Fee

An application is required in order to reserve a room for the following academic year. This fee is nonrefundable and is not deducted from room charges. Additional information regarding the housing application process is located on the housing website: www.calu.edu/current-students/housing/index.htm.

Late Payment Fee

A late payment fee of \$50 per month will be assessed when a student fails to pay the required fees by the due date or when a student fails to pay according to an approved payment plan. (The structure of fees is subject to change without prior notice and such changes shall take precedence over existing charges set forth in this catalog.)

Return Check Charge

A \$25 fee will be charged for any check (paper or ACH) that is made payable to California University of Pennsylvania and returned by the bank because funds are unavailable for any reason or incorrect bank account information (numbers) were entered by the student. (The structure of fees is subject to change without prior notice and such changes shall take precedence over existing charges set forth in this catalog.)

Proxy

A completed Proxy Access form is required by University offices to release account information via phone. Proxy Access Management is available through the Vulcan Information Portal - Academic/Banner Self Service/Proxy Access.