# COLIEGE OF <br> Eastern Utah 

2008-2009 General Catalog


## PROGRAMS AND DISCIPLINES OF STUDY

## ACCOUNTING (ACCT)

Henning Olsen
Ron Vogel
Elaine Youngberg
The business department at CEU offers a wide variety of training in accounting and business. Degree and certificate programs are available in the following areas:

Certificates of Completion in

- Accounting/Information Systems

Associate of Applied Science in

- Business Administration

Associate of Science with an emphasis in

- Business Administration


## STUDENTS SEEKING <br> CERTIFICATES AND ASSOCIATE OF APPLIED SCIENCE DEGREES

Students who want specific training but don't plan on transferring to a four-year school should consider a certificate or applied science degree. The certificates and applied science degrees will help you gain detailed, specific skills needed to quickly enter a vocational field and successfully pursue an occupation where you can function effectively in the community. The classes and training provided are designed to match the skills and knowledge needed for specific careers. The certificates can usually be completed within one year. The applied degrees take longer to complete but do enable you to obtain an Associate degree in a specific area. Each applied degree also allows you to select electives and emphasis areas that are of interest or may be needed in your current profession.

## TRANSFER STUDENTS

The Associate of Science degrees provide the required general education courses to prepare for a four-year school, along with specific business and computer training. General education courses help business students learn the art of living as well as working. Students wishing to continue their education at a four-year university or college should complete the requirements for an Associate of Science degree, incorporating specific business courses and computer courses in their elective hours.

Students should also consult early in their program with business department advisors at CEU and at the institution to which they wish to transfer. This advisement is necessary to obtain the prerequisites for the business program they wish to complete at the transfer school. Some classes must be passed with a "B" or better in order to transfer. The CEU business faculty and advisors are listed below:

| Name | Ext. | E-mail |
| :--- | :--- | :--- |
| Betty Banning | 5270 | Betty.Banning@ceu.edu |
| Steven Black | 5189 | SteveBlack@sjc.ceu.edu |
| David Cassidy | 5420 | David.Cassidy@ceu.edu |
| Jan Curtis | 5285 | Jan.Curtis@ceu.edu |
| Russell Goodrich | 5641 | Russell.Goodrich@ceu. <br> edu |
| Tracey Johnson | 5231 | Tracey.Johnson@ceu.edu |
| Eric Mantz | 5649 | Eric.Mantz@ceu.edu |
| Bill Olderog | 5249 | BillOlderog@sjc.ceu.edu |
| Henning Olsen | 5219 | Henning.Olsen@ceu.edu <br> Ron Vogel |
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| Elaine Youngberg | 5601 | Elaine.Youngberg@ceu. <br> edu |
| Henry Zwick | 5277 | Henry.Zwick@ceu.edu |

ASSOCIATE OF APPLIED SCIENCE IN BUSINESS ADMINISTRATION

| Core Courses |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr. |
| ACCT | 1111 | Survey of Accounting | 3 |
|  |  | - and/or- |  |
| ACCT | 2010 | Financial Accounting I | 4 |
| BUSN | 1050 | Business Math | 3 |
|  |  | - or - |  |
| MATH | 1050 | College Algebra | 4 |
| BCIS | 2010 | Business Computer Applications | 3 |
|  |  | - or - |  |
| BCIS | 1410 | Spreadsheet I | 2 |
|  |  | - and - |  |
| BCIS | 2420 | Database I | 2 |
| BUSN | 1310 | Intro. to Business Management | 2 |
| BUSN | 1091 | Business Presentations | 3 |


| BUSN | 2700 | Business Foru |  | 1 |
| :---: | :---: | :---: | :---: | :---: |
| BUSN | 2201 | Marketing Co | epts | 3 |
| ACCT | 2020 | Managerial A | ounting | 4 |
| BUSN | 2050 | Business Law |  | 4 |
| BUSN | 2200 | Business Com | unications | 3 |
| BUSN | 2320 | Small Busines for CTE | Management | 3 |
| - or - |  |  |  |  |
| BUSN | 2390 | Organizationa | Behavior | 3 |
|  |  | - or - |  |  |
| BCIS | 2930 | Office Proced Relations | es and Human | 3 |
| ECONENGL | 2010 | Principles of | croeconomics | 3 |
|  |  | Introduction | Writing | 3 |
|  |  | re Total 37-39 |  |  |
| Electives (shown by emphasis) |  |  |  |  |
| Accounting |  |  |  |  |
| Course |  | Name |  | Cr. |
| ACCT | 2151 | Income Tax Pr | paration | 2 |
| BUSN | 2160 | Introduction Finance | to Business | 3 |
| Hospitality |  |  |  |  |
| Course |  | Name |  | Cr. |
| BUSN | 1400 | Intro. to Hosp Management |  | 3 |
| BUSN | 2451 | Travel and To | ism | 2 |
| Computer |  |  |  |  |
| Any approved BCIS course |  |  |  |  |
| Management |  |  |  |  |
| Course |  | Name |  | Cr. |
| BUSN | 2160 | Introduction Finance | to Business | 3 |
| BUSN | 2321 | Small Busines | Management | 2 |
| Marketing |  |  |  |  |
| Course |  | Name |  | Cr. |
| BUSN | 2241 | Retail Mercha | dising | 2 |
| BUSN | 2251 | Consumer Be | vior | 3 |
| Math |  |  |  |  |
| Course |  | Name |  | Cr. |
| MATH | 1050 | College Algeb |  | 4 |
| MATH | 1100 | Calculus Tech | ques | 3 |
| MATH | 2040 | Applied Statis |  | 3 |
| Other General Education Electives |  |  |  |  |
| Course |  | Name |  | Cr. |
| COMM | 1020 | Public Comm | ication | 3 |
| ECON | 2020 | Principles of M | acroeconomics | 3 |
| BUSN | 1010 | Business Prin | pes | 3 |
| BUSN | 1021 | Personal Fina |  | 3 |
| BUSN | 1500 | Business Lead | ship Club | 1 |
| BUSN | 2977 | ooperative Ed | cation | 1-3 |
|  |  | ctives Total | 26-27 |  |
|  | Pro | gram Total | 63-66 |  |

CERTIFICATE OF COMPLETION IN ACCOUNTING/ INFORMATION SYSTEMS

| Core Courses |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr. |
| BUSN | 1050 | Business Math | 3 |
|  |  | - or - |  |
| MATH | 1050 | College Algebra | 4 |
| BUSN | 1091 | Business Presentations | 3 |
| BUSN | 2320 | Small Business Management for CTE | 3 |
|  |  | - or - |  |
| BUSN | 2390 | Organizational Behavior | 3 |
|  |  | - or - |  |
| BCIS | 2930 | Office Procedures and Human Relations | 3 |
| COMM |  | - or - |  |
|  | 2110 | Interpersonal Communication | 3 |
|  |  | -or- |  |
| COMM | 2120 | Group Communication | 3 |
| ENGL | 1010 | Introduction to Writing | 3 |
| Core Total 12-13 |  |  |  |
| Accounting Courses |  |  |  |
| Course |  | Name | Cr. |
| ACCT | 1111 | Survey of Accounting | 3 |
| - and /or- |  |  |  |
| ACCT | 2010 | Financial Accounting I | 4 |
| ACCT | 2020 | Managerial Accounting | 4 |
| ACCT | 2151 | Income Tax Preparation | 2 |
| ACCT | 2800 | Computerized Accounting | 2 |
| Computer Courses |  |  |  |
| Course |  | Name | Cr. |
| BCIS | 1405 | Word Processing I | 2 |
| BCIS | 2010 | Business Computer Applications | 3 |
|  |  | - or - |  |
| BCIS | 1410 | Spreadsheet I | 2 |
|  |  | - and - |  |
| BCIS | 2420 | Database I | 2 |
| Business Electives |  |  |  |
| Business Law |  |  |  |
| Econ |  |  |  |
| Business English |  |  |  |
| Business Statistics |  |  |  |
| Calculus Techniques |  |  |  |
| other approved courses |  |  |  |
| Electives Total 3 |  |  |  |
| Program Total 33-34 |  |  |  |

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PROGRAMS \& COURSE OF STUDY

## ACCT

ANTH APPR
ART
AUTO
BCCM
BCIS
BIOL
BUSN
CHEM

DANC
DSME
ECON
EDDT
EDUC
ELEC
EMMT
ENGL
ENGN
ESOL
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
MA
MLT
MINT
MUSC
MUSM
NURS
PE
PHIL
PHYS
POLS
PRE-PROF
PSY
RECR
SLSC
SOC
THEA
TRST
WE
WELD
WILD

PEOPLE

## ACCOUNTING COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1111 Survey of Accounting

(3:3:0)

## Fall, Spring

This course is designed for the business student who would like to develop a foundational understanding of accounting procedures in preparation for ACCT 2010 or for the individual who has bookkeeping or business ownership interests and would like a practical overview of basic accounting and bookkeeping procedures. It is also intended for the non-business student or the secretarial major who needs only one semester of basic accounting. Topics cover the accounting cycle for both service and merchandising businesses and an introduction to payroll accounting and financial statement preparation and analysis.

## 2010 Financial Accounting

(4:4:0)
Fall, Spring
This course is designed for all students wanting to learn about accounting as the language of business. This course is required for business and accounting majors. This course introduces students to basic accounting principles necessary to prepare, understand, and use financial statements and financial information for decision making. This course is designed to provide the student with useful and productive skills that will help in understanding more about the business world and the role accounting information plays in the U.S. economy.

## 2020 Managerial Accounting

(4:4:0)
Fall, Spring
This course is designed for all students wanting to learn how accounting information is used in business decisions. This course is a required class for business and accounting majors. The main focus of this class is on providing relevant information that is necessary to assist managers in a modern, global environment. Topics will include product costing, activity based costing, cost behavior, budgeting for planning and control, and budgeting for capital expenditures. Prerequisites: Recommended ACCT 2010, MATH 1030

2151 Income Tax Preparation
(2:1:1)
Service Learning
Spring
Income Tax Preparation gives students understanding and skill in preparation of the IRS 1040 form and supporting schedules. Students
prepare and electronically file these documents as a service to low-income and senior citizen community members using the computer. Students will become aware of important individual decisions in reporting and financial tax planning.

2800 Computerized Accounting
(2:1:1)
Spring
Business Computer Accounting will enhance students understanding of fundamental accounting principles in General Ledger, Accounts Receivable, Accounts Payable, Inventory, and Payroll using Quickbooks software. Prerequisite: ACCT 1111 or ACCT 2010.

## ANTHROPOLOGY (ANTH)

Dr. Robert McPherson
Pam Miller

## ANTHROPOLOGY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Cultural Anthropology

## Social Science

Cultural Anthropology introduces the discipline of anthropology, the central concept of culture and the fundamentals for understanding theory and method in cultural anthropology. The course covers not only what humans were and are like, but also why humans are the way they are, how they got that way, and why they vary.

## 1020 Biological Anthropology

(3:3:0)
Biological Anthropology provides the student with a broad overview of physical or biological anthropology, one of four sub-disciplines within Anthropology. This course examines variation within our species Homo sapiens sapiens, focusing on biological variation and evolution of the past and present. Discussions on human and non-human primate anatomy, genetics, primates, evolution, and a myriad of other subjects help students understand and explain the tremendous biological diversity associated with modern humans. The course ends with a discussion on what the future might hold for human life with respect to evolution and adaption. Lectures, films, and slides will be used.

## 1030 World Prehistory

(3:3:0)
World Prehistory is the introduction to the two-million-year-old archaeological record of human prehistory. The long-term development of humans is studied from material remains and the patterns of these remains using archaeological methods and techniques.

## 2011 Peoples of the Southwest

## Humanities

This course will appeal to those interested in the prehistoric and living peoples of the American Southwest. A variety of classroom and field trip experiences will be used to apply the principles of archaeology and anthropology to the native peoples of the region. Previous anthropology experience or coursework suggested.

## 2018 Native American History and Culture

(3:3:0)

## Social Science

This course surveys NativeNorthAmerica from the earliest societies to the present examing all aspects of Native North American culture including food production, econmics, political systems, kinship, religion, art, and other aspects of culture. Class presentations will include lecture, discussion groups, guest lectures, analytical writing projects, film discussions, field trips, and opportunities for individual exploration of specific areas of interests. Previous anthropology experience or coursework suggested.

## 2030 Archaeology

(3:3:0)
Explores means by which archaeological inferences are made to decipher the material record of past human behavior. It includes the history of archaeological thought from the beginning of scientific archeology through the new profession of cultural resource management. Previous anthropology experience or coursework suggested.

2520 Archaeological Field Techniques (3:3:0) Four to eight week internship on an archaeological field project covering survey, artifact recognition, excavation, recording, map reading, map making, and the scientific conduct of archaeological problem solving.

## 2525 Archaeological Laboratory Techniques

(3:2:1)
Laboratory internship on an archaeological project. Examines the stages of study used to complete an archaeological investigation and solve problems in prehistory. Includes lecture, laboratory work, and student projects.

2977 Cooperative Education
(1-3:0:1-3)
This course provides on-the-job experience for students in most aspects of archaeological work. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by the instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Anthropology.

## CULTURAL RESOURCE TECHNICIAN PROGRAM

There is a need for trained certified technicians to work on federal lands, in museums and at similar sites throughout the state. Course work will include a wide range of studies.

| Certificate of Completion (One year program) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Fall Semester |  |  | 1st Spring Semester |  |  |
| Course |  | ${ }_{\text {c. }}$ | Couse |  | cr. |
| сомм | 2120 | 3 | BIOL | 1010 | 3 |
| SLSC | 1050 | 2 | MATH | 1030 | 3 |
| ANTH | 1030 | 3 | HIST - ANTH | 2018 2018 | 3 |
| Engl | 1010 | 3 | RECR | 1600 | 1 |
| geo | 1010 | 3 | $\underset{\substack{\text { ANTH }}}{ }$ | 2011 | 3 |
| soc | 1010 | 3 | HIST | 2810 |  |
| total |  | 17 | BCis | 1010 | 3 |
|  |  |  | total |  | 16 |
| Program Total 33 |  |  |  |  |  |

## APPRENTICE (APPR)

## ELECTRICAL APPRENTICE PROGRAM DEPARTMENTAL CERTIFICATE

The Electrical Apprentice Program is designed to provide the necessary courses required to become a state licensed Journeyman Electrician. The program is designed to coincide with regular work experience. One course per semester is offered over a four year period. Once an individual starts in the program, an apprentice license must be obtained through the Utah Division of Occupational and Professional Licensing (www.dopl.utah.gov).

## GENERAL

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Admissions
Academic Policies
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Student Services
Degree Requirements

## PROGRAMS \& COURSE OF STUDY

## ACCT

ANTH APPR
ART
AUTO
BCCM
BCIS
BIOL
BUSN
CHEM
CJ
COMM
COST
CS
DANC
DSME
ECON
EDDT
EDUC
ELEC
EMMT
ENGL
ENGN
ESOL
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
MA
MLT
MINT
MUSC
MUSM
NURS
PE
PHIL
PHYS
POLS
PRE-PROF
PSY
RECR
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WILD
PEOPLE

Once obtained, one can then continue attending courses, work the required hours and complete the state examinations. The College will assist students in attempting to obtain employment in the electrical industry throughout the program. Upon completion, a departmental certificate is issued and upon passing the state examinations, the individual becomes a Journeyman Electrician.

All courses follow a sequence, so it is important to prepare to start in the fall. The A group courses are offered in the fall semesters and the B group in the spring semesters. Students are also required to obtain the necessary licensure and provide copies to the division office.

| Electrical |  |  |  |  | Apprentice Courses |
| :---: | :---: | :--- | :--- | :---: | :---: |
| Course |  | Name | C. |  |  |
| APPR | 2301 | Electrical Apprentice 1-A | 5 |  |  |
| APPR | 2302 | Electrical Apprentice 1-B | 5 |  |  |
| APPR | 2303 | Electrical Apprentice 2-A | 5 |  |  |
| APPR | 2304 | Electrical Apprentice 2-B | 5 |  |  |
| APPR | 2310 | Electrical Apprentice 3-A | 5 |  |  |
| APPR | 2320 | Electrical Apprentice 3-B | 5 |  |  |
| APPR | 2410 | Electrical Apprentice 4-A | 5 |  |  |
| APPR | 2420 | Electrical Apprentice 4-B | 5 |  |  |

## ELECTRICAL APPRENTICE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 2301 Electrical Apprentice 1-A

(5:4:2)
A course designed for students enrolled in electrical apprenticeship. This course teaches the theory of electricity and includes an introduction to electricity, basic CD theory, voltage, current, resistance, batteries, and magnetism. It covers principles, formulas and math for simple electrical circuits, series, parallel, combination circuits, and power problems. Includes theory and lab experiences. Prerequisites: Willingness to obtain apprentice license.

## 2302 Electrical Apprentice 1-B

(5:4:6)
A course designed for students enrolled in electrical apprenticeship. This course introduces measuring instruments, magnetism, circuits, devices, National Electrical Code, blueprint reading, DC motors, low voltage circuits, DC motor control, DC generators, 3 and 4 way switches, and conduit bending. Prerequisite: ELEC 2301and apprentice license.

2303 Electrical Apprentice 2-A
(5:4:6)
A course designed for students enrolled in electrical apprenticeship. This course covers the application of AC theory as it applies to industrial applications in the electrical field. It covers the basic construction and theory of inductance, capacitance, and resistors dealing with L.C.R. circuits as they are used in the electrical field. It emphasizes hands-on lab experience in correcting power factor in motors, comparing true power and reactive power in inductor, capacitors and resistors. Prerequisites: ELEC 2302 and apprentice license.

2304 Electrical Apprentice 2-B
(5:4:6)
A course designed for students enrolled in electrical apprenticeship. This course covers the installation, troubleshooting, preventive maintenance and repair of AC motors, motor control, and transformers. Students will learn the proper use of tools and test equipment needed in maintaining AC motors, motor control, and transformers. Includes theory and lab experiences. Prerequisites: ELEC 2303 and apprentice license.

2310 Electrical Apprentice 3-A
A course designed for students enrolled in electrical apprenticeship. This course includes installation, trouble-shooting, preventive maintenance, and repair of AC motor controls. It covers the proper use of hand tools and test equipment, used in the maintenance of AC motor controllers. Completers should be able to work at entry level jobs maintaining $A C$ motor control equipment in an industrial environment. Prerequisites: ELEC 2304 and apprentice license.

2320 Electrical Apprentice 3-B
(5:4:2)
A course designed for students enrolled in electrical apprenticeship. This course covers the theory of the operation of electronic devices used in industrial control systems. Students study test equipment and procedures used in the installation, maintenance, troubleshooting, and repair of electronic control circuits. The basic theory and operation of instrumentation and process control equipment is introduced. Completers should be able to work in industry in related entry level positions. Prerequisites: ELEC 2310 and apprentice license.

## 2410 Electrical Apprentice 4-A

A course designed for students enrolled in electrical apprenticeship. This course studies: Industrial motor control with particular attention to the National Electrical Code and Programmable Logic Controllers. (PLC). It explores the fundamental parts of a PLC system, identifying their use and how they work together to make a control system. Completers
should be qualified to work in industry in related work at entry level positions. Prerequisites: ELEC 2320 and apprentice license.

2420 Electrical Apprentice 4-B
(5:4:6)
This is the final course designed for students enrolled in electrical apprenticeship. This course reviews DC and AC theory, electrical circuits and circuit calculations, transformers, motors and motor control circuits. Studies the calculation of single and three phase loads, service entrance size, feeder and branch circuit capacity, wire and conduit size, and voltage drops. Includes a comprehensivestudy of all chapters of the National Electrical Code with an emphasis placed on the preparation for taking the Utah State Journeyman Exam. Completers should be preparaed to take the Utah State Journeyman Exam, provided they have completed all Utah State requirements. Prerequisites: ELEC 2410 and apprentice license.

## 2988 Special Problems

(1-3:1-3:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## ART (ART)

Noel Carmack
Robert DeGroff
Nathan Wilson

## AREAS OF SPECIALIZATION

Areas of specialization include: Advertising Design, Art Education, Ceramics, Drawing, Art Graphics/Computer Applications, Industrial Design, Painting, Photography, Printmaking, and Sculpture. Courses are also offered for students majoring in Architecture and Elementary Education.

Art majors other than Graphic Arts Applications should complete their general education requirements and their major core curriculum by the end of the sophomore year. They must satisfactorily complete the foundation curriculum during their first two semesters. Foundation Curriculum consists of the following: ART 1110, Drawing Fundamentals I, ART 2110, Drawing II, ART 1120, Two Dimensional Design and ART 1130, Three Dimensional Design. Majors must take one elective in each of the following areas: Ceramics or Sculpture, Painting, and Printmaking. An additional two studio elective classes must be taken in the art area of their choice. Art majors
must complete the core requirements plus elective courses as outlined by the advisor or the major emphasis professor.

Students transferring to other institutions will develop a portfolio of their work during their two years in the department. The portfolio will be the responsibility of the student working with the department professor in the area of specialization. Two hours of credit will be given for this portfolio by registering for ART 2260, Portfolio, during the final semester of the student's enrollment. Grades will be determined by the quality of the portfolio. A minimum of 27 semester credits in art is necessary for the art major seeking an associate degree and transferring to the university to assure being on line to graduate and transfer all work.

## FINE ARTS TOUR

Art majors and minors should plan to participate on the Annual Fine Arts Tour. This tour includes visits to art galleries, museums, operas, plays, and musicals. It is planned to be a learning as well as aesthetic experience.

## RECOMMENDED COURSE OF STUDY FOR VISUAL ARTS MAJOR

(Painting, Sculpture, Printmaking, Ceramics, Photography)


GENERAL
Introduction Statement of Policy College Terminology Admissions Academic Policies Financial Services Scholarships Student Services Degree Requirements

## PROGRAMS \& COURSE OF STUDY

## ACCT

ANTH APPR ART
AUTO
BCCM
BCIS
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## Recommended Course of Study

| Oral    <br> Communication <br> Intensive course 3 Portfolio 2 <br> TOTAL 15 TOTAL 17 <br>  Program Total 65  |
| :--- | :---: | :---: | :---: |

*If you are a declared art major, students will substitute ART 2110 for the Fine Arts requirement and take three hours of electives in place of the Fine Arts requirement.
**No credit hours will be awarded for taking the Computer Literacy test to fulfill the requirement. If you take one of the courses to fulfill the CL requirement, the hours go towards electives.

## GRAPHIC ARTS PROGRAM

College of Eastern Utah's Graphic Arts curriculum prepares students for employment in a variety of industries: advertising, commercial printing, corporate publications, and publishing design to name a few. CEU's program emphasizes both the artistic and technical aspects of the graphic arts. With further education, one can become a Graphic Designer, Web Designer, Creative Director, or a Desktop Publisher.


| Associate of Applied Science Degree Program |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Year |  |  |  |  |  |
| Course |  | cr. | Course |  | Cr |
| ART | 1110 | 3 | ART | 1620 | 3 |
| ART | 1120 | 3 | ART | 1690 | 3 |
| ART | 1130 | 3 | ENGL | 1010 | 3 |
| ART | 1300 | 3 | MATH | 1030 | 3 |
| ART | 1610 | 3 | Human Course | Relations | 3 |
|  |  |  | Art Elec | ves | 6 |

Associate of Applied Science Degree Program

| 2nd Year <br> Course |  |  | Cr. |  |  |
| :--- | :---: | :--- | :--- | :--- | :--- |
| Cr. |  |  |  |  |  |

Program Total 64

## ART COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Introduction to the Visual Arts

(3:3:0)

## Fine Arts

This course gives a basic overview of the visual arts and how they fit into our society. It is designed to give the student an understanding of the methods and concepts used to produce art as well as the basic understanding of the history of art. It will give the student the fundamental tools for making critical judgments of art and enable the student to relate to its aesthetic nature.

## 1110 Drawing Fundamentals I

(3:3:3)
This is a perceptual drawing course. In this course, students will learn the basic skills used in representational drawing and will gain an understanding of the history and materials of drawing. The course concentrates on line and value. In this course students begin to explore compositional approaches to drawing. Students work from observation under the guidance of the instructor.

## 1120 Two-Dimensional Design

(3:3:0)
This course is a basic foundation course required for all art majors. The course will emphasize compositional visual structure through the principles and elements of art including line, shape, value, color, and texture. Students will develop their skills in drawing and painting as they work on assignments that solve visual problems.

1130 Three Dimensional Design
(3:3:0)
This course introduces students to the basic principles, processes, and materials of threedimensional design through a series of projects
which stress problem solving, experimentation, and tangible results. Students explore form and space by studying such concrete design elements as line, plane, volume, mass, surface, composition, scale, and proportion. The student will be introduced to the use of woodworking tools machines and metal fabricating equipment and their safe use.

1200 Introduction to Ceramics
(3:3:3)
Introduction to ceramics is the beginning class in the plastic media of clay. This course introduces the student to the constructive processes of ceramics. These processes include hand built forms, wheel thrown, and sculptural directions of all the processes. It introduces the student to surface decoration, glazing and firing of stoneware forms. It also introduces them to contemporary ceramics through lecture, slide, videos, presentation and library reference materials.

## 1250 Introduction to Sculpture

(3:3:3)
This course introduces ideas and materials that facilitate response to three-dimensional form. The stress is on concepts of modeling, casting, carving and constructing as well as the possibilities of more contemporary modes of expression.

1270 Native American Arts and Crafts (3:3:0) This survey course introduces prehistoric, historic, and contemporary Native American art forms and the underlying philosophical belief systems that gave rise to them. The goal is to provide basic principles for understanding and evaluating the artistic expression of Native Americans. The course is organized around geographical regions and cultural types.

1300 Introduction to Printmaking
(3:3:3) This course is designed as an introduction to the concepts and techniques involved in the fine art of printmaking. Students will learn the basic skills of printmaking through relief, intaglio, and monotype techniques. Hand-drawn and photographic (including digital) strategies will be used. This is a basic class that requires little or no experience with printmaking, but design and drawing experience would be helpful.

## 1410 Introduction to Painting

(3:3:3)
Emphasis will be placed on the learning of several different painting styles and techniques such as direct (alla prima) and indirect (glazes) painting. Students will work on assignments in a studio setting, creating paintings of a variety of subjects.

1420 Watercolor Painting
(3:3:3)
The watercolor painting class will be conducted in a studio setting where the student will actively create paintings. These painting assignments will explore various styles and techniques employed in watercolor painting. The studio work will be complemented by field trips to painting locations in and around the community for a plein air landscape painting experience.

1430 Basic Illustration
(3:3:3)
The course will emphasize basic drawing and painting skills in illustration problems in a variety of media and techniques. Emphasis will be placed on materials. Students will draw and paint from the model in some assignments.

## 1440 Intermediate Illustration

(3:3:3)
This course specializes in the finished product. Various experimental techniques will be utilized with special emphasis on the use of the airbrush as a painting tool. In most cases the instructor will demonstrate a technique and the students will complete an illustration assignment using the airbrush technique.

1500 Fundamentals of Photography (3:3:0) This is an introductory course in basic black and white photography open to all students. The student will become familiar with both the applied and the aesthetic factors involved in photography. The course consists of lectures and labs where the student will learn to develop film, enlarge and process black and white prints. The instructor will cover the operation of the 35 millimeter camera and its related equipment: lenses, exposure and exposure controls, and lighting. The instructor will employ discussion and demonstrations in the lab that should enable the student to develop the skills to process and print their images. Students will also learn the fundamentals of image presentation and evaluation. Reviews and critiques will be held with each student and a portfolio of images will be presented by the student at the end of the semester. A 35 mm camera is required for this course.

## 1600 Foundations of Computer Graphics

Fall Introduces students to graphics and design using personal computers. Students will use a combination of desktop publishing, illustration programs and photo manipulation to create documents that combine graphics with text. Course demonstrations and several hands-

## GENERAL

Introduction Statement of Policy College Terminology Admissions Academic Policies Financial Services Scholarships Student Services Degree Requirements

## PROGRAMS \& COURSE OF STUDY

## ACCT

ANTH APPR
on assignments cover topics such as graphic file formats, inter-application compatibility, operating systems, file management and printing.

## 1610 Desktop Publishing

(3:3:0)
Spring
An introduction to page layout using Adobe InDesign as a production tool. Students will explore basic page design concepts and compose documents such as newsletters, brochures and posters that combine text, photos, and original illustrations. Topics will include document construction, word processing, typography, color management, and printing. Required course for Graphic Arts majors.

## 1620 Electronic Illustration

Fall, Spring
An introduction to Vector-based computer illustrations using Adobe Illustrator as a production tool. Students will learn to produce professional quality color and black and white designs. Topics will include drawing, type sharing files between applications, using color and printing. Required course for Graphic Arts majors.

1690 Typography and Color Theory
(3:3:0)
Spring
This course combines the fundamentals of designing with type and color theory. Students will explore typographic techniques, the history of typography, and the structure of the letter-form. The course also explores color application and modern color design. Topics will include; spot colors, process colors, trapping, color matching and digital color.

## 2110 Drawing Fundamentals II

(3:3:3)
The goal of this course is to develop a student's awareness of process as the means of developing a working visual vocabulary. The drawing process is taught as a method of gathering and notating information, a means of synthesizing and transforming ideas, and as a way to develop the students' perception of visual components and relationships in the physical world. The course emphasis is composition and includes an introduction to the human figure as the subject. Students will do some major works outside the formal class time.

## 2200 Intermediate Ceramics

(3:0:6)
Intermediate ceramics include all of the descriptions in the Introduction to Ceramics course with an emphasis on throwing larger forms, extruded sculptural forms and Raku firing of wheel thrown forms.

2260 Portfolio
(2:2:0)
A course designed for sophomore students who will transfer to a four-year program or begin professional careers as artists. This course will address the following: photographing and assembling a digital portfolio and writing artist statements, cover letters, and résumés. Critical analysis skills will be built through a series of formal critiques. Required of all art majors.

2310 Printmaking: Intaglio and Relief
(3:3:3)
This course is designed to further explore intaglio and relief printmaking techniques. The emphasis will be on techniques not covered in a typical Introduction to Printmaking course. The following are possible course topics: spit-bite aquatint, viscosity printing, mezzotint, line engraving, lift ground, multi-block relief, reductive relief, etc. This is an intermediate course. Prerequisite: ART 1300

## 2330 Printmaking: Introduction to Stone Lithography (3:3:3)

This course is an introduction to basic stone lithography techniques. Students will work on Bavarian limestone using traditional materials and techniques. The course will emphasize lithography as a drawing medium, with students producing original work. Course topics include: crayon drawing, tusche wash, counteretching, manière noire, and some color work. This is an intermediate course. Prerequisite: ART 1300

## 2500 Advanced Photography

A continuation of ART 1500, the advanced course will further the skills and experiences of the photographer in technical controls, lighting and exposure. A greater emphasis will be placed on aesthetics and photographic style. The instructor will use lectures, demonstrations and reviews to help the student better understand the medium. An introduction to experimental photography and image enhancement processes will be explored. The student, in conjunction with the instructor, will develop a project that will be presented in portfolio form at the end of the semester. Emphasis will be placed on the aesthetic and presentation skills acquired during the class. Prerequsite: ART 1500

## 2610 Electronic Image Processing

Fall
Introduces students to Adobe Photoshop and other advanced graphic software applications as production tools for the creation of camera-ready artwork. This course emphasizes manipulation of bitmap images and digital photographs. Students will produce photo montages, original illustrations, and package designs. Topics will also include
scanning, halftones, printing techniques, sharing files between applications, and color management. Required course for second year Graphic Arts majors. Prerequisites: ART 1610 or 1620.

## 2630 Pre-press and Printing Internship (4:4:0)

 SpringFinal preparation of press-ready documents for commercial printing, the history and classifications of commercial printing are topics covered in this course. This course also emphasizes creation of documents using Adobe Photoshop, Illustrator, InDesign, and preparing the documents for output with a commercial printer. Students will also collaborate on class projects that will be used for on-campus publications. Required advanced course for second year Graphic Arts majors. Prerequisite: ART 1610, 1620, 2610.

## 2650 Advertising Illustration

(2:2:1)

## Spring

This advanced Graphic Arts course allows students to develop ideas for commercial illustration. A series of exercises are designed to give students a professional and philosophical look at conceptual advertising through a graphic artists viewpoint. Prerequisites: ART 1420, 1440, 1600, or 1620.

## 2690 Introduction to 3D Modeling and Animation

(3:3:0)

## Fall

This course introduces students to Strata 3D animation software as a production tool for 3D modeling, texturing, and animation. Students will explore the creation of full feature animations based on their own ideas and storyboards. Students will also learn final editing techniques using Apple GarageBand and Final Cut in the creation of their animations. Prerequsites: ART 1610, 1620

## 2977 Cooperative Education

(1-3:0:1-3)
Thiscourseprovidessupervisedon-the-job training in art. The student meets with the instructor/ coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements. Prerequisites: Instructor's permission.

2988 Special Problems
(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Art.

## AUTOMOTIVE

 TECHNOLOGY (AUTO)Stanley Martineau

Students have two degree options within the Automotive Technology Program. Students can attend one year and obtain a Certificate of Completion or complete two years and obtain an Associate of Applied Science in Automotive Technology.
The Automotive Technology curriculum follows the guidelines established by the National Automotive Technician Education Foundation (NATEF) and the National Institute for Automotive Service Excellence (ASE). The curriculum follows the safety requirements, areas of focus, time frames and recognized task list designed by the above two agencies.

Students entering this program are expected to furnish their own personal hand tools and safety equipment such as hard toe shoes, safety glasses, and coveralls. Students will be expected to comply with personal and environmental safety practices associated with clothing, eye protection, hand tools, power equipment, and the storage and disposal of chemicals in accordance with local, state and federal safety and environmental regulations.
*Students may take a combination of automotive courses, but theory courses must be completed in conjunction with labs. Consult with an advisor for selecting automotive courses

## Associate of Applied Science Degree Program

| EVEN YEAR |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Fall Semester |  |  | 1st Spring Semester |  |  |
| Course |  | cr. | Course |  | cr. |
| AUTO | 1000 | 4 | AUTO | 1500 | 3 |
| AUTO | 1100 | 3 | AUTO | 1505 | 2 |
| AUTO | 1105 | 3 | AUTO | 1400 | 3 |
| AUTO | 1300 | 3 | AUTO | 1405 | 3 |
| AUTO | 1305 | 2 | AUTO | 2700 | 3 |
| ENGL | 1010 | 3 | AUTO | 2705 | 2 |
| TOTAL |  | 14-18 | MATH | 1020 -or higher | 3 |
|  |  |  | General | ducation | 1-3 |
|  |  |  | TOTAL |  | 20-22 |

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## Associate of Applied Science Degree Program

## ODD YEAR

| 2nd Fall Semester |  |  | 2nd Spring Semester |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course |  | cr. | Course |  | cr. |
| AUTO | 1000 | 4* | AUTO | 1800 | 3 |
| AUTO | 1600 | 3 | AUTO | 1805 | 3 |
| AUTO | 1605 | 3 | AUTO | 2800 | 3 |
| AUTO | 2600 | 3 | AUTO | 2805 | 2 |
| AUTO | 2605 | 2 | PHYS | 1010 | 3 |
| Human Relations |  | 3 |  | -or- |  |
| General Education |  | 3 | PHYS | 1050 | 3 |
| TOTAL |  | $\begin{aligned} & 17 \\ & -21 \end{aligned}$ | AUTO | 1200 | 3 |
| *Only if not taken |  |  | AUTO | 1205 | 2 |
| 1st Fall Semester |  |  | Compu | r Literacy | 0 |
|  |  |  | TOTAL |  | 19 |

Program Total 70-80


## AUTOMOTIVE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1000 Introduction to Transportation Technology I

(4:3:2.5)
This course is the first course in automotive or diesel technology. Students will gain needed skills in shop safety and other basic skills that will prepare students for specific automotive or diesel courses. The following topics will be covered: using manual and information systems, precision measurement, tires and wheels, bearings, headlamp adjustment, oils and fluids, cleaning methods, gaskets and sealants, cooling systems and belts and hoses. This course can be articulated with high school automotive courses.

1010 Introduction to Transportation Technology II
(5:4:3)
This course is a continuation of AUTO 1000. Students will continue to learn how to service, troubleshoot and repair modern automobiles. Prerequisite: AUTO 1000

## 1100 Engine Repair Theory

(3:3:0)
Students will study engine types, construction, operating principles, and performance. Related physics and mathematics are emphasized, detailed examination is made of lubricating systems, cooling systems, timing valves and bearings, as applied to gas and diesel-powered units.

## 1105 Engine Repair Lab

(3:0:16)
This courseoffersshop practiceinengine disassembly and inspection, valve and seat reconditioning, and installation, checking tolerance, fitting parts, and engine reassembling. Students will complete all P-1 and P-2 NATEF tasks for the area of study. Prerequisite: Concurrent enrollment in AUTO 1100.

## 1200 Automatic Transmission/ Transaxle Theory

(3:3:0)
This course covers the principles of the automatic transmission system. Including gearsets, apply devices, power flow, hydraulic systems, torque converter, shift controls (manual, hydraulic and electronic) problem solving, repair procedures, and maintenance procedures. Physics and math will be included as part of system operation. Prerequisite: AUTO 1000

## 1205 Automatic Transmission/ Transaxle Lab

(2:0:3)
Students will complete checks necessary to analyze and diagnose automatic transmission systems. Lab assignments include major and minor repair procedures including disassembly, verifying clearances and specifications and reassembly to manufacturer specifications. Students will have the opportunity to complete all P-1 and P-2 NATEF tasks for this area of study. The completion of all tasks will require students to plan and use the time available wisely. Prerequisite:Concurrent enrollment in AUTO 1200.
$1300 \begin{aligned} & \text { Manual Drive Train and } \\ & \text { Axle Theory }\end{aligned}$
(3:4:0)
This class studies the theory of manual transmission, trans axles, drive shafts, axle shafts, and differential assemblies. A study of four wheel drive and clutch components as used in manual drive trains will also be included.

1305 Manual Drive Train and Axle Lab (2:0:10) Students will complete the removal, tear down, assembly, and installation procedure on a standard transmission, trans axle, differential assembly and clutch assembly. They will diagnose the need of required replacement parts on all manual drive train components. They will also complete all P1 and P-2 NATEF requirements for this area of study. Prerequisite: Current enrollment in AUTO 1300.

1400 Suspension and Steering Theory (3:4:0) Students will study the theory of SRS Systems Manual, power steering systems, rack and pinion systems, McPherson Strut Suspension Systems, and short and long arm suspension systems. Students will also study two and four wheel alignment procedures and steering geometry as well as tire wear problems. The students will also learn the theory behind tire and wheel vibrations. Where applicable, related math and physics will be taught.

1405 Suspension and Steering Lab (3:0:15) Students will complete as many as four wheel alignment procedures and wheel balances as time permits, as well as aa P-1 and P-2 NATEF tasks for this area of study. Prerequisite: Concurrent enrollment in AUTO 1400

## 1500 Brakes - Theory

(3:3:0)
This course covers the principles of the automotive braking system. Includes the study of ABS, manual and power brake system, covers disc brakes, and drum brakes as well as power assist units. Where applicable, related math and physics will be taught.

## 1505 Brakes - Lab

(2:0:10)
Students will complete necessary pressure checks to diagnose and analyze brake problems and will complete major and minor brake work, which will include turning drums and rotors on a brake lathe. Students will complete all P-1 and P-2 NATEF tasks for this area of study. Prerequisite: Current enrollment in AUTO 1500.

## 1550 Professional Vocational Leadership (VICA)

(1:.5:1)
Fall, Spring
This course supports and facilitates the goals and objectives of Vocational Industrial Clubs of America (VICA). Students will gain skills in the following areas: personal development, service, team building and leadership, workplace skills, and interview skills. Students may participate in regional, state and national competitions. May be repeated as desired.

1600 Electrical and Electronics I Theory (3:3:0) A complete study of the automobile electrical system, which includes battery performance and testing, starting system diagnosis and repair, charging system diagnosis and repair. Proper use of a multimeter including Hz , dwell, ms on time, duty cycle, min/max. Coursework also includes proper use of wiring diagram and electrical troubleshooting procedures.

1605 Electrical and Electronics I Lab (3:0:7) Students will complete all hands on testing of components using diagnostic routines and troubleshooting procedures. Use of diagrams, meters, test procedures, and NATEF tasks will be required. Corequisite: Current enrollment in AUTO 1600.

1800 Engine Performance I Theory (3:3:0)
Coursework will include fuel systems, ignition systems, air intake and exhaust systems. Students will also cover basic engine diagnostics and test procedures.

1805 Engine Performance I Lab
(3:0:9)
Students will run test procedures to diagnose basic engine problems. Lab requirements include fuel delivery systems, early fuel injection and ignition systems, and basic waveform diagnostics. Skill sets and procedures will include NATEF tasks as well as instructor assignments. Corequisite: Current enrollment in AUTO 1800.

## 2600 Electrical and Electronics II Theory

(3:3:0)
Advanced diagnostic procedures on lighting systems, gauge systems, wiper systems, and warning systems. Students will use state of the art equipment including lab scope and waveform diagnostics.

2605 Electrical and Electronics II Lab (2:0:2)
Students will be required to complete advanced lab procedures including lab scope use, voltage and amperage waveform analysis and the completion of NATEF tasks to national standards. Competency testing includes experimental learning and guided diagnostic approaches. Corequisite: Current enrollment in AUTO 2600.

## 2700 Heating and Air Conditioning Theory

(3:3:0)
Students will study the theory of heat transfer, pressure, and change of state necessary for heating and systems to operate. The theory class will also cover vacuum and electronic controls, actuators

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and sensors. Emphasis will be placed on proper use of equipment, safety issues as well as diagnosis and repair. Prerequisite: AUTO 1000, Concurrent enrollment in AUTO 2705

## 2705 Heating and Air Conditioning Lab

(2:0:2)
The use of equipment and job skills will be performed. Students will follow the national NATEF task list as well as instructor written tasks. Students will service heating and air conditioning systems. Procedures will cover diagnostic and test procedures, and removal and replacement of heater core, evaporators, condensers, pumps, valves and switches used in domestic and import vehicles. Prerequisite: Concurrent enrollment in AUTO 2700.

2800 Engine Performance II Theroy (3:3:0) Engine Performance Theory II includes the use of scanners, computer diagnostics, and proper use of the lab scope diagnostics for diagnostics.

## 2805 Engine Performance II Lab

(2:0:2)
Engine Performance Lab II will cover OBDII as well as IM240 test procedures. Students will learn about computer monitors, how to access and use available information in the PCM. Scanner use will include road trip and snapshot features. Lab scope use will require testing of both inputs and outputs and learning how to use the information available. Corequisite: Current enrollment in AUTO 2800.

2977 Cooperative Education (1-3:0:1-3)
This course provides supervised on-the-job experience for students in most aspects of automobile repair businesses. The student establishes learning objectives, hours to be worked, and a credit agreement with the instructor/coordinator at the beginning of the semester. Student and instructor / coordinator will meet periodically to review progress. Prerequisite: Instructor's permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by the department instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
This course is designed to acquaint students with aftermarket retailers and industry oriented or dealer related presentations on particular product or equipment use as it applies to the auto industry.

## BUILDING <br> CONSTRUCTION AND CONSTRUCTION MANAGEMENT (BCCM)

Dick Einerson

Lewis Stilson

The Building Construction and Construction Management Program offers a one year Certificate of Completion as well as a two year Associate of Applied Science degree.

Students who complete the certificate program will have a basic knowledge in architectural drawings, floor layout, wall and roof systems, siding application, soffit and fascia applications, and the installation of siding, windows, doors, stairs and interior trim.

The Associate Degree prepares students for construction management positions, small business ownership, and general contracting.

| Certificate of Completion (One year program) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course | cr. | course | cr. |  |  |
| BCCM | 1010 | 1 | BCCM | 2130 | 3 |
| BCCM | 1150 | 2 | BCCM | 2170 | 3 |
| BCCM | 2010 | 3 | ENGL | 1010 | 3 |
| BCCM | 2030 | 3 | MATH | 1020 -or | 3 |
| BCCM | 2080 | 3 | Human Relations <br> Course | 3 |  |
| BCCM | 2100 | 3 | Elective |  |  |
|  | Program Total | 33 |  |  |  |

Associate of Applied Science Degree Program

| 1st Year <br> Course | cr. | Course | cr. |  |
| :--- | :--- | :--- | :--- | :--- |
| BCCM | 1010 | 1 | BCCM 2130 | 3 |
| BCCM | 1150 | 2 | BCCM 2170 | 3 |
| BCCM | 2010 | 3 | ENGL 1010 | 3 |
| BCCM | 2030 | 3 | MATH1020 -or <br> higher | 3 |
| BCCM | 2080 | 3 | Human Relations <br> Course | 3 |
| BCCM | 2100 | 3 | Electives <br> TOTAL | 3 |

Associate of Applied Science Degree Program

| 2nd Year <br> Course | cr. | course | cr. |  |
| :--- | :--- | :--- | :--- | :--- |
| BCCM | 2200 | 3 | BUSN | 2321 |
| BCCM | 2230 | 3 | EDDT | 1040 |
| BCCM | 2240 | 3 | EDDT | 1100 |
| BCCM | 2250 | 3 | ENGN 2240 | 3 |
| BCCM | 2270 | 2 | Computer Literacy | 3 |
| BCCM | 2500 | 2 | Elective | 3 |
| BCCM | 2600 | 2 | TOTAL | 34 |

Program Total 67

## BUILDING CONSTRUCTION AND CONSTRUCTION MANAGEMENT COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.
1010 Building Construction Safety (1:1:0)
A study of OSHA and common safety rules for use of hand tools, power tools, ladders, scaffolds, etc. Also covers concepts of waste disposal and maintaining a clean working environment.

1150 Basic Print Reading
(2:2:0)
For anyone who needs to learn how to interpret and understand the drawings used in the construction industry. Prints provide a common set of information for all parties involved in the design and construction of a building. Theory of projection architectural symbols, materials, and construction methods are covered. Information taken from plot plans, foundation plans, floor plans, elevation drawings, details, and specifications will be stressed.

## 2010 Framing and Concrete Theory <br> (3:3:0)

Theory of framing layout techniques, including floors, stairways, and roofs in typical residential construction. Principles and methods of concrete construction including forming, placement, finishing, and testing of concrete footings, walls, and slabs in residential and commercial construction.

## 2030 Framing Lab

(3:0:6)
Application of techniques in floor, wall, roof, and stair layout and framing. These techniques are taught through foundation to roof on-site construction of a full-size project home.

2080 Concrete Construction Lab
(3:0:6)
Experience in forming, placing, finishing, and placing of concrete in actual construction settings including footings, walls, and slabs.

## 2100 Finish Interior and Exterior Theory

(3:3:0)
This course will cover the study of materials, energy and heat loss, and methods used in interior construction. Course includes instruction on insulation, drywall, interior finish, handrails, moldings, and cabinets.

## 2125 Basic Cabinet Making and Millwork

(3:1-3:1-3)
In this course, students will become familiar with the advanced set-ups and operations of the tools and machines used in cabinetmaking and millwork. The student will explore several different types of construction methods and styles, e.g. frace frame, European, casework, raised panel door, decorative use of molding and trim, and stains and finishes. The student will be introduced to the role of cabinetmaking in the world today, as well as participating in the design, construction, and finish of their own project.

## 2130 Finish Lab

(3:0:6)
Application of insulation, wallboard, interior finish, handrails, moldings, and cabinets by onsite construction.

2170 Exterior Construction Lab
(3:0:6)
Practice and application of methods and materials of exterior construction.

2200 Construction Management
(3:3:0)
Covers the theory of project organization, contracts, change orders, records, and project supervision.

2230 Construction Management Lab I (3:0:6) Practice and application of construction management techniques through organization and supervision of layout and framing in an onsite construction setting.

2240 Construction Estimating
(3:3:0)
Principles of construction estimating including take-offs, labor costs, equipment costs, overhead expenses and markups. Limited exposure to computer applications in construction estimating may also be taught.

2250 Construction Management Lab II (3:0:6) Practice and application of construction management techniques through organization and supervision of interior construction.

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## PROGRAMS \& COURSE OF STUDY

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2270 Building Codes and Inspections (2:2:0)
Covers the nature and use of building codes and zoning ordinances. Also covers inspection procedures used to enforce building codes and ordinances.

## 2500 Specialty Construction Lab

(2:0:6)
Practice and application methods and materials in exterior construction for second year building construction students.

2600 Contractor Preparation
(2:2:0)
Review of the construction industry, business ownership, company organization, bidding procedures, contracts, bonds and insurance, labor laws, lien laws, and cost management.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job experience for students in most aspects of building construction and construction management. The student establishes learning objectives, hours to be worked, and a credit agreement with the instructor at the beginning of the semester. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. May prepare for State Examinations. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of students in Building Construction and Construction Management.

## BUSINESS COMPUTER INFORMATION SYSTEMS (BCIS)

Betty Banning<br>Steven Black<br>David Cassidy<br>Jan Curtis<br>Russell Goodrich<br>Tracey Johnson<br>Eric Mantz<br>Dr. Henning Olsen<br>Clayton Palmer<br>Henry Zwick

The business department at CEU offers a wide variety of training in business, computers, networking, ecommerce, web design and development and office
education. Degrees and certificates are available in the following areas:

Certificates of Completion in

- Accounting/Information Systems (See ACCT department)
- Microsoft Network Engineer
- Secretarial Science or Office Computer Systems

Associate of Applied Science in

- Administrative Assistant/Information

Processing Specialist

- Business Administration (See BUSN
department)
- Computer Networking
- E-commerce, Web Design and Development

Associate of Science with an emphasis in

- Business Administration (See BUSN department)
- Computer Programming (See CS department)
- Business Information Systems


## STUDENTS SEEKING

CERTIFICATES AND ASSOCIATE OF APPLIED SCIENCE DEGREES

Students who want specific training but don't plan on transferring to a four-year school should consider a certificate or applied science degree. The certificates and applied science degrees will help you gain detailed, specific skills needed to quickly enter a vocational field and successfully pursue an occupation where you can function effectively in the community. The classes and training are designed to match the skills and knowledge needed for specific careers. The certificates can usually be completed within one year. The applied degrees take longer to complete but do enable you to obtain an Associate degree in a specific area. Each applied degree also allows you to select electives and emphasis areas that are of interest or may be needed in your current profession.

## BUSINESS EVENING COURSES

Pre-business core (courses required for acceptance into university business studies) are offered in the evening on the Price Campus and can be taken via EdNet at remote sites. These courses include Economics, Accounting, Business Law, College Algebra, Calculus Techniques, Business Communications, Business Presentations, Statistics, Spreadsheet, Database and Psychology. These courses rotate on a two year cycle on Tuesday and/ or Thursday evenings.

## TRANSFER STUDENTS

The Associate of Science degrees provide the required general education courses to prepare for a four-year school, along with specific business and computer training. General education courses help business students learn the art of living as well as working. Students wishing to continue their education at a four-year university or college should complete the requirements for an Associate of Science degree, incorporating specific business courses and computer courses in their elective hours. Students should also consult early in their program with business department advisors at CEU and at the institution to which they wish to transfer. This advisement is necessary to obtain the prerequisites for the business program they wish to complete at the transfer school. Some classes must be passed with a "B" or better in order to transfer. The CEU business faculty and advisors are:

| Name | Ext. | E-mail |
| :--- | :--- | :--- |
| Betty Banning | 5270 | Betty.Banning@ceu.edu |
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## CERTIFICATE OF COMPLETION/ OFFICE INFORMATION SYSTEMS OR SECRETARIAL EMPHASES

| Core Courses |  |  |  |
| :---: | :--- | :--- | :--- |
| Course |  |  | Name |
| ENGL | 1010 | Introduction to Writing | 3 |
| BCIS | 1405 | Word Processing I | 2 |
| BCIS | 1406 | Word Processing II | 2 |
| BCIS | 1410 | Spreadsheet I | 2 |
| BCIS | 2930 | Office Procedures and Human | 3 |
|  |  | Relations | 2 |
| BCIS | 2420 | Database I | 3 |
| BUSN | 1050 | Business Math |  |


| ACCT | 1111 | Survey of Accounting <br> - or- | 3 |
| :---: | :---: | :--- | :---: |
| ACCT | 2010 | Financial Accounting I | 4 |
| BUSN | 2200 | Business Communications | 3 |


| Secretarial Emphasis |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | c. |
| bcis | 1901 | Intermediate Keyboarding | 2 |
| BCSI | 1910 | Speedwriting for Notetaking | 4 |
| Electi |  |  | 4 |
|  | Program Total 33-34 |  |  |

## Office Information Systems Emphasis



Program Total 34-35

| Suggested Electives for Either Emphasis |  |  |  |
| :---: | :--- | :--- | :--- |
| Course |  | Name | Cr. |
| BCIS | 1200 | Microcomputer Operating <br> Systems | 2 |
| BCIS | 1300 | Intro to HTML and Web Page <br> Design | 3 |
| BCIS | 1411 | Spreadsheet II | 2 |
| BCIS | 1900 | Elementary Type/Keyboarding | 1 |
| BCIS | 1901 | Intermediate Typewriting | 2 |
| BCIS | 1910 | Speedwriting for Notetaking | 4 |
| BCIS | 2421 | Database II | 2 |
| BCIS | 2430 | Desktop Publishing | 2 |
| BCIS | 2920 | Legal/Medical Practicum | 2 |
| BCIS | 2930 | Office Procedures and Human | 3 |
| BUSN | 1500 | Belations | Business Leadership Club |
| MATH | 1010 | Intermediate Algebra | 3 |

## ASSOCIATE OF APPLIED SCIENCE - ADMINISTRATIVE ASSISTANT/ INFORMATION PROCESSING SPECIALIST

| Business Training Courses |  |  |  |  |
| :---: | :---: | :--- | :--- | :---: |
| Course |  | Name |  |  |
| BUSN | 1050 | Business Mathematics | 3 |  |
| ACCT | 1111 | Survey of Accounting | 3 |  |
|  | -or- |  |  |  |
| ACCT | 2010 | Financial Accounting | 4 |  |
| ACCT | 2800 | Computerized Accounting | 2 |  |
| BUSN | 2050 | Business Law | 4 |  |

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| ECON | 2010 | Microeconomics | 3 |
| :---: | :---: | :---: | :---: |
| MATH | $1050 \quad$ College Algebra | 4 |  |
|  | Electives Total 17 |  |  |

## ASSOCIATE OF APPLIED SCIENCE - NETWORKING



| Electives |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr . |
| BCIS | 1300 | Introduction to HTML and Web Page Design | 2 |
| BCIS | 2630 | Foundations of Novell Networking | 3 |
| BCIS | 2631 | Net+ | 3 |
| BCIS | 2650 | Information Security Fund | 2 |
| BUSN | 1010 | Business Principles | 3 |
| BUSN | 2050 | Business Law | 4 |
| CJ | 1010 | Intro to Criminal Justice | 3 |
| Electives Total 4-7 |  |  |  |
| Program Total 65 |  |  |  |

*for the Science Requirement, choose one class from any Life, Earth, or Physical Science Course.

## ASSOCIATE OF APPLIED SCIENCE E-COMMERCE, WEB DESIGN AND DEVELOPMENT

Prerequisite skills needed before beginning this program - Windows operating system, Word Processing and Computer Literacy


| BUSN | 1091 | Business Presentations | 3 |
| :---: | :---: | :---: | :---: |
| BUSN | 2200 | Business Communications | 3 |
| BUSN | 2201 | Marketing Concepts | 3 |
| BUSN | 2500 | Electronic Commerce | 3 |
| Core Total 39-41 |  |  |  |
| General Education Courses |  |  |  |
| Course |  | Name | Cr. |
| ENGL | 1010 | Introduction to Writing | 3 |
| PSY | 1010 | Introduction to Psychology | 3 |
|  |  | - or - |  |
| SOC | 1010 | Introduction to Sociology | 3 |
| BCIS | 2010 | Business Comp Applications | 3 |
| Math Requirement (choose one) |  |  |  |
| Course |  | Name | Cr. |
| BUSN | 1050 | Business Math | 3 |
| MATH | 1050 | College Algebra | 4 |
| Human Relations Requirement (choose one) |  |  |  |
| Course |  | Name | Cr. |
| BUSN | 2390 | Organizational Behavior | 3 |
|  |  | - or - |  |
| BCIS | 2930 | Office Procedures and Human Relations | 3 |
| COMM | 2110 | Interpersonal Communications | 3 |
| Electives |  |  |  |
| Course |  | Name | Cr. |
| ACCT | 1111 | Survey of Accounting | 3 |
| ACCT | 2010 | Financial Accounting I | 4 |
| ART | 1620 | Electronic Illustration | 3 |
| ART | 1600 | Foundations of Computer Graphics | 3 |
| BCIS | 2345 | Multimedia Authoring | 2 |
| BCIS | 2346 | Multimedia Authoring Lab | 2 |
| BCIS | 2420 | Database I | 2 |
| BCIS | 2430 | Desktop Publishing | 2 |
| BUSN | 1010 | Business Principles | 3 |
| BUSN | 2050 | Business Law | 3 |
| MATH | 1010 | Intermediate Algebra | 3 |
| Any additional BUSN or BCIS class |  |  | 2-4 |
| Any general education course |  |  | 3 |
| BCIS networking courses |  |  | 2 |
| Electives Total 11-13 |  |  |  |
| Program Total 64-69 |  |  |  |

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## CERTIFICATE OF COMPLETION MICROSOFT NETWORK ENGINEER

| Core Courses |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr . |
| BCIS | 2210 | UNIX (UNIX using Lunix) | 3 |
| BCIS | 2330 | Business Data Communications | 3 |
| BCIS | 2610 | Administering $\quad$ Windows® Professional | 3 |
| BCIS | 2611 | Administering $\quad$ Windows® Server | 3 |
| BCIS | 2612 | Administering Windows ${ }^{\circledR}$ Network Infrastructure | 3 |
| BCIS | 2613 | Implementing Windows ${ }^{\circledR}$ Directory Services Infrastructure | 3 |
| BCIS | 2614 | Designing Windows® Directory Services Infrastructure | 3 |
| BCIS | 2615 | Designing Security for a Windows $®$ Network | 3 |
| BCIS | 2616 | Managing a Windows® Network Environment | 3 |
|  |  | Core Total 27 |  |
| English |  |  |  |
| Course |  | Name | Cr . |
| ENGL | 1010 | Introduction to Writing | 3 |

## Math (choose one)

| Course |  | Name | Cr. |
| :--- | :--- | :--- | :--- |
| BUSN | 1050 | Business Math | 3 |
| MATH | 1050 | College Algebra | 4 |


| Human Relations (choose one) |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr. |
| BCIS | 2930 | Office Procedures and Human Rel. | 3 |
| BUSN | 2320 | Small Business Management for CTE | 3 |
| BUSN | 2390 | Organizational Behavior | 3 |
| COMM | 2110 | Interpersonal Communications | 3 |
| MINT | 1110 | Labor Management Relations | 3 | General Education Total 9-10

Program Total 36-37

## ASSOCIATE OF SCIENCE/BUSINESS INFORMATION SYSTEMS EMPHASIS




## BUSINESS COMPUTER INFORMATION SYSTEMS COURSES

## 0990 Computer Basics

(2:2:0)
This course is designed for students with little or no previous computer experience to give them a practical knowledge in using a computer, with emphasis on home use. Concepts covered include keyboard and mouse use, learning the purpose of computer devices, changingcomputer settings, file management, using the Internet and e-mail, basic word processing, and digital media management.

1000 Introduction to Computer Science (3:3:0) On Demand Only
This class is strictly a lecture class with NO handson experience. The class is a survey of computers that covers hardware, software, computer history, computer crime, operating systems, programming languages, and computer networks. A research paper will be required.

## 1010 Computer Literacy

(3:2:1)

## Computer Literacy

Fall, Spring
This course uses the Microsoft Office program to teach students basic word processing, data processing, spreadsheet, graphics, Internet, Windows, and E-mail skills in a business setting. Following the completion of the course, students will be able to use the Microsoft Office program for personal and business use. Business majors refer to BCIS 2010.

## 1200 Microcomputer Operating Systems

(2:2:0)
On demand only
This course is taught using the current version of Microsoft Windows. It covers the history of microcomputer operating systems, legacy DOS commands (redirection, pipes, filters, hierarchical directories and folders, special utilities, and the creation of batch files), a comparison of GUI operating systems with their strengths and weaknesses, Windows configuration files, setup, memory resource management, optimization, multitasking, Windows management and accessory programs. Prerequisite: Previous computer experience suggested.

## 1300 Introduction to HTML and Web Page Design <br> (3:3:0)

Fall, Spring
This course focuses on the design and construction of Internet Web Pages. Web Page development using HTML and Web page editing software is discussed. All students will have hands-on experience creating and publishing their own Web pages. Prerequisite: BCIS 1010 or equivalent.

## 1310 Digital Image Basics

(2:2:0)
This course will cover digital camera basics, downloading images, applying some basic touchup and enhancements using popluar software, options for printing your pictures, creating cards, scrapbooks, calendars, screen projects to display on a computer or on a DVD for television. Converting and compressing digital images into appropriate file formats to store and archive correctly will also be taught.

1340 Digital Audio-Video Production (3:3:0) Fall, Spring
Fundamental theories and practice in computerbased audio and video production, including recording, editing, digitizing audio and video segments utilizing current programs such as Adobe Premiere, Quicktime and various Internet streaming technologies. Includes lectures, demonstrations, and a project during which each student will set up, shoot, edit, and digitize a high-quality video project for computer-based multimedia.

## 1350 Flash Basics and Interactive Web Design

Fall
This course is an introduction to the Macromedia Flash multimedia authoring environment. Students will have hands-on experience developing streaming web-based multimedia presentations and websites incorporating animation, sound and graphics. Students will use the Flash scripting language, ActionScript, to add interactivity and functionality to their Flash projects. Prerequisite: BCIS 1300 or expereience in creating web pages.

1400 Word Processing I (WordPerfect) (2:2:0) On demand only
This course is designed to teach basic word processing techniques, using Corel WordPerfect software. Students will create, format, edit, and print documents. Concepts covered include such topics as basic editing functions, use of writing tools, usage of tabs, file management, and tables. Prerequisite: BCIS 1900 or eqivalent. This course is taught as a block course.

1401 Word Processing II (WordPerfect) (2:2:0) On demand only
This course is designed for students who have completed BCIS 1400. Concepts covered include such topics as columns, merging, sorting, macros and creating outlines. Prerequisite: BCIS 1400 or equivalent. This course is taught as a block course.

## 1405 Word Processing I (Microsoft Word)

(2:2:0)
Fall
This course is designed to teach basic word processing techniques, using Microsoft Word. Following the completion of the course, students will be able to use Word for personal and business use. Prerequisite: BCIS 1900 or
Keyboarding I.

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(2:3:0)
Fall
This course is a continuation of BCIS 1405. Concepts covered include such topics as creating charts, macros, styles, sorting, creating master documents, creating fill-in forms and mail merge. Prerequisite: BCIS 1405 or equivalent.

## 1410 Spreadsheet I (Excel)

(2:2:0)
Fall, Spring
This course is an introduction to spreadsheet operations. Several pre-defined spreadsheet functions will be introduced. Creating charts, graphs, and other graphic elements will be covered. The class will be taught each semester. Prerequisites: Limited typewriting and math skills (MATH 0990).

1411 Spreadsheet II (Excel)
(2:2:0)
Spring
This class is a continuation of the BCIS 1410 class. It teaches students about databases, database functions, tables, graphics, styles, macros, and application development. Students will also learn basic programming techniques. Prerequisite: BCIS 1410

1560 Java Programming
(3:3:0)
Spring (on demand only)
This course covers the syntax of the Java Programming Language. Some of the topics covered will be objects, references, control structures, error handling, and others. Prerequisite or Corequisite: MATH 1050

## 1900 Elementary Typewriting and Keyboarding

(1:0:1)
Fall
This class is designed for students with little or no previous keyboarding experience. The class emphasizes fundamental keyboarding skills as well as technique. Touch keyboarding covering the letter, figure and symbol keys are learned.

## 1901 Intermediate Keyboarding

(2:1:1)

## Spring

This course is designed for students who have had previous keyboarding and computer experience. The class is designed to significantly improve typing speed and accuracy. The class will also teach students how to produce several types of reports, memos, letters, outlines and tables required by specific business offices.

1910 Speedwriting for Notetaking
(4:4:0)
On demand only
This course teaches students how to increase their writing speed, using an alphabetic shorthand system and a variety of dictation and transcription exercises. The class is designed for secretarial majors and for students who want to improve their note taking abilities. Finally, the course helps students increase their punctuation, spelling and word usage skills. Prerequisite: A word processing class (e.g., BCIS 1400 or BCIS 1405) or prior experience with a word processing program.

## 2010 Business Computer Applications

(3:2:1)
Computer Literacy
Fall, Spring
This course is designed for business majors and uses the Microsoft Office program. Students will learn basic word processing, data processing, spreadsheet, graphics, Internet, Windows, and Email skills in a business setting. Following the completion of the course, students will be able to use the Microsoft Office program for personal and business use. Transfer students are required to make a "B" or better to transfer this credit.

## 2210 UNIX Operating System <br> Fall

This course will teach the student the UNIX operating system from the user's standpoint and cover some basic systems administration. The instruction offered includes shells, directories, file operations, permissions, processes, background execution, tools, utilities, editors, basic shell programming, and network/remote operations. Prerequisite: Previous computer experience suggested.

## 2300 Advanced HTML and Java Script Spring

This course is a Web Page authoring course designed to give the student the knowledge to design advanced web pages. Graphics, content, layout, and aesthetics will be stressed. Extensive Java scripting and Active $X$ will be used to enhance web page functionality and appearance. Web based forms, data collection and dynamic web pages will also be covered. Prerequisites: Computer literacy requirement, BCIS 1300 or instructor approval.

## 2330 Business Data Communications and Networking

This course places emphasis on business data communications in a LAN and WAN networking environment. Includes network protocols, cable technology, telecommunications standards, security issues, and general telecommunications management issues. Prerequisite: Computer literacy requirement

On demand only
This course will use a popular authoring software package to create an interactive multimedia presentation. The purpose of the course is to give students a good start in multimedia development. This course will introduce students to Macromedia's Authorware software program. Since the Authorware program is very complex, only the essential functions of the program will be used as a basis for this course. Students will have the opportunity to develop a basic selfdirected design module that will include the major components of the software covered during class time. Utilizing Authorware, this course will provide the designer with the core foundations for the development of computed based instruction. Prerequisites: ART 2610, BCIS 1340

## 2345 Multimedia Authoring

(2:2:0)
On demand only
This course focuses on multimedia authoring using the capabilities of Macromedia Director. Students learn to use authoring tools, scripting, Lingo, and other basics. The primary emphasis of the course is hands-on experience with beginning levels of Director. Students work through textbook lessons and create their own multimedia projects. Prerequisite: Concurrent enrollment in BCIS 2346.

## 2346 Multimedia Authoring Lab

(2:0:2)
On demand only
This laboratory course focuses on the production of interactive multimedia projects using the capabilities of Macromedia Director. The course is a hands-on experience that includes design, audience analysis, project management and delivery. Students work in teams during the term on a single instructional project of their choice. Prerequisite: Concurrent enrollment in BCIS 2345.

## 2420 Database I (Access)

(2:2:0)

## Fall, Spring

This course is taught using the current version of Microsoft Access for Windows. Students will be introduced to data processing techniques including creating, editing and querying a database. Students will also learn how to create custom forms and reports, and how to design custom advanced queries and use World Wide Web and Hyperlink Fields. Prerequisite: BCIS 1010, BCIS 2010 or equivalent.

2421 Database II (Access)
(2:2:0)
On demand only
This course is taught using the current version of Microsoft Access and its Visual Basic Environment. Students will create customized menus and programs that could be used as standalone data processing applications. This course is designed for the serious data processing student or for the student who wants to learn Visual Basic Programming. Visual Basic topics covered are variables, modules, functions, subroutines, IF statements, FOR and WHILE loops, SELECT statements, class registry, and error handling. Prerequisites: Computer Literacy requirement and BCIS 2420, or instructor permission.

## 2422 Oracle/InterDev

(3:3:0)
This course uses Oracle, from the world's leading database company, to develop database objects that are accessible through the Internet as part of an E-commerce business. Students learn the basics of developing forms, reports, and integrated database applications. The SQL language will be introduced and used to create tables, insert data into tables, and display data from a search. Prerequisite: BCIS 2420, some knowledge with programming languages.

## 2430 Desktop Publishing

(2:1:1)
Spring
This course will introduce students to the concepts of desktop publishing using Microsoft Publisher. Concepts covered include such topics as creating business cards, letterheads, flyers, brochures and booklets. Prerequisites: BCIS 1405.

## 2441 Graphics for the Web

(3:3:0)
Fall
This course is designed to teach web site design techniques using Photoshop, Image Ready and other popular web graphic design software. Students will create graphiocs for web sites which includes icons, graphics, background images, bullets, buttons, fonts and banners. Recommended prerequisite: BCIS 1300

## 2550 Fundamentals of Fortran

## Spring

An introduction to programming using the highlevel language FORTRAN 90. Emphasis will be on structured problem solving and algorithm development using control structures, arrays, functions, and subroutines. It is recommended that Engineering students take this class during the Sophomore year. Prerequisite: MATH 1210 or MATH 1100

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## 2570 Assembly Language

On demand only
Assembly language programming at the beginning level. The course includes memory organization, addressing modes, instruction formats, program control mechanisms, logical operations, and arithmetic operations. Prerequisites: MATH 1010 and any high level language such as C, Pascal, BASIC, COBOL, Fortran, or any other approved language.

## 2610 Administering Windows ${ }^{\circledR}$ Professional

(3:3:0)
Fall
This course is designed to teach fundamental installation, implementation, and configuration management tasks in Microsoft Windows® Professional. This course is intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification. Prerequisite: Previous experience and familiarity with Windows suggested.

2611 Administering Windows ${ }^{\circledR}$ Server (3:3:0) This course is designed to teach fundamental installation, configuration, and administrative management tasks in Microsoft Windows® Server. This course is intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification. Prerequisite: BCIS 2610

## 2612 Administering Windows® Network Infrastructure

(3:3:0)
This course is designed to teach Windows ${ }^{\circledR}$ Network Administration in the areas of Domain Naming Service (DNS), Dynamic Host Control Protocol (DHCP), Remote Access, Network Protocols, Windows Internet Naming Service (WINS), Internet Protocol (IP) routing, Address Translation, and Troubleshooting. This course is intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification. Prerequisite: BCIS 2611

## 2613 Implementing Windows® Directory

 Services Infrastructure(3:3:0)
This course is designed to teach Windows ${ }^{\circledR}$ Directory Services Infrastructure. This includes the following areas: Active Directory, Active Directory DNS, Change and Configuration Management, and Active Directory Security. This course is intended
for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification. Prerequisite: BCIS 2611

## 2614 Designing Windows® Directory Services Infrastructure

This course is designed to teach the design of Windows ${ }^{\circledR}$ Directory Services Infrastructure. This includes doing extensive analysis of business and technical requirements to design appropriate Directory Service Architectures and Service Locations. This course is intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification. Prerequisites: BCIS 2611, BCIS 2613

## 2615 Designing Security for a Windows Network

On demand only
This course is designed to teach the designing of security for a Windows® Network. This includes doing extensive analysis of business, technical, and security requirements to design appropriate security for local and wide area networks that use Windows ${ }^{\circledR}$. This course is intended for students interested in achieving Microsoft Certified Professional status. Students also earn core credit toward Microsoft Certified Systems Engineer certification. Prerequisites: BCIS 2611, 2613

## 2616 Managing a Microsoft Windows® Network Environment

On demand only
Managing a Microsoft Windows® Network Environment is designed to prepare you for the challenges you will face as a networking professional responsible for administering and supporting Windows network skills that are in high demand in today's business environment. Learn how to administer and support a Windows network and prepare for the Microsoft Certified Professional Exam 70-218, a core requirement for MCSA certification and an elective for MCSE. Coverage includes how to: set up client and server computers; manage data storage, shared resources, and permissions; configure network infrastructure, including TCP/IP, DHCP, and name resolution services; install Internet Information Services; create user and group objects, and administer Active Directory services; use group policies to manage desktops and network security; troubleshoot remote access and VPN connections; and monitor server health and performance. Prerequisites: BCIS 2611, 2613

## 2630 Foundations of Novell Networking

(3:3:0)
On demand only
Thiscourseteacheshowtoaccomplishfundamental network managementtasksona NetWare network. This course is intended for students interested in gaining their Certified Novell Administrator (CNA) and Certified Novell Engineer (CNE) certifications. (Course 560) Prerequisites: Basic understanding of personal computers, operating systems and network technology and a working knowledge of the Windows operating system or Windows NT Workstation and experience with DOS suggested.

2631 Net+
On demand only
This course provides students with an excellent foundation upon which to build their network training. It covers the basics of computer networking, including terms and concepts. Networking technology- how it works, and why it works - is made clear in this course, where concepts like contemporary network services, transmission media, and protocols are explained. Students learn how protocols are used in networking implementations from many vendors, especially those most common in today's LANs and WANs. This course is an introduction to computer networking technologies for students who are new to networking technologies. These students may or may not already be IT professionals, but are not yet networking professionals. This course will provide students with the concepts and skills needed to pass the Network+ certification exam produced by the Computing Technology Industry Association (Comp/TIA).

## 2650 Information Security Fundamentals

(2:2:0)
An introduction to the various technical and administrative aspects of Information Security and Assurance. This course provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. The purpose of this course is to provide the student with an overview of the field of Information Security and Assurance. Students will be exposed to the spectrum of Security activities, methods, methodologies, and procedures. Coverage will include inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of preand post-incident procedures, technical and
managerial responses and an overview of the Information Security Planning and Staffing functions. Prerequisites: Experience using personal computers, their operating systems, and network technology suggested.

2651 Computer Security Fundamentals (3:3:0) In this course, we will take an in depth look at operating system security concepts and techniques. We will examine theoretical concepts that make the world of security unique. Also this course will adopt a practical hands-on approach when examining operating system security techniques. Along with examining different security strategies, thiscourse willexplore theadvancementofsecurity implementation, as well as timeless problem solving strategies. Prerequisites: Experience using personal computers, their operating systems, and network technology.

## 2652 Advanced Network Security

(3:3:0)
In this course, we will take an in depth look at network security concepts and techniques. We will examine theoretical concepts that make the world of security unique. Also, this course will adopt a practical, hands-on approach when examining networking security techniques. Along with examining different network strategies, this course will explore the advancement of network implementation as well as timeless problem solving strategies. Prerequisites: Experience using personal computers, their operating systems, and network technology suggested.

## 2653 Network Intrusion Detection

 and Control(2:2:0)
In this course, we will take an in depth look at network defense concepts and techniques, We will examine theoretical concepts that make the world of networking unique. This course will also adopt a practical hands-on approach when examining network defensetechniques.Alongwithexamining different network defense strategies, this course will explore the advancement of network implementation, as well as timeless problem solving strategies. Prerequisites: Experience using personal computers, their operating systems, and network technology suggested.

2654 Disaster Recovery
(3:3:0)
The goal of this course is to provide a thorough, step-by-step process for learning the fundamentals of disaster recovery planning. Disaster recovery planning is the process of assessing risks that an organization faces, developing, documenting, implementing, testing, and maintaining procedures that help the organization quickly return to normal operations and minimize losses

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PEOPLE
after a disaster. This course will enable individuals to become disaster recovery planning team leaders and members. Prerequisites: Experience using personal computers, their operating systems, and network technology suggested.

## 2655 Computer Forensics

(2:2:0)
This course presents methods to properly conduct a computer forensics investigation, beginning with a discussion of ethics. Prerequisites: Experience using personal computers, their operating systems, and network technology suggested.

## 2920 Legal/Medical Practicum

(2:1:1)
Spring
This course is designed for students who have had previous keyboarding and computer experience. The class is primarily designed for secretarial majors who want to become more familiar with the specialized forms and terminology used in medical and legal offices. Students will also learn to use some of the advanced features of WordPerfect (e.g., mail merge and macros) to automate the completion of the forms. Prerequisites: BCIS 1901 or permission of the instructor, BCIS 1400 or 1405.

## 2930 Office Procedures and Human Relations

(3:3:0)

## Human Relations <br> Spring

This course provides instruction and application of skills and knowledge needed in an office setting. Skills in human relations will be stressed through a series of group and individual activities. Prerequisites: BCIS 1405, 1406, 2420 or BCIS 1010 or BCIS 2010 .

2977 Cooperative Education
(1-3:0:1-3)
This course provides supervised on-the-job training in BCIS areas. The student meets with the instructor/ coordinator periodically during the course to determine and evaluate learning objective, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by the instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Business Information Computer Systems.

## BIOLOGY (BIOL)

Dr. Tyson Chappell
Dr. Carla Endres
Dr. Michael King
Dr. Jon Krum
Students wishing to major in a Biological discipline and transfer to a four year school can prepare themselves for articulation at another institution by taking the appropriate courses while at the College of Eastern Utah. The following undergraduate courses are required by almost all four year programs in Biology, Pre-Professional Studies (majors in premedical, pre-dental, pre-physical therapy, prepharmacy and pre-veterinary), and Pre-Natural Resources Programs (pre-forestry, wildlife, fisheries, range management). Students should keep in mind that requirements will vary depending on the college or university they will attend after CEU. Students planning to major in a Life Science discipline should consult with their academic advisor for their particular course of study.

| Required Life Science Courses |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr . |
| BIOL | 1610 | Biology I | 3 |
| BIOL | 1615 | Biology I Lab | 2 |
| BIOL | 1620 | Biology II | 3 |
| BIOL | 1625 | Biology II Lab | 2 |
| BIOL | 2030 | Genetics | 3 |
| BIOL | 2220 | General Ecology | 1 |
| Required Physical Science Courses |  |  |  |
| Course |  | Name | Cr. |
| CHEM | 1210 | General Chemistry I | 4 |
| CHEM | 1215 | General Chemistry I Lab | 1 |
| CHEM | 1220 | General Chemistry II | 4 |
| CHEM | 1225 | General Chemistry II Lab | 1 |
| CHEM | 2310 | Organic Chemistry I | 4 |
| CHEM | 2315 | Organic Chemistry I Lab | 1 |
| CHEM | 2320 | Organic Chemistry II | 4 |
| CHEM | 2325 | Organic Chemistry II Lab | 1 |
| PHYS | 2010 | General Physics I | 4 |
| PHYS | 2015 | General Physics I Lab | 1 |
| PHYS | 2020 | General Physics II | 4 |
| PHYS | 2025 | General Physics II Lab | 1 |
| Required Math Courses |  |  |  |
| Course |  | Name | Cr. |
| MATH | 1210 | Calculus I | 4 |
| MATH | 1220 | Calculus II (a requirement for some four year biology programs) | 4 |

## BIOLOGY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Principles of Biology

(3:3:0)

## Life Science

Fall, Spring
This general education course focuses on the principles of molecular biology, genetics, diversity of life, evolution, and ecology in historical and modern contexts. It fills the Life Science general education requirement.

## 1015 Principles of Biology Lab

(1:0:2)
An optional general laboratory experience covering introductory topics in general biology for the non-science major. Designed to complement the student's experience in the BIOL 1010 course with emphasis on the application of the scientific method. Includes actual student experiences with living organisms, use of the microscope, field excursions and an introduction to techniques used in the study of life. This lab is not equivalent to BIOL 1615 or 1625.

## 1250 Heredity

(3:3:0)

## Life Science

An introductory, general education course in the principles of genetics. It is a non-laboratory survey of genetics emphasizing the principles of heredity with an emphasis on human genetics. Wherever possible the principles of genetics will be illustrated using human examples. In addition to studying classical genetics, students will learn about the new advances in biotechnology and their implications for humans.

## 1410 General Botany

(3:3:0)

## Fall

A beginning course in the study of plants with an emphasis on flowering plants and conifers. The study includes cell biology, anatomy, physiology, morphology, and systematics. Prerequisite: BIOL 1610 or a general Biology course. Corequisite: Must be taken concurrently with BIOL 1415.

## 1415 General Botany Lab

(1:0:2)
Fall
A comprehensive laboratory course that teaches botanical laboratory techniques, procedures and principles. Investigates anatomy, physiology, morphology, biodiversity and systematics of plants with observational and investigative laboratories. Prerequisite: Must be taken concurrently with BIOL 1410.

1500 Anatomy and Physiology
(3:3:0)

## Life Science

This general education course focuses on the structure and function of the major organ systems of the human body. It fills the Life Science general education requirement. It is a prerequisite for students in the medical coding program. (It does not fulfill the prerequisites for nursing, premedical, pre-dental, pre-veterinary, or other allied health pre-professional programs).

1610 Biology I
Fall
A comprehensive introductory biology course for Life Science majors that introduces students to basic principles of biology including the chemistry of life, structure and function of cells, molecular biology, principles of genetics, and mechanisms of evolution. Prerequisite: Recommended concurrent or previous enrollment in introductory chemistry and biology courses or instructor permission. Corequisite: Must be taken concurrently with BIOL 1615.

## 1615 Biology I Lab

(2:1:2)
Fall
A comprehensive laboratory course that teaches biological laboratory techniques, procedures and principles. Laboratory periods include one hour of lecture and two hours of laboratory activities. Exercises emphasize cell structure and processes, principles of genetics, DNA technology, and biodiversity of microbes with observational and investigative laboratories. Corequisite: Must be taken concurrently with BIOL 1610.

## 1620 Biology II

## Service Learning

Spring
Part two of a comprehensive introductory biology course for Life Science majors that introduces students to basic principles of biology including biological diversity and its evolution, form and function of Prokaryotes, Protistans, Fungi, Plants and Animals, and principles of ecology. Prerequisites: BIOL 1610 and 1615. Corequisite: Must be taken concurrently with BIOL 1625.

## 1625 Biology II Lab

(2:1:2)
Spring
A comprehensive laboratory course that teaches biological laboratory techniques, procedures and principles. Investigates biodiversity of Protista, Plants, Fungus, and Animals with observational and investigative laboratories. Prerequisite: BIO 1610 and 1615. Corequisite: Must be taken concurrently with BIOL 1620.

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PEOPLE

## 1800 Principles of Environmental Science Service Learning <br> Life Science

(3:3:0)
This general education course introduces students to ecological principles and relationships that underlie environmental science and natural resource conservation. It also examines the environment as the context for human activities and explores the effects of humans on ecosystems. Course material will be presented through lectures, videos and selected readings. It satisfies the general education requirement of one, but not both, for Life Science (LS) and Earth Science (ES).

2030 Genetics
Spring
A study of the mechanisms of inheritance and variation in microorganism, animals and plants. Emphasis will be given to classical genetics, DNA technologies, and the genetics populations and evolution. The course is recommended for science majors and preprofessional students in the health professions. Prerequisites: BIOL 1610, 1615, CHEM 1010, and Intermediate Algebra competency. Corequisite: Must be taken concurrently with BIOL 2035.

## 2035 Genetics Lab

(1:0:2)
Spring
This is strictly a laboratory course with focus on conducting experiments in classical genetics, population genetics, and biotechnology. Students will complete a series of experiments and individual projects designed to acquaint them with the techniques employed in genetics research. Instructional methods employed will involve student use of the scientific method to design and conduct research experiments in genetics and DNA technologies. Laboratory design will allow students to progress from instructor directed and assisted experiment at the beginning of the semester to scientific problem solving using student designed experiments as students progress in their independence and problem solving skills. Corequisite: Must be taken concurrently with BIOL 2030.

## 2060 General Microbiology

(3:3:0)
Fall, Spring
This course (including the lab) is intended for students majoring in the health professions including nursing, and preprofessional medical programs. General Microbiology is a study of the essentials of general and pathogenic microbiology. Students will study the historical aspects of the development of the science of microbiology. They will also learn and
practiceacceptablestandardsoflaboratory technique employed in modern microbiology. Students will also study the characteristics of eukaryotic and prokaryotic microbes and viruses, and human defense mechanisms against disease. Instructional methods will include lecture, class discussion, demonstrations and videos. Prerequisites: Students should have completed an introductory biology course and an introductory chemistry course prior to taking microbiology. Corequisite: Must be taken concurrently with BIOL 2065.

## 2065 General Microbiology Lab

(1:0:3)
Fall, Spring
General Microbiology Lab will meet for three hours, one afternoon per week. Students will study microbiological techniques, the characteristics of eukaryotic and prokaryotic microbes and viruses, and human defense mechanisms against disease through observational and investigative laboratory exercises. Prerequisite: Must be taken concurrently with BIOL 2060.

## 2220 General Ecology <br> Oral Communication Intensive

Fall
General Ecology is a Life Science course designed to give students, life science majors and nonmajors alike, an introduction to the dynamic field of ecology. This beginning course will stress the relationships between organisms (primarily plants and animals with emphasis on Southeastern Utah's ecosystems) as well as how organisms are adapted to their environment. It will focus on how organisms interact with each other at the species, population, community, and ecosystem levels. It will also cover the impacts (beneficial and detrimental) that humans impose on natural ecosystems. Prerequisites: BIOL 1610, 1615, 1620, 1625. Corequisite: Must be taken concurrently with BIOL 2225.

## 2225 General Ecology Lab

(1:0:3)
Fall
A laboratory course designed to fill the ecology lab requirements for Life Science majors. This laboratory coursewillstresstherelationshipsbetweenorganisms (primarily plants and animals with emphasis on Southeastern Utah's ecosystems) as well as how organisms are adapted to their environment. It will focus on how organisms interact with each other at the species, population, community, and ecosystem levels. The course consists of one-three laboratory periods per week. Prerequisites: BIOL 1610, 1615, 1620, 1625. Corequisite: Must be taken concurrently with BIOL 2220.

## 2320 Human Anatomy

(3:3:0)
Fall, Spring
This course focuses on the structure of the human body. It is laboratory intensive. Students learn the structure of all major systems through study and dissection. This course is required for all nursing students and recommended for students in premed, pre-dental, pre-veterinary, and other allied health pre-professional programs. Corequisite: Must be taken concurrently with BIOL 2325.

## 2325 Human Anatomy Lab

(1:0:3) Fall, Spring
This lab focuses on dissection but also includes demonstration and recitation during the select laboratory. The laboratory reinforces principles taught in BIOL 2320. Corequisite: Must be taken concurrently with BIOL 2320.

## 2420 Human Physiology

(3:3:0)

## Fall, Spring

This course focuses on the function of the human body. It concentrates on cell membrane function within various systems. It is laboratory intensive. This course is required for all nursing students and recommended for students in pre-medical, pre-dental, pre-veterinary, and other allied health pre-professional programs. Prerequisites: Recommended - BIOL 2320, 2325 and CHEM 1010. Corequisite: Must be taken concurrently with BIOL 2425.

## 2425 Human Physiology Lab

(1:0:3)

## Fall, Spring

The lab focuses on dissection but also includes demonstration and recitation during the select laboratory. The laboratory reinforces principles taught in BIOL 2420. Corequisite: Must be taken concurrently with BIOL 2420.

2520 Introductory Pathophysiology (3:3:0) The study of pathophysiology is the study of the dynamic changes in cell and organ function that occur in injury and disease. This course provides an introduction to the basic concepts of pathophysiology. The focus of this course will be the abnormal functioning of diseased organs as well as gross and microscopic characteristics of diseased tissue. Epidemiology and clinical manifestations are integrated throughout the course. Students will briefly explore normal cell, organ and organ system function and use this as a basis to understand how injury and disease alter normal physiology. Prerequisites: BIOL 2320, 2325, 2420, 2425.

2700 Science Excursion
(1:1:1)
The Science Excursion will be led by CEU faculty and staff, and may include car camping, backpacking, biking, rafting or canoeing in areas of geological or biological interest in Utah. While on the trip, students will study the geology, geography, plant and animal life, astronomy, and historical aspects of the areas visited. Students will beexpected toattend oneormorelectures preceding or following the field trip. Assignments, reports and / or exams may be required. Variable fees will be charged, which will include transportation, food, course handouts and rental fees for some of the necessary equipment. Students with physical disabilities should not enroll in this course if their disabilities limit their mobility and could pose a safety hazard for themselves or other students on the canoe trip. It will be up to the discretion of the instrutors whether or not to allow students to participate in the canoe trip.

2977 Cooperative Education (1-3:0:1-3) Life science majors may gain "hands-on" experience working with life science professionals in industry, business, or government. The work supervisor and life science instructor determine/ approve the student's curriculum and credit hours earned. Prerequisite: Permission of instructor .

## 2988 Special Problems

(1-3:0:1-3)
This course enables an individual to probe/study a biological topic of specific interest. The topic must be approved by a supervising instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
Specific course developed for students who require a certain emphasis on a particular biological subject.

## BUSINESS (BUSN)

David Cassidy
Russell Goodrich
Tracey Johnson
Dr. William Olderog
Dr. Henning Olsen
Ron Vogel
Elaine Youngberg

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## PROGRAMS \& COURSE OF STUDY

## ACCT

ANTH APPR ART
AUTO
BCCM
BCIS
BIOL
CHEM
CJ
COMM
COST
CS
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DSME
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EDDT
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ELEC
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ENGL
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GEOG
GHUM
HEAL
HETR
HIST
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LANG
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PEOPLE

The business departmentat CEU offers three business degrees which are available in the following areas:

Associate of Applied Science in Business Administration

Associate of Science in Business
Associate of Science with an emphasis in Business Information Systems

## STUDENTS SEEKING CERTIFICATES AND ASSOCIATE OF APPLIED SCIENCE DEGREES

Students who want specific training but don't plan on transferring to a four-year school should consider a certificate or applied science degree. The certificates and applied science degrees will help you gain detailed, specific skills needed to quickly enter a vocational field and successfully pursue an occupation where you can function effectively in the community. The classes and training provided are designed to match the skills and knowledge needed for specific careers. The certificates can usually be completed within one year. The applied degrees take longer to complete but do enable you to obtain an Associate degree in a specific area. Each applied degree also allows you to select electives and emphasis areas that are of interest or may be needed in your current profession.

## BUSINESS EVENING COURSES

Pre-business core (courses required for acceptance into university business studies) are offered in the evening on the Price Campus and can be taken via EdNet at remote sites. These courses include Economics, Accounting, Business Law, College Algebra, Calculus Techniques, Business Communications, Business Presentations, Statistics, Spreadsheet, Database and Psychology. These courses rotate on a two year cycle on Tuesday and / or Thursday evenings.

## TRANSFER STUDENTS

The Associate of Science degrees provide the required general education courses to prepare for a four-year school, along with specific business and computer training. General education courses help business students learn the art of living as well as working. Students wishing to continue their education at a four-year university or college should complete the requirements for an Associate of Science degree, incorporating specific business
courses and computer courses in their elective hours. Students should also consult early in their program with business department advisors at CEU and at the institution to which they wish to transfer. This advisement is necessary to obtain the prerequisites for the business program they wish to complete at the transfer school. Some classes must be passed with a "B" or better in order to transfer. The CEU business faculty and advisors are listed below:

| Name | Ext. | E-mail |
| :--- | :--- | :--- |
| Betty Hassell | 5270 | Betty.Hassell@ceu.edu |
| Steven Black | 5189 | SteveBlack@sjc.ceu.edu |
| David Cassidy | 5420 | David.Cassidy@ceu.edu |
| Jan Curtis | 5285 | Jan.Curtis@ceu.edu |
| Russell Goodrich | 5641 | Russell.Goodrich@ceu.edu |
| Tracey Johnson | 5231 | Tracey.Johnson@ceu.edu |
| Eric Mantz | 5649 | Eric.Mantz@ceu.edu |
| Bill Olderog | 5249 | BillOlderog@sjc.ceu.edu |
| Henning Olsen | 5219 | Henning.Olsen@ceu.edu |
| Ron Vogel | 5257 | Ron.Vogel@ceu.edu |
| Elaine Youngberg | 5601 | Elaine.Youngberg@ceu.edu |
| Henry Zwick | 5277 | Henry.Zwick@ceu.edu |

## ASSOCIATE OF APPLIED SCIENCE

 - BUSINESS ADMINISTRATION| Core Courses |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr . |
| ACCT | 1111 | Survey of Accounting | 3 |
|  |  | - and / or- |  |
| ACCT | 2010 | Financial Accounting I | 4 |
| BUSN | 1050 | Business Math | 3 |
|  |  | - or - |  |
| MATH | 1050 | College Algebra | 4 |
| BCIS | 2010 | Business Computer Applications | 3 |
| BCIS |  | - or - |  |
|  | 1410 | Spreadsheet I | 2 |
|  |  | - and - |  |
| BCIS | 2420 | Database I | 2 |
| BUSN | 1310 | Intro to Business Management | 2 |
| BUSN | 1091 | Business Presentations | 3 |
| BUSN | 2700 | Business Forum | 1 |
| BUSN | 2201 | Marketing Concepts | 3 |
| ACCT | 2020 | Managerial Accounting | 4 |
| BUSN | 2050 | Business Law | 4 |
| BUSN | 2200 | Business Communications | 3 |



## ASSOCIATE OF SCIENCE IN BUSINESS


*If transfering to the University of Utah
**Requires a grade of " B " or better to transfer ***If transfering to the Utah State University

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ANTH APPR ART
AUTO
BCCM
BCIS
BIOL
BUSN CHEM C COMM COST CS DANC DSME ECON EDDT EDUC ELEC EMMT ENGL ENGN ESOL FAML GEO
GEOG
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PEOPLE

## ASSOCIATE OF SCIENCE/BUSINESS INFORMATION SYSTEMS EMPHASIS

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Fall Semester |  |  | 1st Spring Semester |  |  |
| Course |  | cr. | Course |  | cr. |
| BCIS | 1405 | 2 | BCIS | 1300 | 3 |
| BCIS | 1406 | 2 | BUSN | 2050 | 4 |
| BCIS | 1410 | 2 | MATH | 1050 | 4 |
| ENGL | 1010 | 3 | Fine Arts Humaniti |  | 3 |
| PSY | 1010 | 3 | Life Scien |  | 3 |
| - or - |  |  | TOTAL |  | 16 |
| SOC | 1010 | 3 |  |  |  |
| Fine Arts or Humanities |  |  |  |  |  |
| Physical Science |  | 3 |  |  |  |
| Computer Literacy |  | 0 |  |  |  |
| TOTAL |  | 16 |  |  |  |
| 2nd Fall Semester |  |  | 2nd Spring Semester |  |  |
| Course |  | Cr. | Course |  | Cr. |
| BCIS | 2420 | 2 | American Institution |  | 3 |
| АССт | 2010 | 4 | Calculus <br> Statistics |  | 3-4 |
| BUSN | 2200 | 3 | Earth Scie | ence | 3 |
| ENGL | 2010 | 3 | Fine Arts Humaniti |  | 3 |
| OralCommunications |  | 0 | Electives |  | 5 |
| Electives |  | 4 | TOTAL |  | 17-18 |
| TOTAL |  | 16 |  |  |  |
| Electives |  |  |  |  |  |
| Course |  | Name |  |  | cr. |
| ACCT | 2020 | Managerial Accounting |  |  | 4 |
| BUSN | 1091 | Business Presentations |  |  | 3 |
| BCIS | 1411 | Spreadsheet II |  |  | 2 |
| BCIS | 1901 | Intermediate Keyboarding |  |  | 2 |
| BCIS | 2300 | Advanced HTML and JAVA Script |  |  | 3 |
| BCIS | 2330 | Business Data <br> and <br> Communications  <br> Networking  |  |  | 3 |
| BCIS | 2421 | Database II |  |  | 2 |
| BCIS | 2430 | Desktop Publishing |  |  | 2 |
| BCIS | 2930 | Office Proc \& Hum Rel |  |  | 3 |
|  | Electives Total 4-7 |  |  |  |  |
|  | Program Total 65 |  |  |  |  |

## BUSINESS COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Business Principles

(3:3:0)
Social Science
Fall, Spring
This course is for all students wanting a greater understanding of business. It is an examination of the role of business and commerce through history and how it shapes modern society. Students will study both classical and current theories of management, human relations and motivation, ethics and social responsibility. Emphasis will also be placed on factors needed for organizations to become and remain competitive in the global marketplace.

## 1021 Personal Finance

(3:3:0)
Fall, Spring
This course is designed for all students. An introduction to personal financial planning throughout all stages of life. Emphasis is placed on planning for, acquiring, protecting and investing wealth to meet personal financial objectives.

1050 Business Mathematics
Fall, Spring
This course is required for students working towards aCertificate of Completion or an Associate of Applied Science in Business Administration. Business Mathematics examines common business practices and their associated math procedures. It is designed to provide a solid preparation and foundation for students who are going on to course work or careers in accounting, management, marketing, finance, and small business or for individuals who wish to become better informed consumers. Topics to be covered in this course include: discounts, markups/ markdowns, payroll, promissory notes, time value of money, consumer and business credit, interpretation of financial statements, inventory, depreciation, and an introduction to business statistics. Prerequisite: MATH 0970 or higher.

## 1091 Business Presentations

Oral Communication Intensive
Fall, Spring, Summer on demand only
Business Presentations is designed to help students develop skills in the art of expressing themselves by visually presenting business topics or proposals to individuals or groups. A variety of business presentations are given using microcom-puter presentation software.

## 1310 Introduction to Business Management

(2:2:0)

## Fall

Introduction to Business Management will cover an overview of management functions and roles and will specifically examine organizational and strategic planning, organizational design, the staffing process, and control systems. This course is required for students working towards an Associate of Science in Business Administration.

## 1400 Introduction to Hospitality Management

(3:3:0)
This course is a recommended elective for students working towards an Associate of Applied Science in Business Administration with an emphasis in Hospitality. This course provides a basic understanding of businesses in the hospitality field. Explores management functions and responsibilities from a hospitality perspective. Introduces students to career opportunities in hospitality management.

## 1500 Business Leadership Club

 Fall, SpringBusiness Leadership Club is the business department's vehicle for student practical involvement and leadership development. In addition to campus and community service projects, students may join the national business organizations PBL and/or DEX where they can network and participate in state and national leadership building activities.

## 2050 Business Law

## Fall, Spring

Business Law introduces the student to the fundamental yet dynamic nature of the legal environment among businesses, government and consumers. These relationships include questions of constitutional law, legal reasoning, ethics and procedures. Torts, crimes, contracts, property (real, personal and intellectual), physical environment, employment, agency, commercial transactions and bankruptcy are but a few issues facing national and international business.

2160 Introduction to Business Finance (3:3:0) On demand only
Introductory course in business finance. Course topics will include the financial sector, financial analysis, budgeting, the time value of money, sources of financing, the cost of capital, and basic securities. Prerequisite: A basic understanding of algebra. It is strongly recommended that this course be taken after the student has completed ACCT 2010

2191 Principles of Banking
(2:2:0)
On demand only
This course is designed for the banking professional. An emphasisis given to fundamental bank functions in a descriptive fashion so that the beginning banker may acquire a broad and operational perspective.

## 2200 Business Communications

## Fall, Spring

This course is required for students working towards an Associate of Applied Science in Business Administration. This course is designed to give students the knowledge and opportunity to write clear, concise, and correct business correspondence. Its focus is on the most common forms of business writing: sales letters, memos, proposals, research reports and resumes. The proper format of business writing is presented and stressed and emphasis is also placed on editing and proofreading in order to produce "mistake-free" correspondence. Prerequisites: An introductory English composition course and a word-processing course. Transfer students are required to make a " B " or better to transfer this credit.

## 2201 Marketing Concepts

(3:3:0)
An overview of the marketing function emphasizing concepts and terminology. The course covers the components of the marketing mix, opportunities available in marketing, and the relationship between marketing and the world of business.

2202 International Marketing
(3:3:0)
This course is for the student who desires to investigate the challenges of doing business in an increasingly global environment. Lectures and in-class discussions place special emphasis on the cultural and social diversity of international markets, marketing strategies of global firms, and the challenges of international pricing, distribution, advertising and product development. Prerequisite: BUSN 2201.

## 2211 Introduction to Advertising

(2:2:0)
Introduces students to the basic techniques used in advertising. Teaches the use of marketing information and research to develop effective advertising campaigns for different media. Other topics include basic design skills, advertising terminology, examples of effective advertising and simple market research. Prerequisite: It is recommended that students have previously taken an introductory course in marketing such as BUSN 2201

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AUTO
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BCIS
BIOL
BUSN
CHEM
CJ
COMM
COST
CS
DSME
ECON
EDDT
EDUC
ELEC
EMMT
ENGL
ENGN
ESOL
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
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MLT
MINT
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## 2241 Retail Merchandising

(2:2:0)
Anoverview of the retailing process, theenvironment within which it operates, and the institutions and functions that are performed by retailers.

## 2251 Consumer Behavior

(3:3:0)
Spring
A course designed to apply psychological, sociological, economic and anthropological influences to the purchasing and the consumption of goods and services by the ultimate consumer.

## 2320 Small Business Management- CTE Human Relations

(3:3:0)

The purpose of this course is to examine the many aspects of establishing and/or managing a small business. In addition to the basic underpinnings of a small business the course focuses on human resource management, ethics, business communications, financial management and managing the growth and expansion.

## 2321 Small Business Management

(2:2:0) Service Learning
Focuses on the unique aspects of establishing and operating a small business. Enables students interested in entrepreneurship to develop the necessary skills and tools for success. Topics will include small business practices, family businesses, franchising and formation of small businesses.

## 2390 Organizational Behavior <br> Human Relations

Fall, Spring
This course is a comprehensive study of human behavior in the workplace. Its focus is on the application of psychological theories of attribution, learning, motivation, and group processes to enhance productivity, quality, and job satisfaction. Prerequisite: Introductory writing course.

## 2451 Travel and Tourism

(2:2:0)
Spring
This course is designed to help students understand the underlying principle and practices of domestic and international tourism. It will also examine how these dimensions effect travel services, marketing strategies, planning, development, research and policy making in the area of hospitality management.

2500 Electronic Commerce
(3:3:0)
Spring
This course is a complete introduction to the world of e-commerce, with balanced coverage of both technical and business topics. Students will
learn theoretical as well as practical e-commerce applications including hands-on construction of as e-commerence web page.

## 2590 Business Ethics and Social Responsibility

Service Learning
Spring
This course explores theories of business responsibility from a multidisciplinary and managerial perspective. Presents current theories of business ethics and examines how they apply to a number of case studies. Topics include ethical and social responsibility issues with regard to consumer product safety, advertising, affirmative action, sexual harassment, employee rights, whistleblowing, conflicts of interest, and worker safety.

## 2600 Business Consulting

(1-3:1-3:0)
On demand only
This course is designed for the business student to provide consulting opportunity and experience as well as exposure to the practical realities of the business world. Under the supervision of a faculty member, students will work with small businesses in the area to either provide or assist in the delivery of consulting, training or business counseling services. On demand only.

## 2700 Business Forum

(1:0:1)
Spring
Business forum is designed to increase the student's success during and after the college experience. The course will focus on developing a portfolio to include a resume, samples of outstanding college work, and letters of recommendation. The course will include a very basic overall review of the major business subjects (accounting, business law, economics, marketing, management, and finance) and their relationship with each other.

2977 Cooperative Education
(1-3:0:1-3)
This course provides for supervised on-the-job training in general business functions. Learning objectives, hours worked and credit agreements are approved by instructor. Prerequisite: Instructor permission.

2988 Special Problems
(1-3:0:1-3)
Special Problems provides an opportunity for business students to study or research a special area of interest approved by an instructor. Time and credit is to be arranged.

## 2999 Workshop

(1-3:1-3:0)
This course is designed to meet the changing needs of the Business or Non-Business student in today's world. In a workshop or seminar-type format, opportunity is provided to cover a broad range of topics and issues. Emphasis will be placed upon the most current thinking in business practice and technology.

## CHEMISTRY (CHEM)

Dr. Joseph Chimeno
Dr. Mark Noirot
The chemistry program prepares students to transfer to the college or university of their choice at the junior level. The program includes physics and mathematics courses in addition to a solid foundation in principles of inorganic and organic chemistry. The program of study incorporates general education electives which may include additional mathematics courses (highly recommended) and liberal arts courses. When students complete the Associate of Science degree with a chemistry emphasis, they should be prepared to do well in more intensive chemistry courses such as physical chemistry, thermodynamics, reaction rates, and quantum chemistry.

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| First Year |  |  |  |  |  |
| course |  | cr. | Course |  | cr. |
| CHEM* | 1210 | 4 | MATH* | 1060 | 3 |
| CHEM* | 1215 | 1 | MATH* | 1210 | 4 |
| CHEM* | 1220 | 4 | Oral Con | unication | 0 |
| CHEM* | 1225 | 1 | General | ucation | 15 |
| MATH* | 1050 | 3 | TOTAL |  | 35 |
| *Recommended Electives |  |  |  |  |  |
| Second Year |  |  |  |  |  |
| course |  | cr. | Cours |  | cr. |
| CHEM* | 2310 | 4 | PHYS* | 2210 | 4 |
| CHEM* | 2315 | 1 | PHYS* | 2215 | 1 |
| CHEM* | 2320 | 4 | PHYS* | 2220 | 4 |
| CHEM* | 2325 | 1 | PHYS* | 2225 | 1 |
| MATH* | 1220 | 4 | General Education |  | 12 |
|  |  |  | tOTAL |  | 36 |
| *Recommended Electives |  |  |  |  |  |
| Program Total 63 |  |  |  |  |  |

## CHEMISTRY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Introduction to Chemistry <br> Physical Science

Fall, Spring
Emphasis is placed on learning the metric system; how to do conversions between the English and metric system; avoiding problems with household chemicals; an introduction to organic and biochemistry as it applies to everyday living; and acids and bases. Lecture demonstrations and in some cases, cooperative team learning is used to emphasize topics. Those who successfully complete the course should understand the hazards associated with common household chemicals, be prepared for the change to the metric system, and better understand the articles in the popular press regarding chemical and environmentally related topics. Prerequisites: None, though successful completion of MATH 0990 is most helpful along with a college writing course.

1015 Introduction to Chemistry Lab (1:0:2)
This laboratory course is offered to those students concurrently enrolled in CHEM 1010. The lab course offers hands-on experience obtaining data in support of topics taught in CHEM 1010. Such concepts are laboratory safety, density, use of various laboratory equipment, mole reactions, titrations, acid and base measurements, ester formation, saponification reaction and gain a familiarity with the metric system. Students should gain an appreciation of the skills needed to get accurate data and learn chemical manipulations necessary for their chosen field. This lab is optional. Prerequisite: Concurrent enrollment in CHEM 1010.

## 1110 Elementary Chemistry

(3:3:0)
Fall
This course is designed for nursing students, forestry majors, and those going into health fields not requiring the more mathematically intensive CHEM 1210, 1220 series. The course consists of an introduction to the metric system and dimensional analysis using a four function calculator; a discussion of the periodic chart and how it relates to medicine; bonding and shapes of molecules; naming of inorganic and organic hydrocarbons; chemical reactions; gases, solutions,

## GENERAL

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## PROGRAMS \& COURSE OF STUDY

## ACCT

ANTH APPR

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acid/base reaction and their importance to the medical area; and an introduction to nuclear and hydrocarbon chemistry. The course is taught using cooperative learning and team techniques, lectures and demonstrations. Upon completion, students should be able to perform calculations involving drug dosages and better understand what they have learned in physiology courses. Prerequisites: Competency in mathematics at the intermediate algebra level, with a C+ or better grade; keyboarding or a word processing course; completion of CHEM 1010 with a C+ or better grade.

## 1115 Elementary Chemistry Lab

(1:0:2)
This is the laboratory part of CHEM 1110. Experiments are chosen to illustrate and clarify concepts taught in the lecture portion of CHEM 1110. Hands-on experience with the techniques of chemistry such as using crucibles, vernier calipers, funnels, semipermeable membranes to study osmosis and diffusion, an indicator derived from red cabbage to study acid/base properties of solutions and so forth. Upon completion of the laboratory experience, students will have a better idea of laboratory manipulations needed to acquire the data they use in the nursing profession. Prerequisite: Concurrent enrollment in CHEM 1110.

## 1120 Elementary Bio-Organic Chemistry

(3:3:0)
Spring
This is a follow up course to CHEM 1110 and is for students desiring to be LPN nurses or going into health care fields where the more mathematically rigorous CHEM 1220 is not required. The course consists of a discussion on organic functional groups and their reactions as applied to bodily processes and an overview of biochemistry as it applies to the basic processes of life. The course is taught using lecture and demonstrations. Upon completion, students will be able to read articles in reference journals and apply what they have read to their chosen health care field. They will also enjoy a better appreciation for physiology and microbiology. Prerequisites: Successful completion of CHEM 1110, 1115, permission of the instructor.

## 1125 Elementary Bio-Organic Chemistry Lab

(1:0:2)
This course is for students enrolled in CHEM 1120 and is the laboratory part of CHEM 1120. Experiments are chosen to enhance understanding of the lecture concepts. Tests used to identify the different functional groups of organic chemicals, some synthesis of simple organic molecules; identification of lipids, carbohydrates, and proteins;
and gene splicing experiments all combine to give the student a feel for organic and biochemistry. Upon completion, students will be able to better understand the modern advances being made in organic and biological chemistry.

## 1210 General Chemistry I

(4:4:0)

## Service Learning

Fall
This course is designed for pre-medical/dental, pre-engineering, chemistry, and earth science students. Concepts taught involve English to metric conversions, the importance of the periodic chart to everyday problems, thermochemistry, an introduction to ionic and covalent bonding, and modern physics as it relates to the chemical bond. Lecture, demonstrations, and in some cases, team learning is used to emphasize topics. Upon successful completion, students should understand why chemistry is the fundamental science and be familiar with techniques for researching articles on the Internet pertaining to chemistry. Prerequisites: Successful completion of MATH 1050, a word processing or spreadsheet class involving Windows software or permission of the instructor.

## 1215 General Chemistry I Lab

(1:0:2)
The laboratory course is offered to those students concurrently enrolled in Chem 1210. The laboratory course offers hands on experience obtaining data in support of topics taught in the lecture sequence. Such concepts are density, the determination of Avagadro's number, heats of reaction, and experiments involving wavelength and light. Students should gain an appreciation of the skills needed to get accurate data and learn chemical manipulations necessary to their chosen fields. Prerequisite: Concurrent enrollment in CHEM 1210.

## 1220 General Chemistry II

Spring
This is the second part of the chemistry series for pre-med/dental, pre-engineering, chemistry and earth science majors. This course relies on learning and applying graphing calculator skills in solving chemistry problems relating to chemical kinetics, acid-base theories, organic chemistry, and coordination compounds. Methodsused to teach this second part of the series rely heavily on cooperative team efforts to solve common chemistry problems, lecture and demonstrations. Upon completion of this part of the series, students should be able to effectively use a graphing calculator, understand how chemistry relates to living organisms, and understand how to perform calculations involving acid-base equilibria. Prerequisites: Completion
of CHEM 1210 with a "C" or better; successful completion of MATH 1050 with a " C " or better; successful completion of a word processing/ spreadsheet class using Windows software or permission of the instructor.

## 1225 General Chemistry II Lab

(1:0:2)
Spring
The laboratory is offered only for those students concurrently enrolled in CHEM 1220. The laboratory phase offers the students opportunities to get hands-on experience using the instrumentation and techniques described in their textbook. Lecture and doing are two techniques used in this course. Freezing point lowering will be used to determine molecular weights of materials, a first order kinetic experiment, acid/base titration, some organic synthesis and the isolation of cholesterol from eggs are typical experiments. Students should gain addition experience in physical chemistry laboratory determinations. Prerequisites: Concurrent enrollment in CHEM 1220.

## 2310 Organic Chemistry I

(4:4:0)
Fall
This course is for pre-med/dental, chemistry majors, and other allied health sciences needing an organic chemistry course containing more detail than CHEM 1120. Topics include the fundamentals of both saturated and unsaturated hydrocarbons (stereochemistry, necleophilio substitution and elimination reactions, electrophillic and free radical addition). Lecture, demonstrations and cooperative team learning is used to emphasize topics. Those who successfully complete the course will be prepared to succeed in the following course, CHEM 2320. Prerequisites: Successful completion of CHEM 1210, 1220 with a " C " or better in both courses or the permission of the instructor.

## 2315 Organic Chemistry I Lab

(1:0:2)
Fall
This lab is for those enrolled concurrently in CHEM 2310. This is the hands-on learning part of organic synthesis and the use of instrumental techniques common to organic chemistry success as gas chromatography and Fourier Transform Infra Red (FTIR) Spectroscopy. Students should gain an appreciation for the lecture material and learn the chemical manipulations involved in organic synthesis. Prerequisite: Concurrent enrollment in CHEM 2310

2320 Organic Chemistry II
(4:4:0) Spring
A continuation of CHEM 2310. for pre-med / dental students and chemistry majors and any other allied health fields requiring a more in depth organic chemistry course than CHEM1120. Topics covered begin with cyclic hydrocarbons, both saturated and unsaturated and their reactions; instrumental spectroscopic techniques, the reactions of functional groups such as aldehydes / ketones, carboxylic acids and the like, the Aldol condensation, reactions of amines and phenols. Lecture, demonstrations and cooperative learning techniques are used to facilitate the learning of organic chemistry. Upon completion of the course students should be better prepared to understand the concepts of biochemistry as it relates to the human body and how organic molecules react. Prerequisites: Successful completion of CHEM 2310 with a "C + " or better grade, instructors permission.

## 2325 Organic Chemistry II Lab

(1:0:2) Spring
This lab is for those concurrently enrolled in CHEM 2320. The laboratory part of this course emphasizes and builds on concepts covered in the lecture portion of CHEM 2320. Gas chromatography, FTIR, High Pressure Liquid Chromatography are all used to elucidate the structures of organic molecules synthesized in the laboratory. Students should gain an appreciation for the skills needed to get accurate data and learn the chemical manipulations associated with organic chemistry. Prerequisite: Concurrent enrollment in CHEM 2320.

2977 Cooperative Education (1-3:0:1-3) This course provides supervised on-the-job training in chemistry lab assistant and similar positions. The student meets with the instructor/ coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
Designed to meet changing needs of the student in Chemistry.

GENERAL


PEOPLE

## CRIMINAL JUSTICE (CJ)

Scott Henrie
Richard Walton

## CAREER OPPORTUNITIES

By completing the program outlined below a student can obtain an Associate of Science Degree in Criminal Justice. Criminal Justice is a rapidly expanding field that provides a wide variety of career paths in such areas as law enforcement, courts, criminalistics (crime labs and investigations), law, juvenile law and corrections. Specific career possibilities, depending on the level of education one pursues, could include such things as attorney, law enforcement officer, correctional officer, inspector or compliance officer, firefighter, paralegal, private investigator, forensics specialist, private security, probation officer, and numerous federal enforcement positions. Because our criminal justice system reflects the realities and concerns of society, the Criminal Justice program draws from a wide variety of academic disciplines like political science, psychology, history, and sociology. See the Criminal Justice Department website at www.ceu.edu for more information.

## ASSOCIATE OF SCIENCE IN CRIMINAL JUSTICE

The Recommended Course of study is intended as a guideline to help students plan their schedules to ensure they graduate in two years. The schedule can be modified or courses rearranged to meet the student's individual needs. Students need not adhere to the proposed schedule, but all requirements will still have to be completed for graduation. It is merely a sample program to help a student successfully complete the program.

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Fall Semester |  |  | 1st Spring Semester |  |  |
| course |  | c. | curse |  | cr |
| ENGL | 1010 | 3 | ENGL | 2010 | 3 |
| c) | 1010 | 3 | мath | 1030 | 3 |
| c) | 1330 | 3 | HIST | 1700 | 3 |
| Humanities |  | 3 | Life Scien |  | 3 |
|  | -or- |  | One of CJ co | he following <br> re cours |  |
| Fine Ar |  | 3 | c) | ${ }^{1340}$ | 3 |
| Earth |  | 3 | ${ }^{\text {c }}$ | 2350 | 3 |
| $\begin{aligned} & \text { Oral Col Co } \\ & \text { Clisi } \end{aligned}$ | m. (May use | 0 | One of <br> CJ ele | the following |  |
| тотal |  | 15 | c) | 1300 | 3 |



## CRIMINAL JUSTICE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Introduction to Criminal Justice

(3:3:0)

## Social Science

Fall, Spring, Summer
This course is designed for all students. Students will be introduced to the history, processes and functions of the American criminal justice system and its primary components, namely law enforcement, courts, and corrections. The students will generally understand the history, process, and functions of the police, courts, and corrections as they relate to the operation of our criminal justice system and key constitutional provisions.

## 1030 Introduction to Firearms Handling/Safety

This course is designed as an introductory basic training program for students interested in recreational shooting, hunting, competition shooting, gun collecting, home safety or personal protection. This program will teach you the basic
safety principles and help you develop the knowledge, skill and attitudes that are needed to successfully pursue your shooting interests. This course is the prerequisite for RECR 1060 and 1070. This course will introduce the student to and familiarize them with the various types of firearms, the mechanics, care and cleaning, history of each type and the unique handling requirements for the following: rifles, shotguns, revolvers and semiautomatic firearms. A large portion of the course will center around general firearm etiquette and safety procedures and students will have an opportunity to practice on a firing range.

## 1070 Law Enforcement/Corrections Academcy I

(3:3:3)

## 1080 Law Enforcement/Corrections Academcy II

(3:3:3)
Six credit hours will be awarded for successful POST certification.

1090 Introduction to Law Enforcement (3:3:0) This course is a comprehensive study as to the evolvement of law enforcement in America. Emphasis will be placed on the historical aspects of law enforcement and what effect those events have presently. An in-depth analysis of Traditional Policing and Community Policing; how Community Policing evolved and what future problems it poses for law enforcement. This course is recommended for the prospective law enforcement professional, social worker, law student or anyone wishing to learn more about the profession of law enforcement.

## 1300 Introduction to Corrections

(3:3:0)

## Oral Communication Intensive

## Spring

This course examines the history and the administration of corrections in America. Emphasis will be placed on the philosophies of punishment, sentencing strategies, prison community, alternatives to incarceration, and various reform efforts. Critical issues facing corrections will also be examined. The students will generally understand the evolution and administration of corrections in America.

## 1330 Criminal Law

(3:3:0)
Fall, Spring
This course is designed mainly for, but not limited to the student majoring in Criminal Justice. It surveys the American criminal justice system. Elements of crime, defenses, historical foundation, limits, proposes and functions of criminal law are discussed. The students will
understand the key general principles that relate to criminal law, criminal liability, complicity, uncompleted crimes, defenses to criminal liability and the various crimes in our legal systems. They will also learn how to read and use statutes and analyze fact situations in light of the law

## 1340 Criminal Investigation

(3:3:0)

## Fall

This course will introduce students to the criminal, investigation process. Legal, scientific, and administrative aspects of this process will be explored and students will come to appreciate the complexity of conducting a thorough investigation and be able to deal with potential obstacles that are commonly encountered. This course is a valuable precursor to taking Criminalistics. The objective of this course is to acquaint the student with the fundamentals of criminal investigations.

1350 Introduction to Forensic Science
(3:3:0)
Fall, Spring
This course is mainly designed for the student majoring in Criminal Justice. It includes interrogation and interview, sources of information (electronic/traditional), crime scene procedure, introduction to identification, collection and preservation of evidence, laboratory techniques and case preparation. The student will understand the functions and duties of the forensic scientist and learn basic skills that related to evidence collection, preservation and analysis. Prerequisites: CJ 1010 and 1330 are highly recommended -

1355 Crime Scene Processing
(3:3:0)
This course covers the duties and responsibilites of a crime scene technician at the scene of a crime. It includes instruction on the proper collection, handling and storage of evidence. Report writing, proper requests for examination as well as laboratory methods are an integral part of this course. Prerequisites: CJ 1340 or 1350.

## 1360 Crime Scene Academy

(3:3:1)
A student will receive extensive training to develop credible skills in the area of crime scene processing. These skills will include, but not limited to; analyzing crime scenes, learning proper investigation processes, managing crime scenes, documenting and preserving evidence at a crime scene, becoming familiar with the medical/ legal aspects of crime scene investigation and becoming familiar with standardized national procedures. After successfully completing the course and passing the required test, the student will be certified as a Crime Scene Technician by the Utah State Bureau of Forsenic Services.

## GENERAL

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## PROGRAMS \& COURSE OF STUDY

ACCT
ANTH
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ART
AUTO
BCCM
BCIS
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## 2110 Security

Spring
This course is designed as a requirement mainly for the student majoring in Criminal Justice. It examines the diverse components which make up the security function, as well as principles and concepts in physical security, loss control and crime prevention. The students will know and understand the historical and professional principles of public and private security and crime prevention, as well as risk management and loss control principles.

## 2330 Juvenile Justice <br> Service Learning

(3:3:0)

Fall
This course is designed mainly for the student majoring in Criminal Justice. It studies the origin, philosophy, and development of the juvenile justice system, particularly the juvenile court. Emphasis is placed upon laws, detention, adjudication, probation, after-care, foster homes, and other alternative correctional practices. The students will understand the nature and origins of juvenile law and the guiding principles that drive the system.

2340 Survey of Criminal Procedure
(3:3:0)
This course will introduce students to the following concepts; historical development of laws and crime causation, historical development of the Justice System, the arrest, the initial appearance, pretrial proceedings, place and time of trial, the trial, confrontation and assistance of counsel, pretrial motions, hearings and plea negotiations, the trial and the roles of major participants, the jury, trial procedure, the jury instructions and deliberation, the verdict, appeals and appellat citations, the sentence and correctional procedures, sentencing philosophy and clemency, extradition process, juvenile system focus and victims' rights. Prerequisites: CJ 1010, 1330, 2350 or special permission of instructor.

2350 Laws of Evidence
(3:3:0)
Fall, Spring
This course is designed mainly for the student majoring in Criminal Justice. It deals with the principles and rules of law emphasizing evidentiary problems related to criminal cases. It will be an introduction and overview of the court process and problems related to the fact finding process of juries. It will explore the courtroom procedures as they relate to evidence and its uses in the courtroom, with emphasis upon the introduction of evidence and the rules pertaining thereto. The students will understand the value of the rules of evidence in the law and be able to understand and apply them to fact scenarios: Prerequisite: Highly recommended: CJ 1010

2360 Juvenile Law and Procedures
Spring
This course is designed mainly for the student majoring in Criminal Justice. The course covers the juvenile justice system emphasizing Utah law and procedure. Itstudiesdifferencesbetweenjuvenileand adult systems, delinquent acts, juvenile treatment as adults and role and function of probation, youth corrections, family services and the community. The student will generally understand the nature and origins of juvenile law, the principles and laws that pertain to juvenile delinquency; neglect, abuse and dependancy proceedings; and status offenses. They will also learn how to read and use statutes and analyze fact situations in light of the law.

## 2370 Child Abuse and Neglect

## Fall, Spring

This course is an overview of causes, identification, reporting, and legal issues pertaining to children who are abused and/or neglected. The cycle of domestic violence and its effects on children will be discussed. The primary objectives of this course are to assist the student in gaining an insight of what constitutes child maltreatment and domestic violence, assess underlying causes of abuse and neglect, and how it is addressed within the criminal justice system.

2860 Criminal Justice Field Experience
(3:3:0)
Fall, Spring (for second year program majors only) This course is designed for students majoring in Criminal Justice. This Criminal Justice Field Experience in an internship with city, county, and state criminal justice agencies. Registration is by permission of the instructor. Students may repeat this course for a total of six credit hours, with consent of instructor. The student will gain first hand experience and knowledge of an area of criminal justice by working with, riding with, or observing a practitioner and will be able to directly evaluate their own interest level in the field.

## 2977 Cooperative Education

(1-3:0:1-3)
Fall, Spring (for second year program majors only) Open to all students in the Criminal Justice Department who meet the minimum cooperative work experience requirements of the department. Provides academic credit for on-the-job experience. Grade and amount of credit will be determined by the department. The student will gain first hand experience and knowledge of an area of criminal justice through on the job training.

## 2988 Special Problems

(1-3:0:1-3)
Fall, Spring
These courses are designed mainly for the student majoring in Criminal Justice. There will be a variety of short courses, institutes and special problems which will work under this number. The number of credits earned will be determined by the department. Classes will be designed on demand.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing need of the student in Criminal Justice/Legal Studies.

## COMMUNICATION (COMM)

Troy Hunt
Dr. Susan Polster

The Department of Communication offers a full two year college communication curriculum for students wanting to major or minor in some phase of the field. The program offers a solid foundation of communication courses in Broadcast, Print and Oral Communication. The department provides the two years of communication training required of communication students during their first two years of college work, leading to a bachelor or advanced degree. Upon graduation from a fouryear institution of higher education, a student can gain employment working for a newspaper, magazine, radio station or television station, as well as in the business world.

| Recommended Course of Study - Broadcast Communication |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Year |  |  | Recommended Electives |  |  |
| Course |  | Cr. | Course |  | Cr. |
| ENGL | 1010 | 3 | COMM | 1500 | 3 |
| ENGL | 2010 | 3 | COMM | 1510 | 3 |
| MATH | 1030 | 3 | COMM | 1560 | 3 |
|  |  |  | COMM | 2200 | 3 |
| MATH | 1050 | 4 | COMM | 2560 | 1-3 |
| BCIS | 1010 | 3 |  |  |  |
| Humanitie Fine Arts | es or | 3 |  |  |  |
| Earth Sci | nce | 3 |  |  |  |
| Electives |  |  |  |  |  |


| Recommended Course of Study - Broadcast Communication |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 2nd Year |  | Recommended Electives |  |  |
| Course | cr. | Course |  | cr. |
| Humanities and Fine Arts | 6 | COMM | 1020 | 3 |
| Social Science | 3 | COMM | 1610 | 3 |
| Life Science | 3 | COMM | 2560 | 1-3 |
| Physical Science | 3 | COMM | 2660 | 1-3 |
| Electives | 17 | THEA | 1023 | 3 |
|  |  | THEA | 1113 | 3 |
| Program Total 63 |  |  |  |  |


| Recommended Course of Study - Print Communication |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 1st Year |  | Recommended Electives |  |  |
| Course | cr. | course |  | ${ }_{\text {c. }}$ |
| ENGL 1010 | 3 | сомм | 1040 | 3 |
| ENGL 2010 | 3 | сомм | 1050 | 3 |
| MATH 1030 | 3 | сомм | 1610 | 3 |
| - or- |  | сомм | 1720 | 3 |
| MATH 1050 | 4 | сомм | 1800 | 3 |
| BCIS 1010 | 3 |  |  |  |
| Humanities or Fine Arts | 3 |  |  |  |
| Earth Science | 3 |  |  |  |
| Electives | 12-13 |  |  |  |
| 2nd Year |  | Recomm | ended |  |
| Course | cr. | Cour |  | $\mathrm{cr}_{\text {r }}$ |
| Humanities and Fine Arts | 6 | Сомм | 1020 | 3 |
| Social Science | 3 | Сомм | 1500 | 3 |
| Life Science | 3 | сомм | 2070 | 3 |
| Physical Science | 3 | сомм | 2080 | 3 |
| Electives | 17 | thea | 1023 | 3 |
| Program Total 63 |  |  |  |  |


| Recommended Course of Study - Oral Communication |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Year |  |  | Recommended Electives |  |  |
| Course |  | Cr. | Course |  | Cr. |
| ENGL | 1010 | 3 | COMM | 1020 | 3 |
| ENGL | 2010 | 3 | COMM | 1560 | 3 |
| MATH | 1030 | 3 | COMM | 2110 | 3 |
|  |  |  | COMM | 2560 | 3 |
| MATH | 1050 | 4 | COMM | 1023 | 3 |
| BCIS | 1010 | 3 |  |  |  |

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PROGRAMS \& COURSE OF STUDY

ACCT
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AUTO
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BCIS
BIOL
BUSN
CHEM


DSME
ECON
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HYDR
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MATH
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NURS
PE
PHIL
PHYS
POLS
PRE-PROF
PSY
RECR
SLSC
SOC
THEA
TRST
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WELD
WILD
PEOPLE

| Recommended Course of Study - Oral Communication |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Humanities or Fine Arts | 3 |  |  |  |
| Earth Science | 3 |  |  |  |
| Electives | 12-1 |  |  |  |
| 2nd Year |  | Recom | ende |  |
| Course | Cr. | Course |  | Cr. |
| Humanities and Fine Arts | 6 | COMM | 1270 | 3 |
| Social Science | 3 | COMM | 1500 | 2 |
| Life Science | 3 | COMM | 2120 | 3 |
| Physical Science | 3 | COMM | 2150 | 3 |
| Electives | 17 | COMM | 2560 | 1-3 |
| Program Total 63 |  |  |  |  |

## COMMUNICATION COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1020 Public Communication <br> Oral Communication Intensive <br> Fall

(3:3:0)

This course is designed to provide students with skill and techniques to help them become more effective communicators. Students will learn various research and organizational techniques relating to oral presentations. Students will learn to give and receive constructive criticism relating to oral presentations. Students will be asked to do speeches designed for both personal and organizational situations.

1040, 1050 Newspaper Production (3:2:4 each) Fall, Spring
These courses cover the writing, research, layout and design of the campus newspaper, "The Eagle" for first year students. Teaches computer-assisted reporting and utilizes four computer programs within the framework of the class. Emphasizes the interview, research and copy preparation of news, viewpoints, features, arts and entertainment and sports. Prepares students to enter the day-to-day print world of the communication field. Prerequisites: At least a " B " or better in high school and college English classes and COMM 1710.

1110, 1120 Intercultural Experience (2:1:2 each) Fall, Spring
These courses are designed to provide a multicultural exchange of ideas and experiences between students from different cultures in order to increase
their intercultural communicative competence. Each student will be assigned a conversation partner from a culture other than their own. Students will meet with the instructor one hour each week for lecture, group discussion, reporting, and instruction. Partners will meet for two hours each week to discuss assigned topics. Instructor's approval must be obtained for this class.

## 1270 Analysis of Argument <br> Oral Communication Intensive

Study of argumentation - reasoning, issues, and audience analysis in decision-making contexts. Analysis and critical evaluation of persuasive and argumentative messages. Practical experience in creating and presenting arguments for a variety of daily applications.

## 1400 Introduction to Film and Film Criticism

This is a general introduction to film, open to all interested students. Instructors emphasize analysis: considering how cinematography, sound, editing, motion, and design contribute to the overall effect of a film experience. A variety of films from silent through contemporary are observed, discussed and analyzed. The course includes some treatment of film history, film genres, and the social values and ideals reflected through film. Students demonstrate their understanding of course material through discussion and by writing papers and/or essay examinations. Written home work assignments, tests, and quizzes may also be included.

## 1500 Introduction to Mass Communication

## Humanities

An introduction to the theory, structure, content, functions, impacts, power and responsibility of newspapers, magazines, radio, television, computer networks and motion pictures, and their signifiance in contemporary society.

1510 Introduction to Broadcasting
(3:3:0)
This course offers an overview of the radio-television-cable industry with emphases to include history, technological innovations, programming practices, the business structure of the industry, and possible career paths available.

1560 Radio Production (Audio)
(3:2:1) Oral Communication Intensive
Students will learn the history, law and current operating practicesoftheradioindustry. Additionally, students will learn the techniques and disciplines of radio field and studio production through hands-on
experience. Includes microphone setups, audio console operation and script writing. Students will learn cut/splice and digital editing. Analysis of the medium's characteristics and practice in preparing and producing programs.

1610 Introduction to News Reporting and Writing
(3:3:0)
Fall
Develops writing skills relevant to newspapers and online news services. Emphasizes news gathering, interviewing and news writing.

## 1660 Introduction to Television

(3:2:1)
A study of the fundamentals of television production including design, shooting, editing, lighting techniques, and an examination of the technological underpinnings of the industry.

## 1710 Writing and Reporting for the Mass Media

(3:3:0)
Fall
This course describes each mass media (radio, television, newspapers, and magazines) which convey information differently and whose main functions are to entertain, inform and persuade. Writers should understand the functions of each medium, and of individual items, so they can craft their material in the most meaningful and efficient ways. Especially in the information arena, the mass media differ in important ways; portability, timeliness, perspective, durability, and engagement. It covers all bases in traditional news writing plus material to boost any media writer's language skills. Its focus is on handson learning with concepts and material linked to real-life experiences.

## 1720 Writing for Broadcasting

(3:3:0)
Writing factual and fictional materials for broadcast media. Assignments include news, commercials, public service annoucements, interviews, documentaries, and other types of scripts. Students will be taught proper script formats for both radio and television writing. Prerequisites: COMM 1560, 1660.

1800 Communication Graphics
(3:2:4)

## Fall, Spring

An introduction into the design of communication projects with special emphasis on creative typography, computer-assisted layout and design as well as publication techniques. Prerequisite: Word processing course or permission of instructor.

2070, 2080 Newspaper Production (3:2:4 each) Fall, Spring
This course covers the writing, research, and layout and design of the campus newspaper, "The Eagle" for second-year students. Teaches computer-assisted reporting and utilizes four computer programs within the framework of the class. Emphasizes the interview, research and copy preparation of news, viewpoints, features, arts and entertainment and sports. Prepares students to enter the day-to-day print world of the communication field. Prerequisites: At least a "B" or better in high school and college English classes and COMM 1710.

2110 Interpersonal Communications (3:3:0) Human Relations Fall, Spring
This course specifically deals with the communications skills needed for interpersonal relationships. Students will discuss as well as role-play various situations that may arise in the context of dyadic interaction. This course will empower students in the area of conflict resolution by focusing on such tools as empathic listening and a relationship centered paradigm of problem solution. The context of this course will cover both personal as well as organizational situations.

## 2120 Group Communication <br> Human Relations/Oral Communication

(3:3:0)

## Intensive

Fall, Spring
This course is designed to provide students with the communication skills to become a more effective group member. In this course students will deal specifically with communication issues as they relate to small group interaction. Students will learn different types of leadership styles along with positive and negative characteristics of each. Students will discuss and role play group situations that deal with ethical implications regarding communications. This class will deal with both personal and organizational groups.
$2150 \quad$ Intercultural Communication (3:3:0)
Social Science/Oral Communication Intensive Social Science/Oral Communication Intensive
A study of the ways people communicate within and between cultures, including a consideration of cultural contexts and the relationship between culture and communication.

2200 Broadcast Production (TV)
(3:2:1)
Fall, Spring
A study of the fundamentals of television production including design, shooting, editing, lighting techniques, and an examination of the technological underpinnings of the industry.

## GENERAL

Introduction Statement of Policy College Terminology Admissions Academic Policies Financial Services Scholarships Student Services Degree Requirements

## PROGRAMS \& COURSE OF STUDY

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## 2560 Radio Performance

(1-3:0:1-3)
Fall, Spring
A practical, hands on training experience in radio operations and production. Students will fulfill various tasks associated with the operation of the campus radio station. Students will attend a weekly meeting with the faculty advisor, produce promotional spots and underwriting, work regularly scheduled board shifts, and other duties as assigned according to the number of credit hours being attempted. Prerequisite: COMM 1560.

2660 Television Practicum
(1-3:0:1-3)
Advanced study in television production. The course is project based. Projects are determined by the needs of CEU, or available outside clients. Prerequisite: COMM 2200.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training and experience in communication areas. The student establishes learning objectives, hours to be worked, and a credit agreement with the faculty/ coordinator at the beginning of the semester. The student then meets periodically with the faculty/ coordinator to review progress. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work to be approved by instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to meet the changing needs of the student in Communication.

## COSMETOLOGY/ BARBERING (COST)

Linda Davis<br>Debra Prichard

College of Eastern Utah offers a Cosmetology/ Barbering course of 2000 hours of instruction and prepares the student to meet requirements for taking the state licensing examination. Classes run Monday through Friday, six hours per day. The course covers the beauty services of permanent waving, shampooing, hair styling, hair cutting, clipper cutting, scalp treatments, arching, lash and brow tinting, manicuring and other material essential to being a successful cosmetologist/ barber. Students pay regular college tuition plus the
cost of equipment being used during their training. This equipment belongs to the student and upon completion of the course they may take it with them. To be a licensed cosmetologist/barber in the State of Utah, an applicant must complete 2000 hours of training in a licensed school of cosmetology/ barbering. The number of actual semesters a student spends enrolled in Cosmetology/Barbering for a state license will depend on her/his attendance. for a Certificate of Completion, a student must complete four to five semesters and 2000 hours. An Associate of Applied Science Degree in Cosmetology is also offered.

Admission into the cosmetology program is a separate process from the admission to the college. Forms necessary to apply are available from the cosmetology department. Enrollment is limited and competitive. Selection is determined by a cosmetology admissions committee which evaluates GPA, references, work experience, communication skills, and personal interview. Candidates will be notified by mail of admission status.

## CAREER OPPORTUNITIES

As a graduate, many jobs will be open to you, including hairstylist, colorist, nail techician, educator, platform artist, or make-up artist. You may choose to work in an independent salon, a spa salon, a national franchise, or an independent chain. You may specialize in salon management or massage. You may even team up with chemists to develop and market your own product line.

| Certificate of Completion (One year program) |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | ${ }_{\text {c. }}$ |
| cost | 1100 | Cosmetology Theory | 5 |
| cost | 1110 | Cosmetology Lab | 10 |
| cost | 1200 | Cosmetology Theory | 5 |
| cost | 1210 | Cosmetology Lab | 10 |
| cost | 2300 | Intermediate Cosmetology Theory | 5 |
| cost | 2310 | Intermediate Cosmetology Lab | 10 |
| cost | 2400 | Intermediate Cosmetology Theory | 5 |
| cost | 2410 | Intermediate Cosmetology Lab | 10 |
| cost | 2500 | Advanced Cosmetology Theory | 5 |
| COST | 2510 | Advanced Cosmetology Lab | $5-10^{*}$ |
| ENGL | 1010 | Introduction to Writing | 3 |
| busn |  | Business Mathematics | 3 |
| BUSN |  | Organizational Behavior | 3 |
| Program Total 79-84 |  |  |  |


| Associate of Applied Science Degree Program |  |  |  |
| :--- | :--- | :--- | :--- |
| Course |  | Name | Cr. |
| COST | 1100 | Cosmetology Theory | 5 |
| COST | 1110 | Cosmetology Lab | 10 |
| COST | 1200 | Cosmetology Theory | 5 |
| COST | 1210 | Cosmetology Lab | 10 |
| COST | 2300 | Intermediate Cosmetology | 5 |
|  |  | Theory |  |
| COST | 2310 | Intermediate Cosmetology Lab | 10 |
| COST | 2400 | Intermediate Cosmetology | 5 |
|  |  | Theory |  |
| COST | 2410 | Intermediate Cosmetology Lab | 10 |
| COST | 2500 | Advanced Cosmetology Theory | 5 |
| COST | 2510 | Advanced Cosmetology Lab | $5-10^{*}$ |
| ENGL | 1010 | Introduction to Writing | 3 |
| BUSN | 1050 | Business Mathematics | 3 |
| BUSN | 2390 | Organizational Behavior | 3 |
| COMM | 2110 | Interpersonal Communications | 3 |
| BCIS | 1010 | Computer Literacy (If | 3 |
|  |  | necessary) |  |

*May be neccessary to complete clock hour requirements.

## COSMETOLOGY/BARBERING COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1100 Cosmetology Theory (5:5:0)

Fall, Summer
Theory Class covers bacteriology, decontamination and infection control, permanent waving, chemical hair relaxing, hair cutting and hair lightening. Emphasis on new technology and product knowledge from industry.

## 1110 Cosmetology Lab <br> (10:0:25)

## Service Learning

Fall, Summer
Lab instruction and practical application. Teaches shampooing, scalp treatments, manicuring, hair cutting, hair dressing, tinting and bleaching, and facials.

1200 Cosmetology Theory
(5:5:0)
Spring
Theory Class covers hair coloring, skin and disorders, chemistry, properties of scalp and hair, wet and thermal hair styling.

1210 Cosmetology Lab
(10:0:25)
Service Learning
Spring
Lab instruction and practical application teaches shampooing, scalp treatments, manicuring, hair cutting, hair dressing, tinting and bleaching, and facials.
$1500 \begin{aligned} & \text { Professional Vocational Leadership } \\ & \text { (VICA) }\end{aligned}$
Fall, Spring
This course supports and facilitates the goals and objectives of Vocational Industrial Clubs of America (VICA). Students will gain skills in the following areas: personal development, service, team building and leadership, workplace skills, and interview skills. Students may participate in regional, state and national competitions. May be repeated as desired.

2300 Intermediate Cosmetology Theory (5:5:0) Fall
Theory class covers salon business, electricity and light therapy, nails and disorders, manicuring, pedicuring.

2310 Intermediate Cosmetology Lab (10:0:25) Service Learning
Fall
Lab instruction and practical application teaches shampooing, scalp treatments, manicuring, hair cutting, hair-dressing, tinting and bleaching, and facials.

2400 Intermediate Cosmetology Theory (5:5:0) Spring
Theory class covers theory of massage, facials, facial make-up and barbering. Lecture classes for State Board. (Review of previous theory classes).

2410 Intermediate Cosmetology Lab (10:0:25) Service Learning
Spring
Lab instruction and practical application teaches shampooing, scalp treatments, manicuring, hair cutting, hair-dressing, tinting and bleaching, facials.

## GENERAL

Introduction Statement of Policy College Terminology Admissions Academic Policies Financial Services Scholarships
Student Services Degree Requirements

## PROGRAMS \& COURSE OF STUDY

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2500 Advanced Cosmetology Theory
(5:5:0)
Fall, Spring
Theory class covers lecture for State Board (review for State License). Advanced techniques. Course is designed for students who have not completed required hours for State Licensing.

## 2510 Advanced Cosmetology Lab <br> Service Learning

(5-10:0:25)

Fall, Spring
Lab instruction and practical application prepares shampooing, scalp treatments, manicuring, hair cutting, hair-dressing, tinting and bleaching, and facials.

## 2700 Student Instructor

(15:5:10)
Fall, Spring, Summer
Course prepares student for State Board Examinations and includes experience in teaching theory and lab. State Law requires 1000 clock hours for licensing. (Instructor permission required).

## 2800 Nail Technician

(9:3:12)
Fall, Spring
This course is designed to educate students with the knowledge, skills and abilities to practice manicuring, pedicuring and nail enhancements. The 300 hours of instruction prepares the student to meet requirements for taking the state licensing examination.

## 2988 Special Problems

(1-3:0:1-3)
Course is designed as adjustable credit hours contingent on needed clock hours (to meet State Law requirement of 2000 clock hours).

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Cosmetology.

## COMPUTER SCIENCE (CS)

Henry Zwick

The Computer Science Department offers an
Associate of Science with an emphasis in Computer Programming.

## TRANSFER STUDENTS

The Associate of Science degrees provide the required general education courses to prepare for a four-year school, along with specific computer
science training. Students wishing to continue their education at a four-year university or college should complete the requirements for an Associate of Science degree, incorporating computer science courses in their elective hours. Students should also consult early in their program with computer science department advisors at CEU and at the institution to which they wish to transfer. This advisement is necessary to obtain the prerequisites for the computer science program they wish to complete at the transfer school.

## ASSOCIATE OF SCIENCE/ COMPUTER SCIENCE PROGRAMMING EMPHASIS

(Two year degree program spread over three years is available from the department advisor)

## Recommended Couse of Study

| 1st Fall Semester | 1st Spring Semester |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Course |  | Cr. | Course | Cr. |
| CS | 1400 | $3^{*}$ | CS | 1410 |
| CS $^{*}$ | 1405 | $1^{*}$ | ENGL | 2010 |
| CS | $3^{*}$ |  |  |  |
| COMM | 1020 | 3 | MATH | 1220 |
| ENGL $^{*} 1010$ | 3 | Earth Science | 3 |  |
| Fine Arts | 3 | Humanities | 3 |  |
| Social Science | 3 |  |  |  |
| TOTAL | $\mathbf{1 6}$ | TOTAL | $\mathbf{1 7}$ |  |

SUMMER SEMESTER
American Institutions 3
TOTAL 3

| 2nd Fall Semester |  |  | 2nd Spring Semester |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course |  | Cr . | Course |  | Cr . |
| CS | 2420 | 3* | CS | 2450*** | 4* |
| ELEC | 1150 | 4* | MATH | 2220*** | 3* |
| ELEC | 1160 | 1* | MATH | 2280 | 3* |
| MATH | 2210 | 4* | Comput Architec | $\text { re }{ }^{* *} \text { or *** }$ | 3* |
| MATH | 2270 | $3 *$ | Humanit Arts | or Fine | 3 |
| PHYS | 2210 | 4* | Life Scie |  | 3 |
| PHYS | 2215 | 1* |  |  |  |
| TOTAL |  | 20 | TOTAL |  | 19 |

Program Total 75

* Class has prerequisites(s) and / or corequisite(s)
** Class will be offered probably over EDNET, and / or video tape.
*** Students can choose certain courses
from Computer Science, Mathematics, Physics, Engineering, Electronics, Chemistry, Life Science, and other approved disciplines. MATH 2040, Applied Statistics, will be quite helpful at your transfer school.
**** Students can take CHEM 1210 and 1215, General Chemistry I and General Chemistry I Lab (5 credits), or five credits of approved Technical Electives. PHYS 1220 and 1225 may also be required at your transfer school. Try to take the chemistry if possible during one of the Spring Semesters.

Note: For a general education requirement, students have to take the computer literacy test or one of the approved computer literacy classes.

For better success at your transfer college and / or in the job market, you should take another programming language such as: BCIS 1560, Java Programming(ifoffered),BCIS2550,Fundamentals of FORTRAN, or BCIS 2570, Assembly Language Programming (if offered).

## COMPUTER SCIENCE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1030 Foundations of Computer Science (4:4:0) Fall, Spring, Summer (on demand)
This course will cover the concepts and topics about computers and computer science. Some of these topics will be data storage and manipulation, hardware, software, networks, internet, algorithms, programming languages, software engineering, data bases, artificial intelligence and systems software such as operating systems, compilers, and interpreters. Programming concepts will include basic data types, and variables, operators, built-in functions, decisions, loops, one-dimensional arrays, bubble sort, sequential search, and possibly graphics all in a high-level language. Prerequisite: MATH 1010.

1400 Fundamentals of Programming (3:3:0) Fall, Spring (on demand)
Introduction to the science of problem solving, programming, program development, algorithm analysis, and data structures. Students will learn to develop correct software in a current programming language environment. Prerequisite
or Corequisite: MATH 1100 or 1210 , or MATH 1050, with a previous high level programming language such as Pascal, COBOL, Fortran, Java or Basic, or CS 1030

## 1405 Fundamentals of Programming Lab

(1:0:1)
Fall, Spring (on demand)
This class is a hands-on laboratory (on your own) to allow the students to practice concepts and syntax learned in CS 1400 course. Course is required for Computer Science Majors and optional for all others. It cannot be taken without CS 1400 unless this class was failed and CS 1400 was passed. No Lab Fee will be charged unless this class only is being repeated. Corequisite: CS 1400.

1410 Object-Oriented Programming (4:4:0) Spring
This class is a continuation of CS 1400. This class is a more in-depth study of problem solving, programming, program development, algorithm analysis and data structures. Prerequisites: CS 1400, 1405, MATH 1050.

## 2420 Introductions to Algorithms/ Data Structures

(3:3:0)
Fall (offered on demand only)
Introduction to Abstract Data Types, Linked Lists, Stacks, Queues, Trees and Graphs; methods for implementing; algorithms for manipulating these types; recursion; dynamic memory methods; and additional searching and sorting of algorithms. Prerequisite or Corequisite: MATH 1100 or 1210, CS 1410.

## 2450 Software Engineering

(4:4:0)

## Service Learning

Spring (on demand only)
Small and large software project development using Software Development Life Cycle and current software engineering theory and practice. Software Planning and Scheduling; Design and Coding; Requirements Analysis: Software Concepts, testing, reliability, and maintenance. A well-documented functional project done in team(s). Prerequisites: MATH 1210, CS 2420

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## PROGRAMS \& COURSE OF STUDY

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## DANCE (DANC)

Melissa Anast

## CAREER OPPORTUNITIES

The field of dance is broad based and offers many job opportunties, not just in the performance area. A dance major could find employment as a performer, teacher, choreography, dance therapist, movement notator, dance historian, critic, writer, dance medicine assistant, trainer, nurse and doctor. for further information, contact the dance department advisor.

All dance courses must be taken consecutively. Listed below are the required classes for dance scholarship students and dance majors. Dance Scholarship recipients and Company Members must maintain a 2.5 GPA in their non-dance subjects as well as their dance courses and put in 2 hours of service in the department per week.

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Fall Semester |  |  | 1st Spring Semester |  |  |
| Course |  | Cr. | Course |  | Cr. |
| DANC | 1100 | 1 | Computer | Literacy | 0 |
|  |  |  | DANC | 1100 | 1 |
| DANC | 1210 | 1 |  | - or - |  |
|  |  |  | DANC | 1210 | 1 |
| DANC | 2240 | 1 |  | - or - |  |
|  |  |  | DANC | 2240 | 1 |
| DANC | 2290 | 1 |  | - or - |  |
| DANC | 1200 | 1 | DANC | 2290 | 1 |
|  |  |  | DANC | 1200 | 1 |
| DANC | 2220 | 1 |  | -or- |  |
| DANC | 1220 | 1 | DANC | 2200 | 1 |
|  |  |  | DANC | 1220 | 1 |
| DANC | 2200 | 1 |  | -or- |  |
| DANC | 1520 | 1 | DANC | 2200 | 1 |
|  |  |  | DANC | 1580 | 1 |
| DANC | 1240 | 1 |  | -or- |  |
| DANC | 1230 | 2 | DANC | 1500 | 1 |
| DANC | 1260 | 1 | DANC | 2210 | 1 |
| DANC | 2210 | 1 | DANC | 2310 | 1-2 |
| DANC | 2310 | 1-2 | ENGL | 2010 | 3 |
| ENGL | 1010 | 3 | DANC | 1010 | 3 |
| Life Scie |  | 3 | Physical | Science | 3 |
| Semeste | Total | 15-16 | Semester | Total | $\begin{aligned} & 15- \\ & 16 \end{aligned}$ |



## DANCE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Dance In Culture

(3:3:0)

## Fine Arts

A study of dance as one of the first art forms, from the primitive to its present state. Dance will also be studied sociologically as well as historically. Students will be exposed to the development of dance through history as it has been influenced by various economic and political forces. Students will be provided with information concerning outstanding contributions to dance and its authorities in the 20th century. Hopefully, the student will develop an appreciation of dance in contemporary society.

1100 Ballet I
Fall, Spring
May be repeated for credit
This is a basic ballet course for men and women to condition the body, develop an appreciation for ballet through its specific exercise forms and acquire the basic skill of ballet technique. The class is open to anyone. A text is used and grading is done by two written tests, attendance, and a performance final. The Frenc-Bouronville as well as the Russian techniques are taught. Video is used to expose students to the professional performance as well as dance history. The students also begin learning the importance of understanding anatomy, exercise physiology, kinesiology, music theory, theater practices and techniques, and physics as it relates to ballet and dance in general.

1150 Beginning Square Dance
(1:0:2)
This course is a social dance activities course in which beginning square dance steps, protocol, and the fundamentals of square dance are covered. This course is open to all students. The first hour will be spent on technique and the second hour, the students will work on performance.

## 1170 Beginning Social Dance

(1:0:2)
Fall, Spring
May be repeated for credit
This is a social dance activities class in which beginning ballroom dance steps, current western swing and line dances, as well as protocol, and the fundamentals of social dance are covered. This class is open to any student. Grading is based strictly on attendance.

## 1200 Modern Dance I

(1:0:3)
Fall, Spring
May be repeated for credit
This is a course designed for the dancer who has not been exposed to basic modern dance techniques. This class is open to anyone. The goal is to communicate through movement. Many different modern dance styles will be explored including Graham, Denis/Shawn and Cunningham. Video will be used as well as a text. Movement experiences will range from the classroom situation to large open space activities including out of doors. Students will learn to analyze others' movement patterns and how people communicate through movement. This is an important aspect in dance therapy. Music, as well as music theory, will be explored. Grading will be on movement projects, tests, and a final movement project.

1210 Ballet II
(1:0:3)
Fall, Spring
May be repeated for credit
This course is a continuation of basic ballet technique for men and women who wish to become more proficient in the art and form of classical ballet. Permission of instructor is required. A text is used and grading is done based on attendance, two written examinations and a performance final. There is a continuation of the French/ Bourenville as well as Russian techniques. Video is used for exposure to dance performance as well as technique. Dance history and ballet tradition is continued. Students continue the study of anatomy exercise physiology, kinesiology, music, theater and performance techniques as well as physics. Based on proficiency, some of these student may become eligible to audition for Ballet Repertory Ensemble, DANC 2310.

## 1220 Beginning Pointe

(1:0:3)
Fall, Spring
May be repeated for credit
This course is designed for female ballet students with at least 2 years of Ballet training and who are observed to be ready for pointe work. Permission of the instructor is required. Students must be physiologically mature and have the proper alignment and strength to dance on Pointe. A text is used and at least two written examinations are given plus a performance final. Each student progresses at her own rate and is graded accordingly as all are different. The rule of thumb is a child should be at least 11-12 before Pointe is allowed.

## 1230 Dance Terminology

(2:2:1)
Fall
This course is designed to expose the dance student to the various terminology used by the different dance styles. Ballet terms will be primary as they are used throughout all other dance forms. Approximately five weeks will be spent learning ballet terms and learning what they mean and how they are performed, two weeks will be spent on modern, and character, three weeks will be spent on tapis and two weeks will be spent on jazz terminology. Two texts and handouts will be used as well as video. Grading is based on tests and a final. This class is open to any student.

1240 Musical Theater Movement
(1:0:3)
Fall (Alternate years)
May be repeated for credit
This course involves a study of the fundamental types of movement used in the theater including mime, improvisation and basic musical theater

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dance forms. The class is open to any student that has had some experience or training in ballet, modern, or jazz dance and is interested in musical theater. The class is performance based. Students learn aspects of movement on stage in the areas of dance for musical theater. They are also exposed to mime and other non-verbal forms of communication. The final project involves each student choreographing a 1 to 1.5 minute piece that would fit a period and style of a broadway show. They are also required to research, use video and critique a broadway show.

## 1250 Middle Eastern Dance

(1:2:0)
Basic movement and choreography for tribal/folk belly dance, including history and background and basic costuming.

## 1260 Improvisation

(1:0:2)
This course is an excellent way for the student to gain more familiarity with movement. The student will begin to use the human body in not only axial and locomotor movement but to add different and interesting positions and patterns to create and also to enhance his/her theatrical as well as choreographical instincts. It is training that every dancer needs, but actors and singers can benefit from it as well. This class is not an end in itself, but is a tool to help artists in rehearsal. Prerequisite: Instructor permission.

## 1500 Jazz Dance I

(1:0:3)
Spring (alternating years)
This course is designed for the dancer who has already been exposed to Modern Dance or Classical Ballet technique. It is not a beginning class. The student should already have basic placement and traditional dance techniques in mind so as to be able to adequately explore the pure jazz technique. The class will explore the Girodano, Maddox, and Luigi methods as well as other methods. Video, handouts and a text are used. Grading is based on attendance, two tests, and a final performance project.

## 1520 Folk/Cultural Dance

(1:0:3)
Fall (alternating Years)
This is a beginning class for men and women interested in ethnic, character, and folk dance for the stage. The class is open to anyone with some dance background. A text is used as well as video. Grading is based on attendance, tests and a performance final. The history and background surrounding the origins of many of the national dances will be explored as well as the differences between the three types.

1580 Tap I
(1:0:3)
Spring (alternating years)
This is a course designed for the beginning and intermediate tap dancer. The class is open to anyone. Basic tap technique will be covered as well as terminology and history of the dance form. The class will include the exploration of the current phase of tap and also the relationship of the basic differences between clogging and tap. Students will be required to reach a certain level of proficiency. Handouts and video will be used. Grading is based on attendance and performance.

2170 Intermediate Social Dance
(1:0:2)
This course is a social dance activites class in which beginning ballroom dance steps, current western swing and line dances as well as protocol, and the fundamentals of social dance are covered. This course is open to all students who have had previous experience in Social or Ballroom Dance. Grading is based strictly on attendance. Prerequisites: Instructor permission and must be 18 years or older.

## 2200 Pointe and Variations

(1:0:3)
Fall, Spring
May be repeated for credit
This course is designed for the female dancer who has met all the technical and physical requirements for solo variations and pas de deux. It is for women who have reached the maturity level to learn the art of partnering and pas de deux. It is a point class for women requiring intermediate-advanced technique. Students will explore the history and choreographic style of at least 5 choreographers including George Balanchine, William and Lew Christianson, Frederick Ashton, Richard Arpel, and Twyla Tharp. They will learn at least that many variations. Grading is based on attendance and increased proficiency on Pointe. Permission of instructor is required.

## 2210 Basic Partnering

Fall, Spring
May be repeated for credit
This course is designed to acquaint both the men and women in the art of supporting and dancing with a partner. The men will work on the proper lifting techniques and the women will learn the skills and adjustments required to be partnered and lifted. Pas de Deux from at least five Ballets will be learned. Video will be used for more exposure. This class is designed for the intermediate or advanced, mature dancer. Grading is based on attendance and proficiency. Permission of the instructor is required. Male and female dancers must be registered for a technique class and women must be registered for DANC 2200. It is recommended that the men take DANC 2290.

Fall, Spring
May be repeated for credit
This course is designed for those who have had at least one year of experience in modern dance techniques. It is a continuation of DANC 1200. Music and music theory will be continued. Students will be encouraged to explore their own movement patterns as well as the modern choreographers of the present such as Alvin Ailey and Paul Taylor.

## 2225 Creative Dance for Elementary Teachers

(2:2:0)
This course is designed for the student interested in dance education or elementary teachers. It involves exposure to methods, practices and techniques for teaching children the process of collective, constructive movement otherwise known as Dance. This class meets the standards as set up by the National Dance Association and the Utah Board of Education as dance is required K through 12. The class is open to all students. A text is used as well as video. The students will teach at least two classes at local elementary schools. Grading is based on tests, lesson plans, attendance and field experience.

## 2240 Ballet III, Company Class

## Fall, Spring

May be repeated for credit
This course is designed for the more proficient dancer, one who wishes to use classical ballet as an important part of their career. Both barre and center practice will consist of longer, more intricate combinations. Physical demands will be greater as to help the students reach an advanced performance as well as technical level. The same styles of technique will be taught as in the lower ballet classes as well as the continued exploration of dance related topics. Grading is based on tests from the required texts as well as attendance and effort. Some library research will be required. Permission of instructor is required.

## 2260 Dance Composition

(1-2:1-2:0)
Fall, Spring
May be repeated for credit
This course is designed for the intermediate dancer to allow them an opportunity to explore their own creative techniques in modern, jazz and classical ballet. Permission of instructor is required. Grading is based on attendance, effort, creativity, interim projects, and a final choreographic project. The final project may be a collaboration between two students. Some of the student choreography
may be performed in Ballet Repertory's Spring Concert.

2275 Musical Dance Production (1-2:0:1-2) This is a perfomance/production class oriented toward a concert or a musical to be performed during Spring Semester. Prerequisite: Instructor permission.

2290 Men's Dance
(1:0:3)
Fall, Spring
May be repeated for credit
This course is especially designed to meet the needs of the male dancer. It empasizes stretching, conditioning, and cross training, basic dance and gymnastic techniques that fit the framework for men only. Basic weight training skill will be explored as well as those needed for DANC 2210 . Video will be used as well as time spent in the weight room. No previous experience is required. Grading is based on proficiency and attendance.

## 2310 Ballet Repertory Ensemble

(1-2:0:1-2)

## Fall, Spring

May be repeated for credit
This is a performance based class. The members are students who wish to perform. The Company performs two major concerts per year as well as Lecture Demos and other performing opportunities. Time and credit hours are arranged by the instructor. Membership is by audition conducted by the Artistic Director.

2320 Ballroom Dance Company (1-2:1:1-3) This course is a performance based class. The Company performs two major concerts per year as well as lecture demos and other performing opportunities. Time and credit hours are arranged by the instructors. Membership is by audition conducted by the Ballroom instructors. Students must become proficient in Fox Trot, Waltz, Cha Cha, Rumba, Maringa, Tango, Jitter Bug, Swing, Cabart, and other styles that may be introduced.

## 2800 Dance Production

(1-3:0:2-6)
This course is designed for the dancers who wish to perform throughout Utah with the CEU Dance Department. These performances are used for education as well as recruiting. Students will also learn the correct performance protocol from the aspect of a performer as well as a member of the audience. Prerequisites; Students must be a member of either Ballet Repertory Ensemble or Ballroom Dance Company.

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## 2977 Cooperative Education

(1-3:0:1-3)
This is a course that provides supervised on-thejob training in dance education. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements. The student must meet certain proficiency requirements and have permission from the instructor or coordinator.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by the instructor. Time, credit and content to be arranged.

## 2999 Workshop

(1-3:1-3:0)
This is a course designed to meet the changing needs and educational background and opportunities of the dance students. Permission of the instructor is required. Content, and credit hours arranged by the instructor only. No previous dance experience required.

## DIESEL EQUIPMENT TECHNOLOGY (DSME)

## Dean Collard

Diesel Equipment Technicians repair and maintain diesel engine powered equipment. The diesel equipment technology program at CEU has been designed to prepare a student for a career in either "on highway" or "off road" industry by offering theory and hands on instruction related to the common sub-systems used in both equipment areas. By taking a broad spectrum of classes, a student is able to get a feel for the diesel industry. A student will also be able to focus on a particular emphasis, while the experience in various study areas provides for diversified employment opportunities upon completion. Live work is incorporated into all courses as it becomes available and as it fits into the curriculum.

## CAREER OPPORTUNITIES

Career opportunities are available in the following areas: Diesel Engine Mechanic, Engine Machinist, On Highway Tractor/Trailer Technician, Heavy Equipment Technician, Fluid Power Technician, Automatic Transmission Technician, Drive Train Technician, Alignment, Suspension and Steering Technician, Electrical Systems Technician, Sales or Service Representative or Education.

## TOOLS

A diesel technician uses a wide variety of tools for troubleshooting and repairing equipment from common hand tools to micrometers and bore gauges to a lap top computer. All students are required to have their own set of tools to use in lab classes. Student sets are available for purchase at $1 / 2$ price from either Snap-On or MAC tools. The department will provide all special tools.

## SPECIAL REQUIREMENTS

Due to the technical nature of service manuals, technical bulletins and the frequent use of detailed written procedures and measuring tools, itis essential that students have good reading comprehension skills (ENGL 1010 level) and math skills that ensure readiness to complete MATH 1020. Students will also have to pass the computer literacy test.


## DIESEL EQUIPMENT TECHNOLOGY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1000 Introduction to Transportation Technology I
(4:3:2.5)
This course is the first course in automotive or diesel technology. Students will gain needed skills in shop safety and other basic skills that will prepare students for specific automotive or diesel courses. The following topics will be covered: using manual and information systems, precision measurement, tires and wheels, bearings, headlamp adjustment, oils and fluids, cleaning methods, gaskets and sealants, cooling systems and belts and hoses. This course can be articulated with high school automotive courses.

1110 Diesel Engine Overhaul Theory (4:4:0) This course is designed to instruct the student on correct diesel engine overhaul procedures from disassembly to assembly. The identification, operation, inspection, repair, maintenance and failure analysis of each diesel engine component will be discussed. Attention is also given to parts cleaning methods as well as fasteners and measuring tools. Prerequisite: MATH 0990 or a higher level MATH course.

1130 Diesel Engine Overhaul Lab (4:0:12.5) This course offers a hands-on experience overhauling a diesel engine and functions much like a diesel engine repair shop. Students will individually disassemble, inspect, and rebuild at least one diesel engine. Emphasis is placed on component identification, measuring, inspection, analyzing wear, and detecting parts failure. Students are introduced to various methods for cleaning parts using the latest cleaning technology as well as identifying fasteners and using measuring and hand tools. Particular attention is given to attendance, quality of work, productivity during class time and the ability to follow detailed written procedures from service manuals. Shop safety is also stressed.

## 1340 Mobile Electrical and Electronics Theory

(5:5:0)
Students will study the basic principles of electricity including electron flow in series and parallel circuits, Ohm's law, magnetism and semiconductor devices related to the mobile industry. The theory and operation of a complete vehicle electrical system and its various components will be discussed in a series of sub-systems. These sub-systems include: the battery, starter and starting system, alternator and charging system, gauges and instrument panel, vehicle lighting and accessories, engine electronic sensors, as well as the wiring and connections used in each of these systems. Students have the opportunity to learn schematic symbols by
studying the various types of electrical circuits used in mobile equipment. Students will be introduced to different test instruments such as the digital multi-meter and testing techniques unique to each type of equipment will be presented. Prerequisite: MATH 0990 or a higher level MATH course.

## 1360 Mobile Electrical and Electronics Lab

(3:0:7.5)
Hands-on experience is given to the student enrolled in DSME 1360. Each individual type of testing equipment is demonstrated as well as techniques givenfortroubleshooting, servicing and testing electrical systems: Students demonstrate their proficiency using this equipment to test batteries, starters and the starting system, the alternator and charging system, gauges, lights and accessories, engine sensors, as well as the wiring harness and connections used in each of these systems. Particular emphasis is placed on component identification, isolating component failures, and electrical safety procedures for both personal safety as well as preventing electrical system damage.

## 1500 Professional Vocational Leadership (VICA) <br> (1:.5:1)

Fall, Spring
This course supports and facilitates the goals and objectives of Vocational Industrial Clubs of America (VICA). Students will gain skills in the following areas: personal development, service, team building and leadership, workplace skills, and interview skills. Students may participate in regional, state and national competitions. May be repeated as desired

2210 Advanced Diesel Engine Theory (5:5:0) This course is a continuation of DSME 1110. Rather than focusing on individual engine components, this course covers engine systems: i.e. lubrication, cooling, intake and exhaust, and fuel systems. Particular attention is given to the theory and operation of the diesel engine combustion process while controlling engine speed and torque through the use of mechanical governors and engine electronics. This course will focus particularly on Cat, Cummins, and Detroit diesel engine electronics and computer software. Prerequisites: DSME 1110, MATH 0990 or a higher level MATH course.

2230 Advanced Diesel Engine Lab (5:0:15) This course is a continuation of DSME 1130. After an engine is rebuilt it will need to be tested on the dynamometer. The dyno provides opportunities

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for troubleshooting "live" engines. Students will dyno test the engine they rebuilt in DSME 1130 as well as perform timing and tune-up procedures on different models of diesel engines. Students will have the opportunity to use a laptop computer to program diagnose Cat, Cummins, and Detroit diesel electronic engines. Particular attention is given to attendance, quality of work, productivity during class time and the ability to follow detailed written procedures from service manuals. Shop safety is also stressed. Prerequisite: DSME 1130.

## 2410 Heavy Duty Chassis and Power Train Theory

(5:5:0)
Topics to be covered in this course are: highway truck air systems, foundation brake repair and maintenance, front end, tandem, and trailer axle alignment, heavy duty suspension systems, annual and automatic transmissions, clutches, differentials, and drive lines. Students will calculate drive line angles, gear ratios, and tire size, as well as troubleshoot and analyze tire wear, failures of gears, universal joints, clutches, axles, brakes.

## 2430 Heavy Duty Chassis and Power Train Lab

(5:0:15)
This course gives the student a hands on opportunity to perform preventive maintenance, inspection, adjustments, and repair to air brakes, suspension systems, clutches, transmissions, differentials, and drive line components used in heavy duty diesel equipment. Students will also do computerized front end and tandem alignment on medium and heavy duty trucks. Particular attention is given to attendance, quality of work, productivity during class time and the ability to follow detailed written procedures from service annuals. Shop safety is also stressed.

2440 Mobile Air Conditioning Theory
(2:2:0)
Students are instructed on the principles of heat transfer using refrigerant as the medium. Particular attention is given to the identification and operation of individual system components as well as the variations in system design from OEM to OEM. Different types of refrigerants used in the mobile industry as well as recovery, recycling, storage, handling, and disposal will be discussed. Students are taught methods for R12 to R134A conversion. After EPA laws and guide lines are taught, the student will have the opportunity to test for an IMACA certificate.

## 2460 Mobile Air Conditioning Lab

(1:0:4)
Studentsaregiventhehands-onopportunity tolocate, identify, test, service, and troubleshoot different types of mobile AC systems using EPA approved equipment and procedures. They will demonstrate
their proficiency using recovery recycling, evacuation, and charging equipment for both R-12 and R-134A refrigerants. System conversion from $\mathrm{R}-12$ to R134A is also demonstrated.

## 2977 Cooperative Education

(1-3:0:1-3)
Provides paid, on-the-job work experience directly related to a specific lab course of study in the student's major. All activities including attendance, on-site work visits, employer and coordinator evaluations, and written assignments are monitored by the co-op coordinator. Prerequisite: Approval from the Director of Cooperative Education must be secured before class enrollment.

## 2988 Special Problems

(1-3:0:1-3)
Lab time approved by the instructor for extra repair projects and "live work" which cannot be completed during normal lab hours. Time and credit to be approved by the instructor. Prerequisite: Instructor permission

## 2999 Workshop

(1-3:1-3:0)
This course is tailored to a specific topic, product, component, or vehicle related to the diesel service industry. Its purpose is to update technician training by addressing changes in products or equipment. A workshop is usually presented by an OEM or a designated dealer or representative.

## ECONOMICS (ECON)

Dr. Ali Hekmat

## ECONOMICS CAREER OPPORTUNITIES

Businesses today need people who are trained as thinkers and communicators. The mission of economic programs is to advance the understanding of the economic process and its relationship to social, political, and cultural institutions. The program places an emphasis on learning, critical thinking, and the development of the whole individual within the context of a rapidly changing world. The analytical skill of the economist is in high demand by many institutions and business firms, bank and nonbank financial institutions, government agencies at all levels, and private industry. Many career paths in economics involve the economist's technical skills of economic forecasting, market and financial analysis, tax analysis, labor market analysis, and public utility analysis. Our economic department offers a variety
of courses that fulfill Business, Social Science, and American Institutions requirements. Our class sizes are small, especially in upper division courses.

## ECONOMIC COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Economics as a Social Science

(3:3:0)

## Social Science

Fall, Spring, Summer
This course overviews both microeconomics and macroeconomics for students planning no further formal study of business and/or economics. Analysis of resource allocation, supply and demand, price determination under competitive and monopolistic conditions. It also analizes factors influencing aggregate levels of output, employment, and prices, introduction to U.S. fiscal and monetary policy, international trade and international monetary systems.

## 1740 US Ecomonic History

(3:3:0)

## American Institutions

Fall, Spring
This course fulfills the American Institutions requirement. It is also suggested for both history and economic majors. The course is a comprehensive study of the history of the United States from the colonial period to the present with an emphasis on economic factors such as technological innovations, the labor movement, capital formation and the money supply. The student is required to gain an understanding of how the aforementioned factors have influenced contemporary standards and resultant national policies in order to successfully complete the course.

## 2010 Principles of Microeconomics

(3:3:0)

## Fall, Spring

This course covers economics of the market place and issues surrounding business and consumer institutions, how prices are set in the market along withsupply and demand factors of production. The business environment and how this environment interacts with government to solve the problems associated with industrial society and market structures; regulations; and international trade will also be discussed. Prerequisite: Math 1010 or 1050, and ECON 2020 is strongly recommended.

2020 Principles of Macroeconomics
(3:3:0) Fall, Spring
Principles that deal with the analysis of aggregate levels of income, employment, inflation, monetary and fiscal policy, economic growth and development, international finance, and comparative economics systems. Prerequsite: MATH 1010 or 1050.

## 2100 Labor Economics

Spring
A review of the nature and causes of economic problems of the American wage and salary earner and of the attempts of wage earners and society, through organizations and legislation, to alleviate these problems. The course deals with the history and systematic theories of labor movements and the market and institutional influences on wages and employment. Prerequisites: ECON 1010 or 2010 or 2020.

2977 Cooperative Education (1-3:0:1-3) This course provides supervised on-the-job experience for students majoring in economics. The student meets with the instructor / coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by the instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to meet the changing needs of the student in Economics.

## ENGINEERING DRAFTING AND DESIGN TECHNOLOGY (EDDT)

Elias Perez

The Engineering Drafting and Design Technology Program is designed to provide instruction for students pursuing entry-level employment or technical upgrading in mechanical, architectural, and construction drafting fields. Individuals interested in pursuing a career in drafting will study basic drafting standards, learn computeraided drawing skills, and acquire the knowledge necessary for the documentation of designs used for production and support of industry. The College of Eastern Utah offers a one-year

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Certificate of Completion in Engineering Drafting and Design Technology. Students are encouraged to complete their associate degree as well, in order to be better prepared to enter the workforce.

## CAREER OPPORTUNITIES

Highly skilled and professional drafters are in demand. Practically every type of industry requires knowledable and trained drafting technician who can translate the ideas and sketches of an engineer into an accurate set of drawings. Depending on the individuals field of interest and capabilities, students who complete the requirements may find employment in any of the following types of jobs: engineering aide 1, drafting aide 1, junior drafter, mechanical drafter/designer trainee, GIS aide, architectural drafter, technical writer, or technical sales representatives.

## RECOMMENDED HIGH SCHOOL PREPARATION

High school courses in English and mathematics are important. It is desirable, but not required, that students complete high school courses in algebra, plane geometry, and drafting.

| Certificate of Completion (One year program) |  |  |  |  |  |
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| Course |  | cr. | Course |  | cr. |
| EDDT | 1010 | 5 | EDDT | 1070 | 3 |
| EDDT | 1040 | 3 | EDDT | 1100 | 3 |
| ENGL | 1010 | 3 | EDDT | 2620 | 3 |
| Human | elations | 3 | ENGN | 2240 | 3 |
| Elective |  | 2 | MATH | 1020 -or higher | 3 |
| TOTAL |  | 16 | TOTAL |  | 15 |
|  | Recon | nen | d Elect |  |  |
| EDDT | 2650 | 2 | EDDT | 2100 | 3 |
| Program Total 31 |  |  |  |  |  |

## ENGINEERING DRAFTING AND DESIGN TECHNOLOGY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1010 Technical Drafting
(5:3:3)
Fall
A beginning course stressing the fundamentals of mechanical drafting as related to industry. Students will gain a knowledge of drafting instruments and their use, lettering, geometric construction, orthographic projection, sectional views, auxiliary views, and dimensioning standards. Additional procedures in geometric dimensioning, developments, threads and fasteners will be studied. Applications will include working drawings and assembly drawings.

1040 CAD Level I: Intro to CAD
(3:3:0)

## Computer Literacy

Fall, Spring
This course covers the fundamentals of computer-aided-drafting (AutoCAD). Students will train using the basic operating features, menus, commands, file management, drawing set up, and plotting. Applications will include, orthographic projection, sections, dimensioning techniques, tracing, pictorial drawing and coordinate features will be included. Prerequisites: EDDT 1010 or Basic Drafting Knowledge

1070 CAD Level II: Intro to 3-D
(3:3:0)
Fall, Spring
A continuation of EDDT 1040 with additional emphasis on drawing productivity. Students will utilize the advance features of AutoCAD to produce industry quality drawings. Students will use the customizing commands of AutoCAD to create custom symbols, line types, and hatch patterns, 3D modeling capabilities, third party software applications, inserting CAD drawings into work processing programs, scanning, and advance plotting techniques. Students should be prepared to spend additional time outside of class in the CAD Lab to complete their assignments. Prerequisites: EDDT 1040

## 1100 Residential Architectural Drafting

Spring
This course is designed to teach AutoCAD techniques utilized in architectural drafting. The student will apply architectural drafting standards in the preparation of a complete set of house plans. Students will learn architectural terminology and nomenclature as used in the building industry. Applications of advance AutoCAD features and third party software will be employed in the course. Students should have CAD skills and be prepared to spend extra time in the CAD lab to complete their assignments. Prerequisite: EDDT 1040

1500 Introduction to Geographic
(3:2:1)
This course is an introduction for the Geographic Information System field. Students planning careers in Engineering, Drafting, Geology, Natural Resources, and Law Enforcement will find this elective class useful either for employment or transfer support. The course covers general GIS applications and teaches the use of software for research and problem solving. The class requires a computer lab experience. In class discussion and lecture methods are used to achieve course goals and objectives. This course is taught on an as needed basis. Prerequisite: MATH 1050 is recommended.

## 2100 Commercial Architectural Drafting

(3:3:0)
This course is designed to teach CAD techniques utilized in commercial architectural drafting. The student will apply architectural drafting standards in the layout, detailing, and dimensioning, of commercial small building plans. Students will learn the architectural terminology and nomenclature associated with the building industry. Applications of advanced AutoCAD features and third party software will be employed in the course. Students should have CAD skills and be prepared to spend extra time in the CAD lab to complete their assignments. Completers should have sufficient entry level skills to work in an architectural design office. Prerequisite: EDDT 1100.

## 2500 Introduction to Global Positioning Systems

(3:2:1)
This course is an overview to Global Positioning Systems (GPS) and emphasizes hands-on Trimble Resource and Mapping grade GPS experience. The course covers general GPS technology, applications, research, field data collection techniques, differential correction and export to other computer softwares such as CAD and GIS. The class requires a computer lab experience. In-class discussion and lecture methods are interspersed with computer applications to achieve course goals and objectives. The course will be useful for teaching students methods to input data into GIS and CAD systems. It is useful preparation for careers in health care, business, agriculture, planning, law enforcement, transportation, engineering, surveying and natural resource development and conservation. Prerequisites: EDDT 1500/GEOG 1800 or a basic CAD course. Suggested prerequisites - GEOG 1010 or GEO 1110/1115.

2620 3-D Modeling Advanced
(3:3:0)
Spring
Descriptive geometry and orthographic projection are the graphic tools of engineering. The student will learn to use the descriptive geometry to not only determine true size and shape, but also intersections, true distances, true distances of lines space, and exact piercing points. Students will solve practical problems applying the principles of descriptive geometry. Prerequisite: EDDT 1010

2650 Mechanical Blueprint Reading (2:2:0) Fall
This is a support course to other departments. This is a course designed to assist the technician in the interpretation of blueprints as they apply to industrial technology. Included is the introduction of technical drawing theory and practices. Students will be exposed to a wide variety of technical drawings in order to gain information about simple or complex parts, assemblies, systems, standards, and practices used in the world of manufacturing for precision and quality control.

2977 Cooperative Education (1-3:0:1-3) This course provides supervised on-the-job training in engineering drafting and design technology areas. The student meets with the instructor/ coordinator periodically to determine and evaluate learning objectives, hours to be worked, and credit. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in the Engineering Drafting and Design Technology field.

GENERAL
Introduction Statement of Policy College Terminology Admissions Academic Policies Financial Services Scholarships Student Services Degree Requirements

## PROGRAMS \& COURSE OF STUDY

ACCT
ANTH APPR
ART
AUTO
BCCM
BCIS
BIOL
BUSN
CHEM
CJ
COMM
COST
CS
DANC
DSME
ECON
EDDT EDUC
ELEC
EMMT
ENGL
ENGN
ESOL
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
MA
MLT
MINT
MUSC
MUSM
NURS
PE
PHIL
PHYS
POLS
PRE-PROF
PSY
RECR
SLSC
SOC
THEA
TRST
WE
WELD
WILD

PEOPLE

## EDUCATION (EDUC)

Anne Mackiewicz

## ASSOCIATE OF SCIENCE

This pre-teacher education program is a two-year program designed to prepare students to transfer to an accredited four-year teaching program. Students completing the program will develop skills and get the hands-on experience necessary to be accepted into the professional core of courses offered at the university level. Course work will satisfy the general education requirements for the first two years of a bachelor's degree in elementary education, early childhood or special education. Secondary education students should consult with an advisor. Specific requirements leading to a bachelor's degree in education differ between the four-year higher education institutions. To tailor a program specific to students needs, meet with an academic advisor prior to registering for courses.

Most elementary education programs now require students to choose an area of emphasis (a minor) to complete a four-year degree. Students planning to major in elementary education can take many content specific courses at CEU, which will fulfill requirements for an area of emphasis. Students should consult with an academic advisor, select an area of emphasis and identify courses, which will transfer and apply toward the requirements of an area of emphasis. Secondary education students must pursue a major and minor in specific content areas. Many of these courses may be taken at CEU and then transferred as articulated with the fouryear institutions.

## PREREQUISITES

It is the responsibility of the student to examine each course description to determine if prerequisite classes are required. Prerequisites must be satisfied before a class may be taken.

Associate of Science Requirements

| Course |  | Name | Cr. |
| :---: | :---: | :---: | :---: |
| EDUC | 1010 | Introduction to Education | 3 |
| ENGL | 1010 | Introduction to Writing | 3 |
| ENGL | 2010 | Intermediate Writing | 3 |
| FAML | 1500 | Human Development Across the Life Span | 3 |
| MATH | 1050 | College Algebra | 4 |
| MATH | 2020 | Math for Elementary Teachers | 3 |
| MATH | 2040 | Applied Statistics | 4 |
| American Institutions |  |  | 3 |
| Computer Literacy |  |  | 0 |
| Humanities and Fine Arts |  |  | 9 |
| Sciences (suggested science courses - GEO 1010, BIOL 1610, PHYS 1010) |  |  | 9 |

Students should choose as many courses from the following list as appropriate

| Course |  | Name | Cr. |
| :--- | ---: | :--- | :--- | :--- |
| FAML | 2500 | Child Development, Birth to <br> Eight | 3 |
| FAML | 2600 | Intro. to Early Childhood <br> Education | 2 |
| FAML | 2610 | Child Guidance | 3 |
| FAML | 2620 | Creative Exp. for Young <br> Children | 3 |
| FAML | 2630 | Practicum Teaching Lab | $2-5$ |
| FAML | 2631 | Teaching Seminar | 1 |
| EDUC 1000,1005 | Teacher Assistant Experience | $1-3$ |  |
| ENGL | 2330 | Children's Literature | 3 |
| HEAL | 1020 | Responding to Emergencies | 2 |

Program Total 63

## ASSOCIATE OF APPLIED SCIENCE DEGREE - EARLY CHILDHOOD DEVELOPMENT

The two year Associate of Applied Science Degree in Early Childhood Development prepares the student to become a teacher or director of a child care facility. Attention is given to development of skills in planning and preparing a classroom, effective teaching, and appropriate business and administrative skills needed to become an effective child care administrator.

## Core Course Requirements

| Course |  | Name | Cr. |
| :--- | :---: | :--- | :---: |
| ENGL | 1010 | Introduction to Writing | 3 |
| ENGL | 2010 | Intermediate Writing | 3 |
| MATH | 1030 | Quantitative Reasoning (or any <br> higher math course that has <br> MATH 1050 as a prerequisite) | 3 |


| Computer Literacy (BCIS 1010 or BCIS 1405) |  |  | 0 |
| :---: | :---: | :---: | :---: |
| FAML | 2400 | Marriage amd Family Relations | 3 |
|  |  | - or - |  |
| FAML |  | Human Development Across the Life Span | 3 |
| Human Relations |  |  | 3 |
| TOTAL |  |  | 12 |
| Major Course Requirements |  |  |  |
| Course |  | Name | Cr. |
| FAML | 1020 | Foundations of Nutrition | 3 |
| FAML | 2500 | Child Development, Birth to Eight | 3 |
| FAML | 2600 | Introduction to Early Childhood Education | 2 |
| FAML | 2610 | Child Guidance | 3 |
| FAML | 2620 | Creative Experiences for Young Children | 3 |
| FAML | 2625 | Administration of Child Care Program | 2 |
| FAML | 2627 | Storytelling | 2 |
| FAML | 2630 | Practicum Teaching | 5 |
| FAML | 2631 | Teaching Seminar | 1 |
| TOTAL |  |  | 24 |
| Electives |  |  |  |
| Course |  | Name | Cr. |
| BUSN | 1010 | Business Principles | 3 |
| EDUC | 2977 | Cooperative Education | 1-3 |
| ENGL | 2240 | Introduction to Poetry | 3 |
| ENGL | 2330 | Children's Literature | 3 |
| ENGL | 2340 | Native American Literature and Philosophy | 3 |
| GEOG | 1000 | Physical Geography | 3 |
| HEAL | 1020 | Responding to Emergencies | 2 |
| HIST | 1100 | Western Civilization I | 3 |
| MUSC | $\begin{aligned} & 1150, \\ & 1160 \end{aligned}$ | Class Piano I, II Instruction | 2 each |
|  | All other courses approved by the department |  |  |
| General Education |  |  |  |
| Course |  | Name | Cr. |
| ART | 1010 | Introduction to Visual Arts | 3 |
| BIOL | 1010 | Principles of Biology | 3 |
| CHEM | 1010 | Introduction to Chemistry | 3 |
| GEO | 1010 | Introduction to Geology | 3 |
| MUSC | 1010 | Introduction to Music | 3 |
| PHYS | 1010 | Elementary Physics | 3 |
| PSY | 1010 | Introduction to Psychology | 3 |
| Program Total 65 |  |  |  |

## CERTIFICATE OF COMPLETION <br> IN EARLY CHILDHOOD DEVELOPMENT

The Certificate of Completion in Early Childhood Development prepares the student to become a teacher of a child care facility. Skills in planning, classroom preparation, and effective teaching are emphasized.

| General Education Requirements |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr. |
| ENGL | 1010 | Introduction to Writing | 3 |
| FAML | 2610 | Child Guidance | 3 |
| MATH | $1030$ | Quantitative Reasoning (Or any higher Math Course that has MATH 1050 as a prerequisite) | 3 |
| Computer Literacy Requirement (BCIS 1010 or BCIS 1405) |  |  | 0 |
| TOTAL |  |  | 11-12 |
| Major Course Requirements |  |  |  |
| Course |  | Name | Cr. |
| FAML | 1020 | Foundations of Nutrition | 3 |
| FAML | 2500 | Child Development, Birth to Eight | 3 |
| FAML | 2600 | Introduction to Early Childhood Education | 2 |
| FAML | 2620 | Creative Experiences for Young Children | 3 |
| FAML | 2625 | Administration of Early Childhood Programs | 2 |
| FAML | 2627 | Storytelling | 2 |
|  | - or - |  |  |
| ENGL | 2330 | Children's Literature | 3 |
| FAML | 2630 | Practicum Teaching Lab | 2-5 |
| FAML | 2631 | Teaching Seminar | 1 |
| HEAL | 1020 | Responding to Emergencies | 2 |
| TOTAL |  |  | 23-24 |
|  | Pro | ram Total 34-36 |  |

## EDUCATION COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1000, 1005 Teacher Assistant Experience

## Service Learning

(1-3:0:1-3 each)
A course for education students designed to familiarize them with the teaching role and to assist cooperating teachers. Classroom experiences in early childhood, elementary, or secondary education available while assisting a certified teacher in a variety of settings.

## GENERAL

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## PROGRAMS \& COURSE OF STUDY

ACCT
ANTH APPR ART
AUTO
BCCM
BCIS
BIOL
BUSN
CHEM

DANC
DSME
ECON
EDDT
EDUC
ELEC EMMT
ENGL
ENGN ESOL FAML

GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
MA
MLT
MINT
MUSC
MUSM
NURS
PE
PHIL
PHYS
POLS
PRE-PROF
PSY
RECR
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## 1010 Introduction to Education <br> Service Learning

A transfer course for pre-education students in either elementary or secondary education planning to attend certain four-year institutions. Examines the relationship of teaching, learning, motivating, and instruction in classroom settings. Includes observations in public schools to help students understand these relationships and appreciate the role of professional educators in today's society.

1800 Native American Education (3:3:0)
Examines Native American education in both traditional and historical context. Forms will be given to stragtegies designed to help Native Americans succeed in education.

## 2030 PE for Young Children

(2:2:0)
A course for early childhood and elementary students which combines the philosophy of physical education with the practical planning and implementing of physical education experiences for children in the primary and elementary. Discussions on the strengths and challenges associated with teaching will be offered. Individualized training plans are developed, along with their application to the teaching of young children. Prerequisites: FAML 2500, 2600, 2610, 2620 and concurrent enrollment in FAML 2630.

## 2760 Music in Early Childhood

(2:2:0)
Spring
This class is designed for students preparing for careers in early childhood, music education, recreation, and special education and how to equip the early childhood major to teach music in the preschool. Emphasis will be placed on musical skills appropriate for classroom music situations. Skills taught will include mastery of basic musical concepts, accompaniment techniques, writing lesson plans, and choosing appropriate materials and objectives for preschool level students.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training in education. The student meets with the instructor / coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual, departmental work experiences designed and approved by the instructor.

2999 Workshop
(1-3:1-3:0)
A course for both traditional degree seeking and non-traditional students with varying educational needs within the Education area.

## ELECTRONICS (ELEC)

Ross Sacco

## CERTIFICATE OF COMPLETION ONE YEAR PROGRAM

The program offers two options: a Certificate of CompletioninIndustrialElectronics and anAssociate of Applied Science in Industrial Electronics Systems Technology.

The one year Certificate includes a rigorous core curricula of fundamental theory and hands-on laboratory experiences. It is designed to prepare the student for entry-level positions in industry and will complement careers in automotive, computer science, medical, and many pre-professional programs.

The Associate Degree prepares the student for employment as an industrial technician or for transfer to a four year degree. The program includes industrial applications such as automated control and feedback systems, control systems interface into high power applications and devices, and communication systems technology that measure, adjust and remotely control complex systems.

All classes are taught in sequence, therefore it is important for the student to start fall semester. An important prerequisite to electronics is math. The student must be at a MATH 1010 level or above before entering the program.

Certificate of Completion (One year program)

| Fall Semester |  |  | Spring Semester |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course |  | cr. | Course |  | Cr. |
| ELEC | 1110 | 3 | ELEC | 1170 | 6 |
| ELEC | 1120 | 2 | ELEC | 1180 | 1 |
| ELEC | 1130 | 6 | ELEC | 1200 | 4 |
| ELEC | 1140 | 1 | ELEC | 1210 | 1 |
| ELEC | 1150 | 4 | ENGL | 1010 | 3 |
| ELEC | 1160 | 1 | Human Course | elations | 3 |
| TOTAL |  | 17 | TOTAL |  | 18 |
| Program Total 35 |  |  |  |  |  |


| Associate of Applied Science Degree Program |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Year |  |  |  |  |  |
| Fall Semester |  |  | Spring Semester |  |  |
| course |  | cr. | course |  | cr. |
| ELEC | 1110 | 3 | ELEC | 1170 | 6 |
| ELEC | 1120 | 2 | ELEC | 1180 | 1 |
| ELEC | 1130 | 6 | ELEC | 1200 | 4 |
| ELEC | 1140 | 1 | ELEC | 1210 | 1 |
| ELEC | 1150 | 4 | ENGL | 1010 | 3 |
| ELEC | 1160 | 1 | Huma Course | Relations | 3 |
| TOTAL |  | 17 | TOTAL |  | 18 |
| 2nd Year |  |  |  |  |  |
| Fall Semester |  | Spring Semester |  |  |  |
| course |  | cr. | course |  | cr. |
| ELEC | 2110 | 3 | ELEC | 2210 | 3 |
| ELEC | 2120 | 1 | ELEC | 2220 | 1 |
| ELEC | 2130 | 3 | ELEC | 2230 | 3 |
| ELEC | 2140 | 1 | ELEC | 2240 | 1 |
| ELEC | 2150 | 6 | ELEC | 2250 | 6 |
| ELEC | 2160 | 3 | ELEC | 2260 | 1 |
| General | Electives | 3 |  |  |  |
| TOTAL |  | 18 | total |  | 15 |
| Program Total 68 |  |  |  |  |  |

## ELECTRONICS COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1110 Electronics/Electrical Mathematics (3:3:0)

This course covers the various specialized mathematical topics unique to and necessary for the study of electronics/electricity. These topics include but are not limited to: Systems of Units, Units of Measure, Scientific vs. Metric Prefix Notation of Numbers/Units, Functions, Complex Numbers, and Vectors, Numbering Systems, Introductory Statistics and Derivative and Integral Calculus as it applies to Electrical/ Electronic Systems and Components. Prerequisite: Completion of MATH 0990 or ASSET / ACT test scores indicating a math level of MATH 0990 or math exam given by the program.

1120 Computer Tools for Technology Computer Literacy
This course covers various software packages and systems used by electronic/electrical technicians and technologists as tools in the analysis and design of systems. These topics include but are not limited to: Pspice, MathCad, Structure Programming C++, Internet retrieval of manufacturers data sheets, work-processing, spreadsheets and graphing, HP48G programming techniques and programmable logic device programming software. Prerequisite: Completion of or concurrent enrollment in MATH 1060 or ELEC 1110.

## 1130 Circuit Analysis

(6:6:0)
This course covers basic and advanced DC and AC electric circuit topics. These topics include but are not limited to: Ohm's Law, Kirchhoff's Voltage and Current Laws, resistance, capacitance, inductance, conductance, reactance, susceptance, impedance, admittance, and RC and RL time constants. Analysis of series, parallel, series-parallel and bridge networks using Superposition, Thevenin's and Maximum Power Transfer Theorems, Resonance, Mesh and Nodal Analysis; and Source and $-Y$ Conversions. Prerequisites: Completed or concurrent enrollment in ELEC 1140 and MATH 1060 or ELEC 1110.

## 1140 Circuit Analysis Lab

(1:0:3)
This laboratory course provides practical experience related to topics in the ELEC 1130. Emphasis is placed on validation of concepts, laws, theorems and methods of analysis used in the classroom. In addition students will be required to design circuits and develop familiarity with electronic components, bread boarding and the proper use of test equipment. Laboratory reporting techniques will be developed through report writing. Prerequisites: Completed or concurrent enrollment in ELEC 1110, 1120.

## 1150 Digital Systems Theory

(4:4:0
This course introduces the fundamentals of digital logic circuits and systems. Topics include but not limited to: Numbering systems and codes, logic gates operation, Boolean algebra, combinational logic and design, flip-flops, counters, timers, registers, programmable logic devices, memories, logic families, interfacing circuits, sequential logic design and an introduction to Microprocessors. Prerequisites: Completed or concurrent registration in MATH 1060 or ELEC 1110, ELEC 1120 and concurrent enrollment in ELEC 1160.

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1160 Digital Systems Lab
(1:0:3)
This laboratory course provides practical experience related to topics in ELEC 1150. Emphasis is placed on validation of concepts, laws, theorems and methods of analysis used in the classroom. In addition students will be required to design combinational and sequential circuits and develop familiarity with programmable logic devices and programming, digital electronic components, data sheet interpretation and use, and the proper use of test equipment. Laboratory reporting techniques will be developed through report writing. Prerequisites: Completion of ELEC 1120, ELEC 1110, ENGL 1010 and concurrent enrollment in ELEC 1150.

1170 Electronic Devices and Circuits
(6:6:0)
This course introduces the basic physics of solid state devices, and the analysis and applications of Diodes, Bipolar Junction Transistors, Field-Effect Transistors, Thyristors and Linear Integrated circuits. Prerequisites: Completion of ELEC 1130 and concurrent enrollment in ELEC 1180.

## 1180 Electronic Devices and Circuits Lab

(1:0:3)
This laboratory course provides practical experience related to topics in ELEC 1170. Emphasis is placed on validation of concepts, laws, theorems and methods of analysis used in the classroom. In addition students will be required to design circuits and develop familiarity with electronic components, bread boarding and the proper use of test equipment. Laboratory reporting techniques will be developed through report writing. Prerequisites: Completion of ELEC 1120 and concurrent enrollment in ELEC 1170.

1200 Motors, Controls and OLC's
(4:4:0)
This course covers the theory, operation and applications of motors, motor controls and programmable logic controllers. Prerequisites: Completion of ELEC 1130 and concurrent enrollment in ELEC 1210.

1210 Motors, Controls and PLC's Lab (1:0:3) This laboratory course provides practical experience related to topics in ELEC 1200. Emphasis is placed on correctly wiring various motor control applications, programming and interfacing the PLC and validation of characteristics of different motor configurations. In addition students will be required to design PLC software and interface wiring to specifications. Laboratory reporting techniques will be developed through report writing. Prerequisites: Completion of ELEC 1130, ELEC 1160 and concurrent enrollment in ELEC 1200.

1250 A+ Preparation
(3:3:0)
This course covers all nine exam domains in preparation for CompTIA's A+ Certification Exam. Prerequisite: Concurrent enrollment in ELEC 1130, 1150.

2110 Micro-Systems
(3:3:0)
This course examines Microprocessors and Microcontrollers and their applications in a variety of industrial applications. This course also covers assemble language programming and hardware interfacing as it applies to Microprocessors and Microcontrollers. Prerequisites: ELEC 1150, 1160, 1170 and 1180.

## 2120 Mirco-Systems Lab

(1:0:3)
This course reinforces the concepts, techniques, and systems studied in the classroom. Particular emphasis is placed on safety, operation of test equipment, programming of devices, interfacing systems and laboratory reporting. Prerequisite: Concurrent enrollment in ELEC 2110.

## 2130 Communication Systems

(3:3:0)
This course studies the operational characteristics of Amplitude, Frequency and Phase Modulation techniques; and their applications in today's communication systems. In addition, digital communication techniques and technologies are explored. Prerequisites: ELEC 1170 and 1180.

2140 Communication Systems Lab
(1:0:3)
This course reinforces the concepts, techniques, and systemsstudiedintheclassroom. Particularemphasis is placed on safety, operation of test equipment, verification of operational characteristics, building and testing systems, and laboratory reporting. Prerequisite: Concurrent enrollment in ELEC 2130.

## 2150 Industrial Instrumentation Systems

(6:6:0)
This course is a comprehensive study of the theory, physics, and devices that measure and control temperature, pressure, flow and level in the world of process control. Students are required to calculate, graph, interpolate, discuss, define, and articulate all concepts relative to these parameters and the devices used to measure them. Prerequisites: ELEC 1130, 1140, 1150, 1160, 1170, 1180, Concurrent enrollment in ELEC 2160.

2160 Industrial Instrumentation Systems Lab
(1:0:1)
This course provides the practical exposure to the devices studied in ELEC 2150. Students will be expected to properly setup, calibrate, test and troubleshoot actual devices used to measure process parameters. In addition, students are required
to interpret manufacturer's specifications to perform the necessary, safe and accurate calibration of various transmitters, sensors, and systems. Students will also be required to convey technical information through written reports. Prerequisites: ELEC 1130, 1140, 1150, 1160, 1170, 1180, and concurrent enrollment in ELEC 2150.

2210 Advanced PLC's
(3:3:0)
This course examines the advanced analog instruction set of the programmable logic controller and its uses in a variety of industrial applications. This course also covers the PC software programming package used to program PLC's, and the interfacing requirements for use in practical systems. Prerequisites: ELEC 1200, 1210, 2150 and 2160

## 2220 Advanced PLC's Lab

(1:0:3)
This course reinforces the concepts, techniques, and systems studied in the classroom. Particular emphasis is placed on safety, operation of equipment, programming of PLC's, interfacing to control systems and laboratory reporting. Prerequisite: Concurrent enrollment in ELEC 2210.

## 2230 Communication Systems II

(3:3:0)
This course is a continuation of ELEC 2130 and studies transmission lines, antennas, Microwave, Satellite, Fiber-Optics and Cellular Communications technologies. Prerequisites: ELEC 2130 and 2340.

2240 Communication Systems II Lab (1:0:3) This course reinforces the concepts, techniques, and systems studied in the classroom. Particular emphasis is placed on safety, operation of test equipment, verification of operational characteristics, building and testing systems, and laboratory reporting. Prerequisite: Concurrent enrollment in ELEC 2230.

## 2250 Industrial Control Systems

(6:6:0)
This course studies industrial control systems, transducers, signal conditioning systems and techniques, sensors, servos, and their applications in the commercial and industrial environments. Prerequisites: ELEC 1170 and 1180.

2260 Industrial Control Systems Lab (1:0:3) This course reinforces the concepts, techniques, and systems studied in the classroom. Particular emphasis is placed on safety, operation of test equipment, building and testing systems, and laboratory reporting. Prerequisite: Concurrent enrollment in ELEC 2250.

2330 Telecom Mediums
(3:3:0)
This coursestudiesthecharacteristics,applications, planning, implementation, and management of telecommunication mediums. Prerequisite: ELEC 1250, concurrent enrollment in ELEC 2340.

## 2340 Telecom Mediums Lab

(1:0:3)
This lab course gives practical application to the topics studied in ELEC 2330, as well as familiarizes the student with the use of basic tools, equipment, and techniques used by Telecom professionals installing, managing, and troubleshooting these mediums. Prerequisites: ELEC 1250, concurrent enrollment in ELEC 2330.

2350 Net+ Preparation
(3:3:0)
This course covers all ten exam domains in preparation for CompTIA's Net+Certification Exam. Prerequisites: ELEC 1250, concurrent enrollment in ELEC 2360.

2360 Net+ Preparation Lab
(1:0:3)
This lab course gives hands-on applications to all ten-exam domains in preparation for CompTIA's Net+ Certification Exam. Prerequisites: ELEC 1250, concurrent enrollment in ELEC 2350.

## 2370 iNet+ Preparation

(3:3:0)
This course covers all six exam domains in preparation for CompTIA's iNet+Certification Exam. Prerequisites: ELEC 1250, concurrent enrollment in ELEC 2380.

## 2380 iNet+ Preparation Lab

(1:0:3)
This lab course gives hands-on applications to all six exam domains in preparation for CompTIA's iNet+ Certification Exam. Prerequisites: ELEC 1250, concurrent enrollment in ELEC 2380.

## 2510 Telecom Systems

(3:3:0)
This course will give the student an overview and history of the telecommunications industry, covering many voice telecom systems and data telecom systems. The student will be able to construct, troubleshoot, test and verify the proper operation of voice based telecommunication systems. Also safely test equipment and tools to measure operational parameters for purposes of diagnosis, repair and verification of proper operation. Prerequisite: ELEC 1250, concurrent enrollment in ELEC 2520.

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EDUC
ELEC
EMMT
ENGL
ENGN
ESOL
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
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MACH
MATH
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MLT
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MUSC
MUSM
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## 2520 Telecom Systems Lab

(1:0:3)
This lab course gives practical application to the topics studied in ELEC 2310, as well as familiarizes the student with the use of basic tools, equipment, and troubleshooting techniques. Prerequisite: ELEC 1250, concurrent enrollment in ELEC 2510.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides on-the-job experience for students majoring in electronics. The student meets with the instructor/coordinator at the beginning and periodically to determine and evaluate objectives, hours to be worked and credit agreement. Prerequisite: Instructor's permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by the instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to meet the changing needs of the student in Electronics.

## EMERGENCY MANAGEMENT (EMMT)

| Associate of Science - Emphasis in Emergency Management |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  |  | Cr. |
| General Education Requirement |  |  | 33-39 |
| EMMT | 1210 | Basic Principles and Practices of Emergency Management | 2 |
| EMMT | 1260 | Decision Making and Problem Solving | 1 |
| EMMT | 1275 | E.O.C. Operations and Management Course | 1 |
| EMMT | 1280 | Basic Public Information Officer Training Course | 2 |
| EMMT | 1376 | Hazard Mitigation | 2 |
| EMMT | 1410 | Disaster Response and Recovery Operations | 2 |
| EMMT | 1925 | Team Building for Emergency Managers | 2 |
| EMMT | 1926 | Management Skills for the Emergency Program Manager | 2 |
| EMMT | 2230 | Exercise Design | 1 |
| EMMT | 2240 | Leadership and Influence | 2 |
| EMMT | 2242 | Effective Communications | 2 |
| EMMT | 2420 | Mass Fatalities Incident Mangt.. | 2 |
| EMMT | 2440 | Developing Volunteer Resources | 1 |
| TOTAL |  |  | 22 |

Additional 9 credit hours required from the following:

| Course |  | Name | Cr. |
| :--- | :--- | :--- | :--- |
| EMMT | 1235 | Emergency Planning | 2 |
| EMMT | 1440 | Resource Management | 1 |
| EMMT | 1450 | Incident Command System <br> (ICS) Basic Course | 1 |
| EMMT | 1460 | Incident Command System <br> (ICS) Law Enforcement | 1 |
| EMMT | 1470 | Incident Command System <br> (ICS) Public Works | 1 |
| EMMT | 1480 | Donations Management <br> Workshop | 2 |
| EMMT | 1490 | Local Rapid Situation Assmt. <br> Wrksp | 1 |
| EMMT | 2430 | Comm. Emerg. Response Team <br> (CERT) | 2 |
| EMMT | 2450 | Incident Command System <br> (ICS) Intermediate Course | 2 |

## EMERGENCY MANAGEMENT COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1210 Basic Principles and Practices of Emergency Management

(2:2:0)
This course is designed mainly for students majoring in Emergency Management. It examines the principles and practices for the Integrated Emergency Management system (IEMS), including the federal-state-local relationship in the four phases of emergency management.

## 1235 Emergency Planning

(2:2:0)
This course is designed mainly for students majoring in Emergency Management. Uses established planning concepts within the context of emergency management. Participants learn the planning process, use action planning techniques, and practice hazard assessment. (The Hazardous Materials Planning course can be taken in place of this course.)

## 1260 Decision Making and Problem Solving

This course is designed mainly for students majoring in Emergency Management. No skill is more valuable than the ability to make critical decisions. This course teaches participants effective ways to improve their approach to problem solving in the emergency management environment.
(1:1:0)
This course is designed mainly for students majoring in Emergency Management. This 3-day course provides participants with the knowledge and skills to effectively manage and operate an EOC during crisis situations. The course covers many aspects of properly locating and designing an EOC, how to staff, train and brief EOC personnel, and how to operate an EOC during various situations.

## 1280 Basic Public Information Officer Training Course

(2:2:0)
This course is designed mainly for students majoring in Emergency Management. Provides an overview of responsibilities and challenges faced by Public Information Officers, and focuses on responding to the increased needs for information during emergencies.

## 1376 Hazard Mitigation

(2:2:0)
This course is designed mainly for students majoring in Emergency Management. This course is designed to provide participants with knowledge about hazard mitigation that will enable them to effectively coordinate state and local hazard mitigation responsibilities. Course modules include state mitigation responsibilities, mitigation techniques and technology, planning, managing the grant program, and developing state mitigation teams. Issues are addressed through a variety of techniques such as workshops, informal discussions, group analysis of a realistic case, and practical exercises. The course can be conducted in a 2 or 3 day format to allow for regional flexibility in selecting course content.

## 1410 Disaster Response and Recovery Operations

(2:2:0)
This course is designed mainly for the student majoring in Emergency Management. It covers the basic concepts and operational procedures and authorities involved in responding to major disasters.

## 1440 Resource Management

(1:1:0)
This course is designed mainly for students majoring in Emergency Management. Provides participants with the knowledge and skills to effectively identify, develop, and manage a resource management system.

1450 Incident Command System (ICS) Basic Course
(1:1:0)
This course is designed mainly for students majoring in Emergency Management. Provides students with an overview of the concepts, terminology, facilities and organizational structure of the ICS. Student will have the opportunity to organize a command structure for a given scenario during the class. The basic course modules cover the following topics: ICS Orientation, Principles and Features of IC, Organizational Overview, Incident Facilities, Incident Resources, and Common Responsibilities.

1460 Incident Command System (ICS) Law Enforcement
(1:1:0)
This course is designed mainly for students majoring in Emergency Management. It covers response to emergency or disaster incidents involving a number of different agencies and requires integrated, effective management in order to ensure a successful outcome and efficient, safe use of resources. It introduces law enforcement personnel to the ICS. Several scenarios are included which allow participants to apply ICS to situations. It teaches the principles and practices of the ICS from a law enforcement perspective.

## 1470 Incident Command System (ICS) Public Works

(1:1:0)
This course is designed mainly for students majoring in Emergency Management. It covers response to emergency or disaster incidents involving a number of different agencies and requires integrated, effective management in order to ensure a successful outcome and efficient, safe use of resources. It introduces public works, personnel to the ICS. Several scenarios are included which allow participants to apply ICS to public works situations. It teaches the principles and practices of the ICS from a public works perspective.

## 1480 Donations Management Workshop

(2:2:0)
This course is designed mainly for students majoring in Emergency Management. This 3-day workshop addresses the planning and operating of an effective donations management system to ensure efficient use of undesignated donations and spontaneous volunteers during a disaster in conjunction with representatives of Voluntary Organizations Active in Disaster (VOAD) and State and local government.

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## 1490 Local Rapid Situation Assessment Workshop

(1:1:0)
This course is designed mainly for students majoring in Emergency Management. This workshop is designed to teach participants critical points in the rapid assessment planning process to enable them to develop an initial draft of rapid assessment procedures for response to a disaster. The ability of a local government to perform a rapid local situation assessment accurately and within the first few hours after a disaster is critical to providing an adequate response for life threatening situations and imminent hazards. Effective early assessment permits prioritization of response activities, allocation of scarce resources and timely requests for mutual aid and State and Federal assistance. This course is delivered in a community on an as requested basis.

## 1925 Team Building for Emergency Managers

(1:1:0)
This course is designed mainly for students majoring in Emergency Management. This 2-day course focuses on conflict resolution, diversity training, and team building. Emphasis is placed on the advantages and challenges of teams, the characteristics of effective teams and team members, team player styles, the role of personal and cultural diversity in building team, the nature of conflict, conflict resolution techniques, and conflict management style. The team process of balancing task with relationship and assertiveness with cooperation are emphasized, as is the fundamental role of listening and communication skills in building and maintaining team relationships.

## 1926 Management Skills for the Emergency Program Manager <br> (2:2:0)

This course is designed mainly for students majoring in Emergency Management. This 2-day course is designed to be of value to the manager just starting out as well as those with more experience. It focuses upon the six tasks and six functions of management, and includes time, stress and project management as well as the development of negotiation, delegation and coaching skills.

## 2230 Exercise Design

(1:1:0)
This course is designed mainly for students majoring inEmergency Management. Includesanindependent study prerequisite on exercise terminology. Course work consists of the importance of exercising plans and evaluating the results to improve emergency exercises which offer learning opportunities as well as effectively testing plans and procedures.

2240 Leadership and Influence
(2:2:0)
This course is designed mainly for students majoring in Emergency Management. Each person utilizes personality assessment tools to help learn about themselves and thereby understand others. Course work focuses on discovering leadership abilities, power bases and conflict resolution strategies.

2242 Effective Communications
(2:2:0)
This course is designed mainly for students majoring in Emergency Management. It reinforces existing management skills and introduces management skills required for building an emergency management system. It strengthens leadership and communication skills and facilitates decision making and problem solving. Participants are required to give a speech and media crisis interview as part of the course work.

## 2420 Mass Fatalities Incident Management

This course is designed mainly for students majoring in Emergency Management. In our planning for and response to a disaster, we always focus on saving lives, protecting property and preserving the environment. How do we properly care for the remains of those who do not survive and how can we help survivors and responders who would be greatly impacted by a mass fatality incident.

## 2430 Community Emergency Response Team

 (CERT)/Train The Trainer (TTT) (2:2:0)This course is designed mainly for students majoring in Emergency Management. Will prepare participants to promote, organize, and administer the Community Emergency Response Team Program in their jurisdictions and to train other instructors in their communities to deliver CERT training.

2440 Developing Volunteer Resources (1:1:0) This course is designed mainly for students majoring in Emergency Management. Emphasizes that dependable and effective volunteers are essential to the success of emergency management programs. The course work explores the need for volunteers then examines how to design, organize and maintain viable volunteer programs. Emphasis is placed on the importance of task identification, appropriate job descriptions, recruiting and motivating volunteers.

## 2450 Incident Command System (ICS) Intermediate Course

This course is designed mainly for students majoring in Emergency Management. Provides a more indepth description of the Incident Command System which would be of particular benefit to supervisor level responders.

## 2460 Emergency Medical Technician (EMT)

(8:8:0)
This course is intended primarily for personnel of companies and agencies who may be involved in providing paramedical assistance in the event of injury or illness. It is held in cooperation with the Utah State Emergency Medical System, local physicians and EMT instructors. A certificate of completion will be awarded at the completion of the course. A special EMT fee is required. Dual listed as MINT 2450.

2977 Cooperative Education
(1-3:0:1-3)
Open to all students in the Emergency Management Department who meet the minimum cooperative work experience requirements of the department. Provides academic credit for on-thejob experience. Grade and amount of credit will be determined by the department.

## 2988 Special Problems

(1-3:0:1-3)
These courses are designed mainly for the student majoring in emergency management. There will be a variety of short courses, institutes and special problems which will work under this number. Since these courses are not specifically designed at this time, it is not possible to detail the teaching methods, textbooks, or instructors as yet. These will be detailed as class slips are designed.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing need of the student in the Emergency Management Field.

## ENGLISH (ENGL)

Carrie Icard
Dr. Curtis Icard
Jared Olsen
Merry M. Palmer
Josi Russell
Larry W. Severeid
Brian Stubbs
N. Kent Templeton

English majors and minors should consult with their advisor for assistance in planning their course of study. The courses will vary according to the areas of emphasis.

| All English majors must take the following classes |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr. |
| ENGL | 1010 | Introduction to Writing | 3 |
| ENGL | 2010 | Intermediate Writing | 3 |
| Two courses from the following: |  |  |  |
| Course |  | Name | Cr. |
| ENGL | 2510 | Survey of American Literature I | 3 |
| ENGL | 2520 | Survey of American Literature II | 3 |
| ENGL | 2610 | Survey British Literature I | 3 |
| ENGL | 2620 | Survey British Literature II | 3 |
| Two courses from the following: |  |  |  |
| Course |  | Name | Cr. |
| ENGL | 2250 | Creative Writing | 3 |
| ENGL | 2260 | Poetry Writing | 3 |
| ENGL | 2030 | Great Books and Ideas | 3 |
| ENGL | 2300 | Shakespeare | 3 |
| ENGL | 2220 | Introduction to Fiction | 3 |
| Total English hours required (five courses) |  |  | 15 |
| Total English hours beyond General Education (four courses) |  |  | 12 |

## ENGLISH COURSES

After the course title is a designation such as ( $3: 3: 3$ ). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

0900 Developmental Language Arts (3:3:0) Intensive practice in reading, writing, grammar, and analytical skills as preparation for composition courses.

## 0950 English Skills Lab

(1-3:0:1-3)
This is a laboratory course in which the students will perform activities and assignments to help them understand and reinforce the material taught during their English or ESOL courses. It will focus on listening, speaking, reading, vocabulary, spelling, grammar, sentence, paragraph, and essay skills.Assignments will be individually tailored to meet the needs of each student.

## 0960 Intermediate Integrated English Language Skills <br> (5:5:0)

ESOL 0960 is an integrated language skills course for English Speakers of Other Languages at the intermediate level. It concentrates on reading comprehension and analysis, on writing for

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different purposes and audiences, on syntax and mechanics of English grammar, and on building an academic vocabulary base. Active listening and speaking activities are also part of the course to help students prepare for participation in the college classroom.

## 0970 Advanced Integrated English Language Skills

(5:5:0)
ESOL 0970 is an integrated language skills course for EnglishSpeakers of Other Languages at the advanced level. It concentrates on reading comprehension and analysis, on writing for different purposes and audiences, on syntax and mechanics of English grammar, and on building an academic vocabulary base. Active listening and speaking activities are also part of the course to help students prepare for participation in the college classroom.

## 0980 College Preparation: Reading and

 Vocabulary(5:5:0)
ESOL 0980 is a basic language skills class that concentrates on reading compehension and analysis, vocabulary development, and writing fluency in response to various genres. In addition to these skills, the course is designed to help students develop the analytical thinking appropriate for success at the college level.

## 0985 College Preparation: Writing and

 Grammar (5:5:0)ESOL 0985 is a basic language skills class that concentrates on reading compehension and analysis, vocabulary development, and writing fluency in response to various genres. In addition to these skills, the course is designed to help students develop the analytical thinking appropriate for success at the college level.

## 0990 Developmental Composition

(3:3:0)
Emphasizes basic composition skills: generating ideas, developing unified, coherent paragraphs, writing and revising short essays, and editing for clarity and grammatical correctness. Includes reading and analysis of short essays. Instructors use a variety of instructional methods including group work, lecture, and tests. Students demonstrate their competence primarily by writing and revising short papers.

## 1010 Introduction to Writing

(3:3:0)
This course is a core requirement for all students pursuing an $\mathrm{AA}, \mathrm{AB}, \mathrm{AC}, \mathrm{AS}, \mathrm{AAS}$, or a Certificate of Completion. The course will teach the student how to plan, write, revise, and edit expository essays. The class will be taught through lectures, class discussions, and group process experiences

## 1070 Native American Literature and Philosophy

## Humanities

This class is a general education class intended for all students. It will introduce the student to general principles of Indian world view. The realm of mythology, legends and tales; trickster tales and religious drama; songs, poetry and figurative language; autobiography; contemporary Indian literature; and cross-cultural literary criticism.

## 2010 Intermediate Writing

(3:3:0)
An extension of English 1010, this course is designed for all students wanting to continue improving their written communication skills. This course is a core requirement for students pursuing an Associate of Science or Arts degree. The course will teach writing of formal essays, including critical reading and writing, research, citation, and documentation of primary and secondary source material. The class will be taught through lectures, class discussions, and group process experiences. Prequisite: English 1010

2030 Great Books and Ideas
(3:3:0)
Materials covered in this course provide a broad reading experience in some of the world's greatest literature, covering major themes from the individual's relationship to the universe, to the interrelationships within a society, to the individual in the sometimes fragmented modern world.

## 2040 Western American Literature Humanities

This course will offer the student a comprehensive introduction to the literature of the American West including both historical and contemporary works of fiction, non-fiction, and poetry. Writers will range from Francis Parkman (The Oregon Trail) to Larry McMurtry (Buffalo Girls). Instructional methods will include lecture, discussion, student presentations, and group projects. Prerequisites: Completion of at least English 1010 is recommended.

## 2050 Literature by Women <br> Humanities

The course will focus on literature by primarily British and American women within the historical and cultural framework of their times. Lectures, videos, and class discussion, as well as some group work, will take place. Quizzes, examinations and at least one paper are required. Prerequisite: Completion of English 1010 is recommended.

## 2060 Literature and Diversity

(3:3:0)

## Humanities

This course is open to all students. It will give them the opportunity to read literature representative of the diversity in America and world cultures, focusing on groups not usually covered in most traditional literature courses.

2120, 2130 Literary Magazine (1:1:0 each)
This is a course for students interested in working on the College's literary magazine, The Nighthawk Review. Students will learn to put a manuscript together with artwork, and with poetry, essays, and stories which are examples of excellent writing done by CEU students who submit their work for publication.

## 2200 Literature

(3:3:0)

## Humanities

Analytical readings in literature, with attention to types, terms, historical development, and other contexts.

## 2220 Introduction to Fiction

(3:3:0)

## Humanities

Readings in fiction, including novels, novellas, and stories. The course will examine elements of the genre such as character, plot, theme, and style. Various critical approaches and contexts will be discussed, as well as the historical development of the form.

## 2240 Introduction to Poetry

(3:3:0)

## Humanities

Emphasizes analytical reading: considering a poem's formal elements such as rhythm, diction, imagery, form and sound, assuming that such understanding enhances the enjoyment of literature. Assists students in forming their own critical approaches and responses to poems by exploring a variety of major critical theories. Instructors employ a lecture and discussion format. Students demonstrate their understanding of course material by writing papers and/or essay examinations. Prerequisite: Completion of English 1010 highly recommended.

## 2250 Creative Writing

(3:3:0)
Techniques for writing fiction and poetry through reading contemporary works and work shopping student writing.

## 2251 Poetry Writing

(3:3:0)
Techniques for writing poetry through reading contemporary works and work shopping student writing.

2300 Shakespeare
(3:3:0)
Analytical reading of representative plays and non-dramatic poetry. Some attention to critical currents around the works, and to textual and genre questions. Shakespeare's literary predecessors and sources will be glanced at as well.

## 2330 Children's Literature

(3:3:0)

## Service Learning

Review of the development of children's literature, past to present: types and characteristics of literature written for children; major award winners; practical uses within the classroom.

2340 Navajo Literature and Philosophy (3:3:0) This survey course examines Navajo literature in its many traditional and contemporary forms: mythology, tales, autobiography, fiction, and poetry. Lecture/discussion/reading/are the central activities of the course.

2510 Survey of American Literature I (3:3:0) Materials covered in this course provide an overview of the major authors, works, and trends in American literature from the earliest narratives of encounter, through the colonial and national periods, to the end of the civil war.

2520 Survey of American Literature II (3:3:0) Materials covered in this course provide an overview of the major authors, works and trends in American literature from the Civil War period to the present.

2610 Survey of British Literature I (3:3:0) Selected readings in British literature from Beowulf to the 18th century. Writers covered include Chaucer, Spenser, Jonson, Shakespeare, Milton, Swift and Pope. British literature I is a standard English major course at the sophomore level, as preparation for upper division, more specific, more intensive courses. This course will be offered once every two years.

2620 Survey of British Literature II (3:3:0) Selected readings in British literature from the early 19th century to the present. Writers covered include Blake, Wordsworth, Keats, Browning, Conrad, Joyce, Woolf and Orwell. British literature II is a standard English major course at the sophomore level, as preparation for upper division, more specific, more intensive courses. This course will be offered once every two years.

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## Introduction to Literature and Critical

 Theory(3:3:0)
The course is an introduction to different ways of reading literature. It is intended primarily for English majors (thoughotherinterested studentsmay register as well). Literary works will be read and discussed, with attention not only to the texts themselves, but also to the acts of reading and interpretation. The class will survey the development of critical theory, and practice the techniques and vocabulary of several influential modes of criticism. Prerequisites: ENGL 1010 and 2010 are recommended. Instructor permission recommended for non-English majors.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training in literature. The student meets with the instructor / coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit will be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in English.

## ENGINEERING (ENGN)

Dr. David Kardelis<br>Dr. Kyle Larsen<br>Dr. Henry Zwick

## ASSOCIATE OF PRE-ENGINEERING

## DEGREE

The Associate of Pre-Engineering (APE) degree is offered to students who plan to transfer to a university and pursue a baccalaureate degree in any of the traditional fields of engineering. This degree requires an emphasis of course work in engineering, mathematics and science; with fewer general education requirements than the Associate of Science or the Associate of Arts degree. The balance of the general education requirements necessary for a bachelor degree will be taken during the summer semester or as a junior or senior at the 4year transfer institution. This program is consistent with recent Accreditation Board for Engineering and Technology (ABET) standards. Course work for the APE degree must include the completion of at least 68 to 76 semester hours. Two year degree programs spread over three years are available from the Engineering advisor.

## SUGGESTED DEGREE FOR CHEMICAL, FUELS, AND PETROLEUM ENGINEERING

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| First Year |  |  |  |  |  |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | cr. | Course |  | cr. |
| CHEM | 1210 | $4^{*}$ | CHEM | 1220 | $4^{*}$ |
| CHEM | 1215 | 1* | CHEM | 1225 | 1* |
| ENGN | 1000 | $2^{*}$ | MATH | 1220 | $4^{*}$ |
| ENGN | 1005 | $1 *$ | MATH | 2280 | 3* |
| PHYS | 2210 | $4^{*}$ | PHYS | 2220 | $4^{*}$ |
| PHYS | 2215 | $1 *$ | PHYS | 2225 | $1 *$ |
| Humani |  | 3 | TOTAL |  | 17 |
| Social Sc | ience | 3 |  |  |  |
| TOTAL |  | 19 |  |  |  |
| Summer Semester |  |  |  |  |  |
| Fine Arts (2 courses) |  |  | 6 |  |  |
|  | American Institution |  | 3 |  |  |
| TOTAL |  |  | 9 |  |  |
| Second Year |  |  |  |  |  |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | cr. | course |  | cr. |
| CHEM | 2310 | 4* | CHEM | 2320** | $4^{*}$ |
| CHEM | 2315 | $1 *$ | CHEM | 2325** | $1 *$ |
| ENGN | 2010* | 3* | ENGN | 2030** | $3^{*}$ |
| MATH | 2270 | 3* | ENGN | 2300 and |  |
| ENGL | 1010 | 3 | ENGN | 2450 - |  |
| CS | 1400 | 3* |  | -or- |  |
| TOTAL |  | 17 | Technica | Electives*** | $8^{*}$ |
|  |  |  | ENGL | 2010 | 3 |
|  |  |  | Total |  | 19 |
|  |  | ra | Total |  |  |

* Course has prerequisite(s) and / or corequisite(s)
** Or Technical Elective***
*** Can be chosen from approved courses in Physics, Chemistry, Engineering, Mathematics, Life Science, Electronics, Computer Science and others.

Note: MATH 2210, Multivariable Calculs is required at some four-year colleges in the second year.It is strongly suggested that it be taken here to ensure better success at the transfer college.

## SUGGESTED DEGREE FOR CIVIL, STRUCTURAL AND ARCHITECTURAL ENGINEERING

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| First Year |  |  |  |  |  |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | cr. | Course |  | cr. |
| ENGN | 1000 | 2* | BCIS | 2550 ***** | 3* |
| ENGN | 1005 | $1 *$ |  | -or- |  |
| GEO | 1110 | 3 | CS | $1400^{* * * * * *}$ | 3 * |
| GEO | 1115* | $1 *$ | EDDT | 1040 | 3* |
| PHYS | 2210 | 4* | MATH | 1220 | 4* |
| PHYS | 2215 | $1 *$ | MATH | 2280 | 3* |
| ENGL | 1010 | 3 | PHYS | 2220 | 4* |
| Fine Art |  | 3 | PHYS | 2225 | $1 *$ |
| TOTAL |  | 18 | TOTAL |  | 18 |
| Summer Semester |  |  |  |  |  |
| Fine Arts or Humanities |  |  | 3 |  |  |
| American Institutions |  |  | 3 |  |  |
| TOTAL |  |  | 6 |  |  |
| Second Year |  |  |  |  |  |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | cr. | Course |  | Cr. |
| CHEM | 1210 | $4^{*}$ | CHEM | 1220 -and- | 4* |
| CHEM | 1215 | $1 *$ | CHEM | 1225 -or- | 1* |
| ENGN | 2010 | $3^{*}$ | Technica | Electives*** | 5* |
| MATH | 2270* | 3 | Humani |  | 3 |
| ENGL | 2010 | 3 | ENGN | 2030 | 3* |
| Social Sc | ience | 3 | ENGN | 2140 | 3 * |
| TOTAL |  | 17 | ENGN | 2240 | 3 * |
|  |  |  | TOTAL |  | 17 |

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* Course has prerequisite(s) and / or corequisite(s)
** Or Technical Elective***
*** Can be chosen from approved courses in Physics, Chemistry, Engineering, Mathematics, Life Science, Electronics, Computer Science and others.
**** Not for the University of Utah
***** For Utah State
******For University of Utah
Note: MATH 2210, Multivariable Calculus is required at some four-year colleges in the second year. It is strongly suggested that it be taken here to ensure better success at the transfer college.

SUGGESTED DEGREE FOR ELECTRICAL OR COMPUTER ENGINEERING
Recommended Course of Study

| First Year |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Fall Semester <br> Course | Spring Semester <br> course |  |  |  |
| CS | 1400 | $3^{*}$ | CS | 1410 |
| ENGN 1000 | $2^{*}$ | MATH | 1220 | $3^{*}$ |
| ENGN 1005 | $1^{*}$ | MATH | 2280 | $4^{*}$ |
| MATH 2270 | $3^{*}$ | PHYS | 2220 | $3^{*}$ |
| PHYS 2210 | $4^{*}$ | PHYS | 2225 | $4^{*}$ |
| PHYS $\quad 2215$ | $1^{*}$ | TOTAL |  | $\mathbf{1 5}$ |
| Technical Elective*** | $3^{*}$ |  |  |  |
| TOTAL | $\mathbf{1 7}$ |  |  |  |


| Summer Semester |  |
| :--- | :--- |
| ENGL 1010 | 3 |
| Fine Arts | 3 |
| Social Science | 3 |
| TOTAL | $\mathbf{9}$ |

## Second Year

| Fall Semester |  |  | Spring Semester |  |
| :---: | :---: | :---: | :---: | :---: |
| Course |  | Cr. | course | cr. |
| ELEC | 1150 | 4* | ENGL 2010 | 3* |
| ELEC | 1160 | 1* | American Institutions | 3 |
| ENGN | 2250 | 5* | Fine Arts | 3 |
| ENGN | 2255 | $1 *$ | Humanities | 3 |
| MATH | 2210 | $4^{*}$ | Technical Elective*** | 3* |
| CS | 2420 |  | TOTAL | 15 |
| $\stackrel{\text {-or- }}{\text { General Education }}$-or- |  |  |  |  |
| Technica | Elective*** | 3* |  |  |
| TOTAL |  | 18 |  |  |

Program Total 74

* Course has prerequisite(s) and / or corequisite(s)
** If required by Transfer College
*** Can be chosen from approved courses in Physics, Chemistry, Engineering, Mathematics, Life Science, Electronics, Computer Science and others.

Note: MATH 2220, Discrete Math and/or CS 2450, Software Engineering are required at some four-year colleges in the second year of Computer Engineering. Very few students can handle these loads for each of the four semesters. It is highly recommended that students spread the program over three years.

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## PROGRAMS \& COURSE OF

 STUDYACCT
ANTH APPR
EMMT
ENGL
ENGN
ESOL
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
MA
MLT
MINT
MUSC
MUSM
NURS
PE
PHIL
PHYS
POLS
PRE-PROF
PSY
RECR
SLSC
SOC
THEA
TRST
WE
WELD
WILD

PEOPLE

SUGGESTED DEGREE FOR ENVIRONMENTAL ENGINEERING

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| First Year |  |  |  |  |  |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | cr. | Course |  | cr. |
| BIOL | 1610 | 3 | CHEM | 1220 | 4* |
| BIOL | 1615 | 2* | CHEM | 1225 | 1* |
| CHEM | 1210 | 4* | EDDT | 1040 | 3* |
| CHEM | 1215 | 1* | ENGN | 2240 | 3* |
| ENGN | 1000 | 2* | MATH | 1220 | 4* |
| ENGN | 1005 | $1 *$ | MATH | 2280 | $3 *$ |
| PHYS | 2210 | 4* | TOTAL |  | 18 |
| PHYS | 2215 | 1* |  |  |  |
| TOTAL |  | 18 |  |  |  |
| Summer Semester |  |  |  |  |  |
| ENGL 10 |  |  | 3 |  |  |
| American Institution |  |  | 3 |  |  |
| Fine Arts (2 courses from different areas) |  |  | 6 |  |  |
| TOTAL |  |  | 12 |  |  |
| Second Year |  |  |  |  |  |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | Cr. | Course |  | Cr. |
| BIOL | 2060* | 3 | ENGL | 2010 | 3 |
| BIOL | 2065* | 1 | ENGN | 2030** | 3* |
| CHEM | 2310 | 4* | ENGN | 2140** | $3 *$ |
| CHEM | 2315 | 1* | ENGN | 2300 -о |  |
| ENGN | 2010** | 3* | ENGN | 2450 |  |
| ENGN | 2250** | 5* | Technic | -or- <br> Electiv | 4* |
| ENGN | 2255** | $1 *$ | Human |  | 3 |
| MATH | 2270 | 3* |  |  |  |
| TOTAL |  | 21 | TOTAL |  | 16 |
| Program Total 85 |  |  |  |  |  |

* Course has prerequisite(s) and/or corequisite(s)
** Or Technical Elective**
*** Can be chosen from approved courses in Physics, Chemistry, Engineering, Mathematics, Life Science, Electronics, Computer Science and others.

Note: MATH 2210, Multivariable Calculus is required at some four-year colleges in the second year. It is strongly suggested that it be taken here to ensure better success at the transfer college.

## SUGGESTED GENERIC DEGREE

This tract of the pre-engineering degree could be for the following Engineering Disciplines: Aeronautical, Aerospace, Agricultural, Architectural, Automotive, Biological, Clinical, Energy, Industrial, Integrated, Irrigation, Management, Manufacturing, Material Science, Nuclear, Safety, Structural. Systems, Textile and Transportation (Note: All of these are not offered at all or any of the Utah four year institutions. Some of these Engineering Disciplines may require early transfer.)

Recommended Course of Study

| First Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Fall Semester |  | Spring Semester |  |  |
| Course | cr. | Course |  | cr. |
| ENGN 1000 | 2* | CHEM | 1210 | 4* |
| ENGN 1005 | $1 *$ | CHEM | 1215 | 1* |
| PHYS 2210 | 4* | MATH | 1220 | $4^{*}$ |
| PHYS 2215 | $1 *$ | MATH | 2280 | 3* |
| Fine Arts (2 Courses from different areas | 6 | PHYS | 2220 -and- | $4^{*}$ |
| MATH 2270 | 3* | PHYS | 2225 | 1* |
| TOTAL | 17 | Technic | -or- <br> Electives*** | 5* |
|  |  | TOTAL |  | 17 |


| Summer Semester |  |
| :--- | :--- |
| American Institutions | 3 |
| ENGL 1010 | 3 |
| TOTAL | $\mathbf{6}$ |

Second Year

| Fall Semester |  |  | Spring Semester |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course |  | cr. | Course |  | Cr. |
| ENGN | 2010 or Tech <br> Elec or GE*** | 3* | ENGL | 2010 | 3* |
| ENGN | 2250** | 5* | ENGN | 2030 and |  |
| ENGN | 2255** | 1* | ENGN | 2140 and |  |
| Social Science |  | 3 | ENGN | 2300 |  |
| Computer Science <br> Programming <br> Language |  |  | and/-or- <br> Technical Electives*** |  | 12* |
| Technical Electives*** |  | 3* | Humanities |  | 3 |
| TOTAL |  | 15 | TOTAL |  | 18 |
|  | Progra | To | 173 |  |  |

* Course has prerequisite(s) and / or corequisite(s)
** If required by transfer school
*** Can be chosen from approved courses in Physics, Chemistry, Engineering, Mathematics, Life Science, Electronics, Computer Science and others

Note: MATH 2210, Multivariable Calculus is required at some four-year colleges in the second year. It is strongly suggested that it be taken here to ensure better success at the transfer college.

## SUGGESTED DEGREE FOR INTEGRATED ENGINEERING

For basic transfer to Southern Utah University and possibly some out-of-state universities.

## Recommended Course of Study

| First Year |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | Cr. | course |  | Cr. |
| ENGN | 1000 | 2* | ENGL | 2010 | 3* |
| ENGN | 1005 | $1 *$ | MATH | 1220 | 4* |
| EDDT | 1040 | 3 | MATH | 2280 | $3 *$ |
| ENGL | 1010 | 3 | PHYS | 2220 | 4* |
| PHYS | 2210 | $4 *$ | PHYS | 2225 | $1 *$ |
| PHYS | 2215 | $1 *$ | Fine Arts Requiren |  | 3 |
| MATH | 2270 | 3* |  |  |  |
| TOTAL |  | 17 | TOTAL |  | 18 |

## Summer Semester

American Institutions 3
TOTAL 3

| Second Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Fall Semester |  | Spring Semester |  |  |
| Course | cr. | Course |  | cr. |
| ENGN 2010 | 3* | CHEM | 1210 | 4* |
| ENGN 2250 | 5* | CHEM | 1215 | 1* |
| ENGN 2255 | 1* | ENGN | 2030 | 3* |
| MATH 2210 | $4^{*}$ | ENGN | 2140 | 3* |
| Biology Requirement | 3 | CS | 1400 | 3* |
| Humanities | 3 | Social S Require |  | 3 |
| TOTAL | 19 | TOTAL |  | 17 |
| Program Total 74 |  |  |  |  |

* Course has prerequisite(s) and / or corequisite(s) ** Or Technical Elective***
Note: Students need to take Computer Literacy Test or BCIS 1010, Computer Literacy. Students may opt to take ENGN 2300, ThermoDynamics here at CEU in the Spring Semester of their 2nd year or wait to take it when they transfer.

SUGGESTED DEGREE FOR MECHANICAL ENGINEERING

## Recommended Course of Study

| First Year |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | cr. | Course |  | cr. |
| ENGN | 1000 | 2* | ENGL | 1010 | 3 |
| ENGN | 1005 | 1* | MATH | 1220 | $4^{*}$ |
| EDDT | 1040 | 3* | MATH | 2280 | 3* |
| MATH | 2270 | 3* | PHYS | 2220 | 4* |
| PHYS | 2210 | 4* | PHYS | 2225 | $1 *$ |
| PHYS | 2215 | $1 *$ |  | er Science ming $\mathrm{e}^{* * * *}$ |  |
| Fine Art |  | 3 | Technica | -or- <br> Electives*** | 3* |
| TOTAL |  | 17 | TOTAL |  | 18 |


| Summer Semester |  |  |  |
| :--- | :--- | :--- | :--- |
| ENGL 2010 | 3 | American Institutions | 3 |
| Fine Arts (2 courses <br> from different areas) | 3 | Social Science | 3 |
| Humanities 3  <br> TOTAL $\mathbf{1 5}$  |  |  |  |

Second Year

| Fall Semester |  | Spring Semester |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Course | cr. | Course |  | Cr. |
| CHEM 1210 | 4* | CHEM | 1220 -and- |  |
| CHEM 1215 | 1* | CHEM | 1225 -or- |  |
| ENGN 2010 | 3* | Technica | Electives*** | 3 |
| ENGN 2250 | 5* | ENGN | 2030 | 3* |
| ENGN 2255 | 1* | ENGN | 2140 | 3* |
| MATH 2210 | $4^{*}$ | ENGN | 2300 | 3* |
| Computer Science <br> Programming <br> Language ${ }^{* * * *}$ or **** | 3* | ENGN | 2450 | 4* |
| TOTAL | 21 | TOTAL |  | 16 |

 * Course has prerequisite(s)
** Or Technical Elective ${ }^{* * *}$
*** Can be chosen from approved courses in Physics, Chemistry, Engineering, Mathematics, Life Science, Electronics, Computer Science and others.
****This course should be BCIS 2550, Fortran for transferring to Utah State University or Brigham Young University
*****This course should be CS1400, Fundamentals of Programming for transferring to University of Utah.

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ACCT
ANTH
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ART
AUTO
BCCM
BCIS
BIOL
BUSN
CHEM
C
COMM
COST
CS
DANC
DSME
ECON
EDDT
EDUC
ELEC
EMMT
ENGL
ENGN
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
MA
MLT
MINT
MUSC
MUSM
NURS
PE
PHIL
PHYS
POLS
PRE-PROF
PSY
RECR
SLSC
SOC
THEA
TRST
WE
WELD
WILD

PEOPLE

SUGGESTED DEGREE FOR MINING, METALLURGICAL OR GEOLOGICAL ENGINEERING

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| First Year |  |  |  |  |  |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | cr. | Course |  | Cr. |
| ENGN | 1000 | 2* | MATH | 1220 | 4* |
| ENGN | 1005 | 1* | MATH | 2280 | 3* |
| GEO | 1110 -and- |  | PHYS | 2220 | 4* |
| GEO | 1115 |  | PHYS | 2225 | 1* |
| $\xrightarrow{\text {-Or- }}$ |  | 4* | Computer Science <br> Programming <br> Language** |  | 3* |
| PHYS | 2210 | 4* | ENGN | 2240 -or- |  |
| PHYS | 2215 | 1* | Technica | Elective*** | 3* |
| Fine Arts |  | 3 |  |  |  |
| TOTAL |  | 15 | TOTAL |  | 18 |
| Summer Semester |  |  |  |  |  |
| Fine Arts |  | 3 | Humanities |  | 3 |
| Social Science |  | 3 | American Institutions |  | 3 |
| ENGL | 1010 | 3 |  |  |  |
| TOTAL |  | 15 |  |  |  |
| Second Year |  |  |  |  |  |
| Fall Semester |  |  | Spring Semester |  |  |
| Course |  | cr. | course |  | cr. |
| CHEM | 1210 | 4* | CHEM | 1220 | 4* |
| CHEM | 1215 | 1* | CHEM | 1225 | 1* |
| ENGN | 2010** | 3* | ENGL | 2010 | 3* |
| ENGN | 2250** | 5* | ENGN | 2030-or- |  |
| ENGN | 2255** | 1* | ENGN | 2140 -or- |  |
|  |  |  | ENGN | 2300 -or- |  |
| TOTAL |  | 17 | Technica | Electives | 11* |
|  |  |  | TOTAL |  | 19 |
|  | Program Total 84 |  |  |  |  |

* Course has prerequisite(s) and / or corequisite(s)
** Or Technical Elective***
*** Can be chosen from approved courses in Physics, Chemistry, Engineering, Mathematics, Life Science, Electronics, Computer Science and others.
Note: MATH 2210, Multivariable Calculus is required at some four-year colleges in the second year. It is strongly suggested that it is taken here to ensure better success at the transfer college.


## SUGGESTED DEGREE FOR SOFTWARE ENGINEERING

## Recommended Course of Study

## First Year

| Fall Semester |  |  | Spring Semester |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course |  | cr. | Course |  | cr. |
| CS | 1400 | 3* | CS | 1410 | 4* |
| CS | 1405 | 1* | PHYS | 2220 | 4* |
| ENGN | 1000 | 2* | PHYS | 2225 | $1 *$ |
| ENGN | 1005 | $1 *$ | MATH | 1220 | 4* |
| PHYS | 2210 | 4* | MATH | $2220 * * *$ | 3* |
| PHYS | 2215 | $1 *$ |  | -or- |  |
| MATH | 2270 | 3* | Fine Arts |  | 3 |
| ENGL | 1010 | 3* | MATH | 2280 | 3* |
| TOTAL |  | 18 | TOTAL |  | 19 |

Summer Semster

| ENGL | 2010 | 3 | American Institutions | 3 |
| :--- | :--- | :--- | :--- | :--- |
| Fine Arts |  | 3 |  |  |
| TOTAL |  | $\mathbf{9}$ |  |  |

Second Year

| $\begin{array}{llll}\text { Fall Semester } \\ \text { Course }\end{array}$ | $\begin{array}{l}\text { Spring Semester } \\ \text { Course }\end{array}$ |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| CS | 2420 | $3^{*}$ | CS | 2450 |$)$

Program Total 89

* Course has prerequisite(s) and/or corequisite(s) ** MATH 2220, Discrete Mathematics and CS 2450, Software Engineering must be taken during a Spring Semester

Note: This degree emphasis is for students who are transferring out-of-state colleges and possibly UVU. You can also go with a Computer Science major with an emphasis in Software Engineering.

## ENGINEERING COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1000 Introduction to Engineering Oral Communication Intensive <br> Fall

(2:2:0)
for those students thinking about careers in any of the engineering disciplines. The course is designed to emphasize the courses taken in engineering programs such as: College survival skills; what takes place in engineering as a profession; the design process to include a team project built using junk from a junk yard and competition between teams using their projects; the use of ProEngr software as a design tool; communicating the results of the design process through stand up presentations and a written final design project report; and what constitutes ethical behavior on the part of an engineer. Lecture, demonstrations and team learning is used to emphasize topics. Upon successful completion, students should know if a career in engineering is a valid choice for them.

## 1005 Introduction to Engineering Laboratory

(1:0:2)
Fall and Spring (on demand only)
for students concurrently enrolled in Introduction
to Engineering 1010. The laboratory builds skills in using the HP48G/GX calculator to solve engineering problems; the use of word processors for report writing; spreadsheets to solve engineering problems; MathCAD for engineering problem solving; an introduction to Pro Engineer for engineering design; an introduction to Access for data base management; and power point for engineering presentations. Mainly hands-on, team learning is emphasized as well as team writing and presentation skills. Students should gain an appreciation for the skills needed to solve engineering problems and prepare engineering communications. Co-requisite: ENGN 1000

2010 Statics
(3:3:0)
Fall
for students interested in civil, mechanical, environmental, biological and chemical engineering. This is a calculus based course covering systems of forces and moments; objects in equilibrium, structures in equilibrium, centroids and centers of mass; moments of inertia; distributed forces; friction; and virtual work and
potential energy. Lecture and demonstrations are used to illustrate topics. Upon successful completion, students will be able to design and analyze mechanical devices for their strengths and weaknesses. Prerequisites: PHYS 2210, 2215, MATH 1210, 1220

2030 Dynamics
Spring
Introduction of motion and Newton's laws, which will describe motion using different coordinate frames (rectilinear, polar, normal and tangential) and vector calculus. Kinetics of particles will be discussed including uses of conservation of energy, momentum and constraints as well as impulse and work. Kinetics of systems will be discussed including steady and variable mass flow problems. The dynamics of rigid bodies are also covered, including 2D rotations, fixed plane rotations work and energy in rotating systems. Three dimensional rotations will be introduced. The course is taught in lecture format with students doing occasional board work to show mastery of topics. This course is intended for students planning to transfer to a 4 year institution in Mechanical, Civil, or Aeronautical engineering. Other engineering majors can use this as an engineering elective course. Prerequisites: MATH 1220, and PHYS 2210, 2215.

## 2140 Strength of Materials

(3:3:0)

## Spring

for students interested in civil, chemical, environmental, mechanical engineering. This is a calculus based course covering loads applied to a non-rigid body made of a given material and the resulting deformations of the body; the relations between the loads applied to a nonrigid body and the stresses produced in that body; the relations between stress and strain for a wide variety of conditions and materials; and finding the required dimensions of a member of a specified material to carry a given load subject to state specifications of stress and deflection. Those successfully completing the course should be able to choose suitable materials needed to design safe structures. Prerequisites: ENGN 2010, PHYS 2210, 2215, MATH 1220. MATH 2210 is highly recommended but not necessary.

## 2250 Circuits

(5:5:0)
Fall (On demand only)
This course is an introduction to Electrical Circuits and Basic Circuit Elements. Topics covered include: Circuit Theory, analysis techniques, introduction to design analysis, operational amplifiers, diodes, transistors, and DC, Electronic,

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## PROGRAMS \& COURSE OF STUDY

ACCT
ANTH
APPR
ART
AUTO
BCCM
BCIS
BIOL
BUSN
CHEM
CJ
COMM
COST
CS
DANC
DSME
ECON
EDDT
EDUC
ELEC
EMMT
ENGL
ENGN
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
MA
MLT
MINT
MUSC
MUSM
NURS
PE
PHIL
PHYS
POLS
PRE-PROF
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PEOPLE

Analog, Digital, Power, Balanced three-phase, Inductive, and Capacitive Circuits, AC steady state analysis, Laplace-transform techniques, FourierSeries Methods, Bode plots, and introduction to computer aided design and analysis. This class is intended for all Engineering Majors. Prerequisites: PHYS 2220, 2225, and MATH 2280.

## 2255 Circuits Lab

(1:0:3)
Fall (On demand only)
Introduction to measurements and use of laboratory instrumentation, which include: electronic measuring instruments including multimeters, function generators, voltmeters, power supplies, oscilloscopes, basic circuit design and anlysis, loading and frequency effects. Introduction to computer aided design and analysis using PSpice. Prerequisite: ENGN 1000,1005, PHYS 2220, 2225, and MATH 2280. Corequisite: Concurrent enrollment in ENGN 2270.

## 2240 Surveying

(3:3:3)
Spring
This is a support course to other departments. This is a course in the principles and methods of engineering surveying, to include the basic measurement of horizontal and vertical angles and distances. Computations in leveling and traversing from field notes will be emphasized. Students will be exposed to a wide variety of field exercises in order to gain experience with the level, theodolite, and distance meter. Other subjects to be covered are: land descriptions, plates, and plotting data on maps. Students successfully completing this course should be eligible to work on a survey team. Prerequisite: MATH 1060

## 2300 Thermodynamics I

(3:4:0)
Spring
This course is a first look into Thermodynamics for Engineering students. This course covers Thermodynamic properties of various substances and processes. Specifically the course will look at First and Second Laws of Thermodynamics, Ideal Gases in open and closed systems, equations of State, Power, Refrigeration, Otto, Gas, Diesel and Carnot Cycles, Efficiency and Work, Availability and Irreversibility, and Problem Solving methodology. Prerequisites: PHYS 2220, 2215 and Corequisite/ Prerequisite in MATH 2210.

2450 Numerical Methods for Engineers
(4:4:0)
Spring
for students mainly in Mechanical, or Chemical engineering. This course is an introduction to numerical methods including: convergence, error accumulation, root finding, solutions of linear and
non-linear equations, optimization, regression, numerical integration and differential and solutions to ordinary and partial differential equations. The software used will include FORTRAN, C++, and / or Mathematical Software, such as MAT Lab, MATH CAD, and EXCEL with VBA. Prerequisites: MATH 2210, 2270 and 2280, CS 1400 or BCIS 2550.

2977 Cooperative Education
(1-3:0:1-3)
This course provides on-the-job experience for students majoring in pre-engineering. Positions as surveyor aids, engineer aids, etc., may be available. The student meets with the instructor/ coordinator and employer at the beginning and periodically during the course to determine and evaluate objectives, hours to be worked, and credit. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Engineering.

## ENGLISH AS A SECOND OR OTHER LANGUAGE (ESOL)

Jane Johnson

The ESOL program at the College of Eastern Utah is designed to provide an intermediate to advanced level of English as preparation for a traditional college curriculum, employment, or to improve general English skills. Emphasis is on reading, writing, listening, speaking, vocabulary and grammar.

CEU's ESOL Program begins at an intermediate level of instruction. Intermediate level is defined as follows: Students scoring between 400 and 499 on the Test of English as a Foreign Language (TOEFL). Students scoring 500 or above can start school in the regular college curriculum.
The ESOL curriculum is non-sequential with an open enrollment. Therefore, international students may begin any semester. The ESOL curriculum runs the full academic year (Fall, Spring and Summer). Classes from the regular curriculum are phased into the student's schedule based on their advisor's recommendation.

International students are required to take SLSC 1030 International Student Orientation during their first semester. A one-time fee of $\$ 500.00$ is assessed the first semester for all international students.

A student information packet and international application packet are available from International Student Services, College of Eastern Utah, Price, UT 84501 or by calling (435) 613-5333.


LEVEL 1

| Course |  | Name | Cr. |
| :--- | :--- | :--- | :--- |
| ESOL | 1040 | Listening/ Speaking | 3 |
| ESOL | 1050 | Academic Reading | 3 |
| ESOL | 1055 | Vocabulary | 2 |
| ESOL | 1060 | Academic Writing | 3 |
| ESOL | 1065 | Grammar | 2 |

LEVEL 2

| Course |  | Name | Cr. |
| :--- | :--- | :--- | :--- |
| ESOL | 1140 | Listening/Speaking | 3 |
| ESOL | 1150 | Academic Reading | 3 |
| ESOL | 1155 | Vocabulary | 2 |
| ESOL | 1160 | Academic Writing | 3 |
| ESOL | 1165 | Grammar | 2 |
| COMM | 1110, | Intercultural Experience | 4 |
|  | 1120 |  |  |
|  | $(2$ hrs. each - Intercultural Experience class <br> by permission only $)$ |  |  |

## ENGLISH AS A SECOND OR OTHER LANGUAGE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## SLSC 1030 International Student Orientation

(1:1:0)
Fall, Spring, Summer
This class will provide first-semester students with knowledge of the services and regulations governing international students while attending CEU. This course will aid in the student's cultural transition to U.S. education and will provide particulars of complying with BCIS (Bureau of

Citizenship and Immigration Service) rules and regulations governing F-1 visa holders. Course will include an overview of academic regulations, graduation requirements, CEU policies and procedures. This class meets daily for the first three weeks of each semester. Course is required of all new F-1 international students.

## 1040 Listening/Speaking

## Fall, Spring

Prepares non-native speakers of English to participate confidently in academic and social situations. Emphasizes activities in critical thinking, interactive listening, and pronunciation skills. Includes lectures, oral presentations and small group activities.

## 1050 Academic Reading

(3:3:0)
Fall, Spring
Designed to provide general strategies for improving reading skills for academic course work. Includes critical reading, comprehension, analysis, synthesis, and evaluation. Also encompasses skills in taking notes, preparing for exams, and interpreting visual aids.

1055 Vocabulary
(2:2:0)
Fall, Spring
Emphasis is on academic content vocabulary. Develops strategies for increasing vocabulary using context clues and word parts. Root words, prefixes and suffixes will be examined in detail. Class will prepare students for academic course work and standardized test taking. Also includes some idioms and metaphors.

## 1060 Academic Writing

(3:3:0)
Fall, Spring
Perfecting sentences, paragraphs, and essays will be emphasized. Offers students writing practice strategies in responding to academic assignments. Basics of research and documentation are also presented.

## 1065 Grammar

(2:2:0)
Fall, Spring
Basic review of English grammar, including mechanics and usage. Studies types of sentences, phases, clauses, modifiers, punctuation and other mechanics. Course is appropriate for any student wanting to improve their grammar skills.

1140 Listening/Speaking
(3:3:0)
Fall, Spring
Prepares non-native speakers of English to participate confidently in academic and social

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## PROGRAMS \& COURSE OF STUDY

## ACCT

ANTH
APPR
ART
AUTO
BCCM
BCIS
BIOL
BUSN
CHEM
CJ
COMM
COST
CS
DANC
DSME
ECON
EDDT
EDUC
ELEC
EMMT
ENGL
ENGN
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
MA
MLT
MINT
MUSC
MUSM
NURS
PE
PHIL
PHYS
POLS
PRE-PROF
PSY
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SLSC
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WILD

PEOPLE
situations. Emphasizes activities in critical thinking, interactive listening, and pronunciation skills. Includes lectures, oral presentations and small group activities.

## 1150 Academic Reading

(3:3:0)

## Fall, Spring

Designed to provide general strategies for improving reading skills for academic course work. Includes critical reading, comprehension, analysis, synthesis, and evaluation. Also encompasses skills in taking notes, preparing for exams, and interpreting visual aids.

1155 Vocabulary
(2:2:0)
Fall, Spring
Emphasis is on academic content vocabulary. Develops strategies for increasing vocabulary using context clues and word parts. Root words, prefixes and suffixes will be examined in detail. Class will prepare students for academic course work and standardized test taking. Also includes some idioms and metaphors.

## 1160 Academic Writing

(3:3:0)
Fall, Spring
Perfecting sentences, paragraphs, and essays will be emphasized. Offers students writing practice strategies in responding to academic assignments. Basics of research and documentation are also presented.

## 1165 Grammar

(2:2:0)
Fall, Spring
Basic review of English grammar, including mechanics and usage. Studies types of sentences, phases, clauses, modifiers, punctuation and other mechanics. Course is appropriate for any student wanting to improve their grammar skills.

## COMM COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1110, 1120 Intercultural Experience (2:1:2 each) Fall, Spring <br> This course is designed to provide a multicultural exchange of ideas and experiences between students from different cultures in order to increase their intercultural communicative competence. Each student will be assigned a conversation partner from a culture other than their own. Students will

meet with the instructor one hour each week for lecture, group discussion, reporting, and instruction. Partners will meet for two hours each week to discuss assigned topics. Instructor approval must be obtained for this class.

## FAMILY LIFE (FAML)

Anne Mackiewicz

## FAMILY LIFE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1020 Foundations of Nutrition

(3:3:0)
A course required by all child development students. The study of nutrition as it relates to the healthy growth and development of children and adults. The course also includes a study of factors influencing human nutritional requirements.

## 1500 Human Development Across the Life Span

## Social Science

Fall, Spring, Summer (Dual listed as PSY 1100)
This course is a general education class intended for all students. It is required for all pre-elementary education and nursing students. It will introduce students to stages of development from prenatal and infancy through childhood, adult and old age. Major developmental theories will be considered, as will the domains of development such as physical, cognitive, psycho-social, and moral, and the behavioral aspects of each. Lecture, video, and slides will be used in teaching, and a term paper and several out-of-class assignments will be required.

## 2030 PE for Young Children

A course for early childhood and elementary students which combines the philosophy of physical education with the practical planning and implementing of physical education experiences for children in the primary and elementary. Dual listed as PE 2550.

## 2225 Creative Dance for Elementary Teachers

(2:2:0)
This class is designed for the student interested in Dance Education or Elementary Teachers. It involves exposure to methods, practices and techniques for teaching children the process of
collective, constructive movement otherwise known as Dance. This class meets the standards as set up by the National Dance Association and the Utah Board of Education as dance is required K through 12. The class is open to all students. A text is used as well as video. The students will teach at least two classes at local elementary schools. Grading is based on tests, lesson plans, attendance and field experience.

## 2400 Marriage and Family Relations Social Science

(3:3:0)
Fall, Spring
Students will be introduced to the interaction and complexity of interpersonal relations through stages of the life cycle including courtship, marriage, parenting, and post marital situations. Reviews family systems, themes, styles of communications, and cultural and ethnic influences on attitudes and behaviors, and more. Requires a research paper.

## 2500 Child Development Birth to Eight

(3:3:0)
A required course for early childhood and elementary students which focuses on developmental characteristics, developmental processes, events and circumstances that influence the young child from birth through eight years of age. Special emphasis is on research that stresses the importance of development in the guidance and education of infants and young children.

## 2600 Introduction to Early Childhood Education

(2:2:0)
A required course for all early childhood and elementary education students which covers the historical and current theoretical approaches, types, philosophies, curriculums, teaching techniques of early childhood programs; and political issues and ethical conduct within the early childhood profession. Prerequisite: FAML 1500

## 2610 Child Guidance

(3:2:1)

## Human Relations

A required course for all early childhood and elementary students, and a suggested course for secondary students. It covers the development of a philosophy and a plan of action for guiding children based on theories of development. Lectures combine with a laboratory experience to provide opportunity for building relationships with young children. Lab experience to be arranged (2 hours per week). Prerequisites: FAML 2500, 2600

2620 Planning Creative Experiences for Young Children
A course for early childhood and elementary education students covering the development and use of creative materials, equipment, and the skills needed to plan and teach age, individually, and developmentally appropriate curriculum for young children. Lab experience to be arranged (2 hours per week). Prerequisites: FAML 2500, 2600.

## 2625 Administration of Early Childhood Programs <br> (2:2:0)

A required course for students seeking a certificate in early childhood development. Basic management principles in directing a preschool or child care program will be covered, including budgeting, personnel, building and equipment, licensing, and health and safety as they pertain to early childhood programs. Prerequisites: FAML 1500, 2500, 2600.

## 2627 Storytelling <br> Oral Communication Intensive

(2:2:0)
Service Learning
Required by all early childhood students. Introduces students to the selection of literature for young children, and the telling of children's stories in a classroom setting. Emphasis is on the developmental needs of children, and teaching opportunities afforded the teacher.

## 2630 Practicum Teaching Lab

(5:0:5)
A laboratory practical teaching experience for early childhood and elementary students in the CEU Child Development Laboratory Preschool. In cooperation with the head teacher, students will plan and implement lesson plans and developmentally appropriate activities for a large group of children. Prerequisites: FAML 2500, 2600, 2610, 2620, and concurrent enrollment in FAML 2631.

## 2631 Teaching Seminar

(1:1:0)
A seminar for education students in the practicum teachinglaboratory experience. Theseminarformat is used to discuss the strengths and challenges associated with teaching. Individualized training plans are developed, along with their application to the teaching of young children. Prerequisites: FAML 2500, 2600, 2610, 2620 and concurrent enrollment in FAML 2630.

2977 Cooperative Education (1-3:0:1-3) This course provides supervised on-the-job training in family life studies. The student meets with the instructor/coordinator periodically

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during the course to determine and evaluate learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit will be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Family Life.

## GEOLOGY (GEO)

Dr. Reese Barrick
Dr. Michelle Fleck
Dr. Mark Noirot

In addition to the regular General Education requirements for the Associate of Science Degree, students who plan to transfer to a university should plan to take the following courses while at College of Eastern Utah.

| Recommended Course of Study for Geology Majors |  |  |  |
| :---: | :---: | :---: | :---: |
| Course |  | Name | Cr. |
| GEO | 1110 | Physical Geology | 3 |
| GEO | 1115 | Physical Geology Lab | 1 |
| GEO | 1220 | Historical Geology | 3 |
| GEO | 1225 | Historical Geology Lab | 1 |
| CHEM | 1210 | General Chemistry I | 4 |
| CHEM | 1215 | General Chemistry I Lab | 1 |
| CHEM | 1220 | General Chemistry II | 4 |
| CHEM | 1225 | General Chemistry II Lab | 1 |
| PHYS | 2210 | Physics for Scientists and Engineers I | 4 |
| PHYS | 2215 | Physics for Scientists and Engineers I Lab | 1 |
| PHYS | 2220 | Physics for Scientists and Engineers II | 4 |
| PHYS | 2225 | Physics for Scientists and Engineers II Lab | 1 |
| MATH | 1210 | Calculus I | 4 |
| MATH | 1220 | Calculus II | 4 |
| Other Recommended Courses |  |  |  |
| Course |  | Name | Cr. |
| MATH | 2210 | Multivariable Calculus | 4 |
| MATH | 2280 | Ordinary Differential Equations | 3 |
| MATH | 2040 | Applied Statistics | 4 |
| GEOG | 1800 | Introduction to Geographic Information Systems | 3 |

## GEOLOGY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Introduction to Geology

(3:3:0)

## Earth Science

Service Learning
Fall, Spring
This course will introduce the student to plate tectonics, minerals, rocks, water resources, geological hazards, the geologic forces which shape the earth's surface, and a geologic history of the earth. The class will be taught using lectures, videos, and slides. A term paper and several out-of-class assignments are required. Prerequisite: ACT English score of at least 14 is strongly recommended.

## 1020 Prehistoric Life

## Earth Science

Fall, Spring
This course is an introductory level geology course which emphasizes the evolution and history of life on earth. Students will be introduced to the concept of the geologic time scale, the basics of minerals and rocks, and the tectonic history of the earth. The curriculum will stress methods of fossilization, the interpretation of basic sedimentary environments, and examples of the major types of animal and plant fossils from each of the geologic eras.

## 1110 Physical Geology

(3:3:0)

## Earth Science

Fall, Spring
This course is a comprehensive study of the physical features of the earth. It covers basically the same topics as GEOL 1010, but in more depth. Major topics covered in the lectures include plate tectonics, minerals, volcanism, igneous rocks, sedimentary rocks, metamorphic rocks, earthquakes, mass wasting, and landforms associated with streams, groundwater, glaciation, coastal processes, and desert processes. In the laboratory, students will study minerals, rocks, topographic and geologic maps, and aerial photography. Corequisite: Concurrent enrollment in GEO 1115

## 1115 Physical Geology Lab

## Fall, Spring

The lab will meet for two hours, one afternoon per week. At least one Saturday field trip will be required. Corequisite: Concurrent enrollment in GEO 1110

1220 Historical Geology
(3:3:0)
Spring
This course is designed for geology majors, and is a comprehensive study of the earth's tectonic history and life history as inferred from the examination of rocks and fossils. Historical geology is concerned with the origin and development of the earth's atmosphere, oceans, and life. Instructional methods will include lecture, videos, slides, inclass discussion, out-of-class readings, and handson work with rock and fossil samples. Field trips will be required. Prerequisites: GEO 1010 or GEO 1110 and 1115 (preferred).

## 1225 Historical Geology Lab <br> Spring

Must be taken concurrently with GEO 1220. At least one Saturday field trip will be required.

## 1650 Fossil Preparation

(2:2:2)
This class is designed to familiarize participants with a paleontological lab and teach them basic techniques of fossil preservation. The class is broken up into six areas, each covering procedures, vocabulary, and hands-on experience. Participants are introduced to fossil care, identification, preservation techniques, molding and casting, basic osteology, and collection laws. Taught as a block course.

## 1800 Principles of Environmental Science

(3:3:0)

## Earth Science

## Service Learning

This general education course introduces students to ecological principles and relationships that underlie environmental science and natural resource conservation. It also examines the environment as the context for human activities and explores the effects of humans on ecosystems. Course material will be presented through lectures, videos and selected readings. It satisfies the general education requirement of either Life Science (LS) or Earth Science (ES), but not both.

## 2700 Science Excursion

(1:1:1)
The Science Excursion will be led by CEU faculty and staff, and may include car camping, backpacking, biking, rafting or canoeing in areas of geological or biological interest in Utah. While on the trip, students willstudy the geology, geography, plant and animal life, astronomy, and historical aspects of the areas visited. Students will be expected to attend one or more lectures preceding or following the field trip. Assignments, reports and / or exams may be required. Variable fees will be charged, which will include transportation,
food, course handouts and rental fees for some of the necessary equipment. Students with physical disabilities should not enroll in this course if their disabilities limit their mobility and could pose a safety hazard for themselves or other students on the canoe trip. It will be up to the discretion of the instrutors whether or not to allow students to participate in the canoe trip.

2977 Cooperative Education (1-3:0:1-3) This course provides supervised on-the-job training as a geology aid or assistant. The student periodically meets with the instructor / coordinator to determine and evaluate learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to meet the changing needs of the students in Geology.

## GEOGRAPHY (GEOG)

Dr. Michelle Fleck<br>Dr. Mark Noirot

## GEOGRAPHY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1000 Physical Geography

(3:3:0)

## Earth Science

Fall, Spring
This course covers the distribution, relationship, function, and characteristics of climate, evolution of land forms, vegetation, soils, water, air and other resources, as they comprise the natural environment and are interacted upon by humans. Students will be taught how to interpret topographic maps, with an introduction to the interpretation of aerial photography and other methods of remote sensing. Instructional methods include lecture, discussion, slides, videos, and group work with maps and photos.

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1400 Human Geography
(3:3:0) Social Science/Oral Communication Intensive
An introduction to the geographical dimension of human behavior as it is expressed in population distribution, rural and urban land use, economic activity, and social, political, religious, and other cultural attributes of society. This course is a basic requirement for geography majors at many fouryear schools, and successful completers should be prepared for more advanced study in geography.

## 1800 Introduction to Geographic Information Systems

(3:2:1)
This course is an introduction for the Geographic Information System field. Students planning careers in Engineering, Drafting, Geology, Natural Resources, and Law Enforcement will find this elective class useful either for employment or transfer support. The course covers general GIS applications and teaches the use of software for research and problem solving. The class requires a computer lab experience. In class discussion and lecture method are used to achieve course goals and objectives. This course is taught on an as needed basis. Dual listed as EDDT 1500. Prerequisite: MATH 1050 is recommended.

## 2500 Introduction to Global Positioning Systems

This course is an overview to Global Positioning Systems (GPS) and emphasizes hands-on Trimble Resource and Mapping grade GPS experience. The course covers general GPS technology, applications, research, field data collection techniques, differential correction and export to other computer softwares such as CAD and GIS. The class requires a computer lab experience. In-class discussion and lecture methods interspersed with computer applications are used to achieve course goals and objectives. The course will be useful for teaching students methods to input data into GIS and CAD systems. It is useful preparation for careers in health care, business, agriculture, planning, law enforcement, transportation, engineering, surveying and natural resource development and conservation. Prerequisites: EDDT 1500/GEOG 1800 or a basic CAD course. Suggested Prerequisites: GEOG 1000 or GEO 1110/ 1115.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training. The student periodically meets with the instructor/ coordinator to determine and evaluate learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

2988 Special Problems
(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to meet the changing needs of the students in Geography.

## GENERAL HUMANITIES (GHUM)

## HUMANITIES COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1010 Student Orientation
(.5:.5:0)

This course is designed to provide incoming students with a working knowledge of the opportunities and services available to them at the College of Eastern Utah. This will aid in the student's transition to college and successful completion of academic goals. Instruction includes an overview of academic regulations, graduation requirements, CEU policies and procedures, the advising process, and course registration. Students are familiarized with locations, personnel, and functions of academic support services and student services.

## 1070, 1080 Fine Arts and Cultural <br> Events

(.5:1:0 each)

An elective course available to all students who wish to extend the exploration of the fine and cultural arts beyond the classroom. Students attend a minimum number of cultural programs and submit written evaluation reports. Class includes lecture, lab and or field trips.

## 1100 Practice and Philosophies of Civic Responsibility

## Service Learning

This course is designed to help students come to a personal understanding of community issues, service and leadership through learning based on volunteer service experience, readings, group discussion and interaction, and critical reflection.

2977 Cooperative Education (1-3:0:1-3) This course provides supervised on-the-job training in general humanities. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit will be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in General Humanities.

## HEALTH (HEAL)

## HEALTH COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1020 Responding to Emergencies

(2:2:0)
First Aid for the non-major and is an elective course. This course will offer training for everyday use, by matching American Red Cross standards for Responding to Emergencies and Community CPR courses.

## 1030 Medical Assisting: Administrative Competencies

(4:4:0)
This course is focused on knowledge necessary to perform medical assistant administrative duties. The content includes introduction to the medical assisting and health profession, ethics, safety, and security in the medical office, integrated administrative procedures, health insurance, medical coding and billing. Communication and management skills in leadership, conflict resolution, and customer service are emphasized.

## 1600 Medical Assisting:

(6:6:0)
This course is focused on knowledge necessary to perform clinical competencies as a medical assistant.The content includes emergency procedures and first aid, therapeutic approach, integrated clinical procedures, diagnostic procedures, and laboratory procedures.

1700 Medical Assisting Internship (4:4:0) This course is designed to provide for student attainment of the Entry Level Competencies for the Medical Assistant. Placement in an ambulatory health care setting is required. In
an actual work situation, students will perform both administrative and clinical competencies. Administrative competencies include perfomance of clerical functions, bookkeeping procedures and preparation of special accounting entries. Clinical competencies include knowledge of fundamental principles, specimen collection, diagnostic testing and patient care. Transdisciplinary competencies will be integrated in both the clinical and administrative areas. These include communciation, legal concepts, patient instruction and operational functions.

## 1860 Phlebotomy and Clinical Laboratory

This course is focused on the knowledge and skill necessary to perform phlebotomy and specific clinical laboratory duties. Skills include drawing blood, obtaining blood cultures, using Lancet or a Microlance for a Microdraw or an Infant Heel Stick, and measuring bleeding time.

2020 Emergency First Response
(3:3:0)
A course designed to meet the skill requirements of students majoring in health related fields and for those working in fields requiring the individual to respond with first aid in the line of duty. Meets or exceeds American Red Cross standards for Emergency Response and CPR for the Professional Rescuer and standards for the Utah Emergency Medical Training Council First Responder Course.

## 2977 Cooperative Education

(1-3:0:1-3)
Thiscourse providessupervised on-the-jobtraining in health. The student meets with the instructor/ coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Health.

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## HEAVY EQUIPMENT AND TRUCKING (HETR)

Justin Bergeman<br>Jordan Hatch

The Heavy Equipment and Trucking program is open-entry/open-exit, which is designed so students can enter when convenient for them. Skills are competency based meaning a skill must be mastered before advancing on to the next skill. The program emphasizes hands-on training with support classes directly related to training.

Students interested in obtaining the Commercial Drivers License (CDL) can register for the Trucking program at any time on an open entry/open exit basis. The job market is very much in need of qualified drivers with a CDL and truck driving training. There are many trucking companies that have hiring programs for students with these qualifications.

| Certificate of Completion Heavy Equipment/Trucking |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| course |  | c. | course |  | c. |
| нетR | 1610 | 4 | HETR | 2770 | 4 |
| Hetr | 1620 | 2 | Hetr | 2780 | 3 |
| нетR | 1630 | 2 | нетR | 2790 | 6 |
| нetr | 1650 | 2 | engl | 1010 | 3 |
| Hetr | 1660 | 2 | MATH | $\underset{\substack{1020-0 r \\ \text { higher }}}{\substack{\text { n }}}$ | 3 |
| нetr |  | 2 | Human Course | Relations | 3 |
| Program Total 36 |  |  |  |  |  |


| Departmental Certificate - Heavy Equipment <br> Program |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course | Cr. | Course | cr. |  |  |
| HETR | 1610 | 4 | HETR | 1630 | 2 |
| HETR | 1620 | 2 | HETR | 1650 | 2 |
| PSY | 1200 | 3 | HETR | 1660 | 2 |
| Program Total |  |  |  |  | $\mathbf{1 5}$ |


| Departmental Certificate - Trucking Program |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course | Cr. | Course | cr. |  |  |
| HETR | 2760 | 2 | HETR | 2780 | 3 |
| HETR | 2770 | 4 | HETR | 2790 | 6 |
| Program Total |  |  |  |  | $\mathbf{1 5}$ |

## HEAVY EQUIPMENT AND TRUCKING COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1610 General Maintenance

(4:1:6)
The student will learn field troubleshooting on a variety of equipment including engines, transmissions, final drives, and electrical/battery systems. Safety training will be emphasized in all aspects of general maintenance.

## 1620 Front End Loader Operation

(2:1:3)
The student will learn theory and practical operation of a front end loader, and related pieces of equipment. The student will demonstrate all phases of operation from pre-shift to post-shift inspections, safety operation, truck loading, rough grading excavation, fueling, lubrication, and field troubleshooting.

1630 Tractor Loader Backhoe Operation (2:1:3) The student will learn theory and practical operation of tractor loader backhoe. The student will demonstrate competence in trenching, hazardous digging, demolition, truck loading, and grading. Field troubleshooting lubrication, general maintenance, and special emphasis on safety and hazard awareness.

## 1650 Motor Grader Operation

(2:1:3)
The student will learn theory and practical operation of a motor grader. The student will demonstrate competence in pre-shift and postshift inspections, finish grading, road maintenance, snow removal, safety roading, grade stake reading, field troubleshooting, lubrication, and basic maintenance.

## 1660 Dozer Operation

(2:1:3)
The student will learn theory and practical operation of a dozer. The student will demonstrate competence in pre-shift and post-shift inspections. Student will also show competence in safe operation, excavation demolition, slot dozing, road building, push cat and cutting grade, fueling, lubrication, and field troubleshooting.

## 2760 Dump and Trailering

(2:1:3)
The student will learn theory and practical operation of a dump truck and drop deck low-boy trailer, the safest way to load and lash each piece of equipment for transport, P.T.O. operation, overhead hazards, safe backing, fueling, lubrication, chain and boomer safety, tire care, and safety.

## 2770 Laws and Regulations

(4:4:0)
This is a theory course which describes laws and regulations, defensive driving, principles of haulage and operation of equipment, safety procedures, and preparation for examination. This course with HETR 2780 and HETR 2790 is intended to prepare students for their Commercial Driver's License (CDL) and employment in the trucking industry. This course is intended to provide the material and experience necessary to pass the written exam for the class A Commercial Drivers License.

2780 Maintenance
(3:2:3)
This course includes lubrication, fluid maintenance, tire and wheel maintenance, electrical maintenance, driving observation, and testing based on knowledge, skills and safety attitude. This course with HETR 2770 and 2790 is intended to prepare students for their Commercial Drivers License (CDL) and employment with the trucking industry.

2790 Behind the Wheel
(6:2:8)
This course covers on and off highway procedures, driving with and without loads, turning, cornering, backing, braking (gear and pedal), shifting, road speeds, traffic, signals, road signs, pre and post shift inspections. This course with HETR 2770 and HETR 2780 is intended to prepare students for their Commercial Driver's License (CDL) and employment in the trucking industry.

## 2977 Cooperative Education <br> (1-3:0:1-3)

This course provides supervised on-the-job training in heavy/equipment and trucking. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by the instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
Designed to meet the changing needs of the student in Heavy/Equipment and Trucking.

## HISTORY (HIST)

Dr. Robert McPherson
Dr. Susan Rhoades Neel
Jennifer Truschka

Students majoring in history should note that most senior colleges and universities will accept a maximum of 18 hours lower division course work in history which may be applied to a major. Students are encouraged to consult the catalog of the college or university to which they intend to transfer upon completion of the Associate Degree. It is recommended that students majoring in history obtain a strong general background in related academic areas such as political science, sociology, anthropology, geography, psychology, economics, philosophy, or literature.

## HISTORY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1100 Western Civilization I <br> Humanities

(3:3:0)
Fall
This course examines the major civilizations of the ancient world as well as Europe during the Middle Ages to 1300. This course explores the historical, political, social, artistic, and economic aspects of these cultures. It is taught using lectures, slides, and movies. One term paper is required.

## 1110 Western Civilization II

(3:3:0)

## Humanities

## Spring

This course is a continuation of HIST 1100 and includes study of Europe during the late Middle Ages, Renaissance, Reformation, and Enlightenment. It alsoexplores the rise of countries and the modern history of the Western world. This course explores the historical, political, social, artistic, and economic aspects of these cultures. It is taught using lectures, slides, and movies. One term paper is required.

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## 1500 World History to 1500 <br> Humanities

This course offers a broad overview of world cultures before 1500 C.E. The emphasis is on the major civilizations of the ancient world and the processes which brought these societies into regional and global systems of economic, political and cultural interaction.

## 1510 World History since 1500 <br> Humanities

(3:3:0)

This course offers a broad overview of world cultures since 1500 C.E. The emphasis is on global processes of interaction and exchange and on the influence of diverse ideologies, changing technologies, and environmental factors on the social, economic and political development of world civilizations.

## 1700 American Civilization

American Institutions
Fall, Spring, Summer
This course is a general survey of American civilization from the 18th through 20th centuries with emphasis on the development of key ideas and institutions and on the impact of these developments on the diverse peoples of America. The course includes lectures, readings, films and use of the World Wide Web. Students are required to demonstrate learning through exams, written and/or multimedia assignments, and classroom presentations and/or participation. Prerequisite: ENGL 1010 highly recommended.

## 2018 Native American History and Culture

(3:3:0)
Provides a broad overview of Native American history from pre-history to the present. First half of the course emphasizes an anthropological approach to the study of the origins and reality of historical and contemporary Native American peoples. Topics include early colonization of North America, diversity of aboriginal cultures, the great ancestral civilizations of Mesoamerica and South America, and Native America in the 20th and 21st centuries. The second half of the course examines the process and results of conquest and colonization, the United States government Indian policy, and the persistance of Native American culture and tribal identity throughout the modern era. Course employs discussion, lecture, independent reading and writing projects, participation in Native American cultural activities and Native American history in film. Previous anthropology experience or coursework suggested

2700 U.S. History to 1877
(3:3:0)
This course is a survey of early U.S. history from the era of the Columbian exchange through the end of post-Civil War Reconstruction. The course covers key political, economic, and cultural developments as experienced across lines of race, class, and gender. The course includes lectures, readings, films, and use of the World Wide Web. Students are required to demonstrate learning through exams, written and/or multimedia assignments, and classroom presentations and/or participation. Prerequisite: ENGL 1010 highly recommended.

2710 U.S. History 1877 to Present
(3:3:0)
This course is a survey of modern U.S. history from the era of post-Civil War industrialization and expansionism through the era of the Cold War. The course covers key political, economic, and cultural development as experienced across lines of race, class, and gender. The course includes lectures, readings, films, and use of the World Wide Web. Students are required to demonstrate learning through exams, written and/or multimedia assignments, and classroom presentations and/ or participation. Prerequisite: ENGL 1010 highly recommended.

2720 Navajo History and Culture
(3:3:0)
This is an introductory course in the survey of Navajo history and culture, ranging from prehistoric through contemporary times on both a local and trans-southwestern level. Lecture, discussion, film and readings provide the student with a visual and interactive approach to learning.

## 2800 Women in America

## Service Learning

This course is an elective intended for all students. The course will discuss the changes in American history from the colonial period to the present through the effects on the lives of American women. Instructional format includes lecture, readings, discussion, and video. Prerequisite: HIST 1700 is highly recommended.

## 2810 History of the American Southwest

This course provides a broad survey of the West in America's history. Themes include territorial expansion, economic and environmental development in the West, the social history of western peoples from the frontier era through the 20th century, and the idea of the West in popular culture. The course includes lectures, readings, films, and use of the World Wide Web. Students are required to demonstrate learning through exams, written and/or multimedia assignments, and
classroom presentations and/or participation. Prerequisites: ENGL 1010 and HIST 1700 or HIST 2700/2710 recommended.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training. The student meets with the instructor/ coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit. Prerequisite: Instructor permission.

2988 Special Problems
(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in History.

## NATIVE AMERICAN STUDIES

The San Jaun Campus is offering a Native American Studies program that will result in an Associate of Science degree with an emphasis in Native American Studies. The following outline identifies the required and elective courses for the program.

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course |  | Cr. | Course |  | Cr . |
| ENGL | 1010 | 3 | Life Scie 3 hours | nce Re rom the | rement ollowing |
| ENGL | 2020 | 3 | BIOL | 1010 | 3 |
| MATH | 1030 | 3 | BIOL | 1800 | 3 |
| -or- |  |  | Physical Science Req - 3 hours from the following |  |  |
| MATH | 1050 | 4 | CHEM | 1010 | 3 |
| HIST | 1700 | 3 | PHYS | 1040 | 3 |
| (HIST 1700 is recommended) -or- |  |  | Electives - 30 hours from the following list |  |  |
| POLS | 1100 | 3 | ANTH | 2011 | 3 |
| BCIS | 1010 | 3 | ANTH | 2030 | 3 |
| Humanites and Fine Arts (9 hours - Must have one Fine Arts, One Humanites and the third from either area)) |  |  | ANTH | 2100 | 3 |
| ENGL | 1070 | 3 | ART | 1270 | 3 |
| (ENGL 1070 is recomended) |  |  | EDUC | 1800 | 3 |
| ENGL | 2040 | 3 | ENGL | 1070 | 3 |
| HIST | 1100 | 3 | ENGL | 2340 | 3 |
| ART | 1010 | 3 | HIST | 2715 | 3 |
| SocialScience Requirement3 hours from the following |  |  | HIST | 2720 | 3 |


| ANTH | 1010 | 3 | HIST | 2018 | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ANTH 1010 is recommended |  |  | POLS | 2110 | 3 |
| ECON | 1010 | 3 | SLSC | 1200 | 3 |
| PSY | 1010 | 3 |  |  |  |
| SOC | 1010 | 3 | There are also six Navajo language classes for both native and non-native speakers. |  |  |
| Earth Science Requirement- <br> 3 hours from the following |  |  |  |  |  |
| GEOG | 1000 | 3 |  |  |  |
| GEOG 1000 is recommended |  |  |  |  |  |
| GEO | 1010 | 3 |  |  |  |
|  |  | PROGR | TAL |  |  |

## HYDRAULICS (HYDR)

Dean Collard

The hydraulics courses are support courses for the automotive and diesel programs. These courses are open to any student.

## HYDRAULICS COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1310 Fluid Power Theory

## (4:4:0)

Classroom instruction is given in the basic fundamental principles of fluid power. Students will discuss and mathematically calculate the relationships between hydraulic pressure, force, area, and resistance as well as rpm, torque, hydraulic horsepower, energy and heat loss. This course covers the theory and operation of hydraulic fluid, reservoir design, filters, pumps, actuators, pressure controls, directional controls, and flow controls. Students will have the opportunity to learn schematic symbols through representations of various types of circuit design representing both closed loop and open center systems in industrial as well as mobile applications. Topics discussed will be pressure compensated systems, hydrostatic drive circuits and system troubleshooting. As the course progresses, students will be introduced to methods of troubleshooting hydraulic systems using a flow meter and pressure gauges. Students will also identify and review hydraulic fittings, hose types, and safety. Prerequisite: Concurrent enrollment in MATH 0990 or a higher level MATH course.

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1330 Fluid Power Lab
(4:0:12.5)
This course offers hands-on experience identifying, testing, troubleshooting, and rebuilding various brands of hydraulic components. Students will have the opportunity to use a flow meter and pressure gauges to troubleshoot hydraulic components as well as test different components on a hydraulic test bench. Particular emphasis is placed on component identification, failure analysis and hydraulic fitting identification. This course should be taken concurrently with HYDR 1310.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job experience in hydraulics. The student meets periodically with the instructor-coordinator to determine and evaluate learning objectives, hours to be worked and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Hydraulics.

## LANGUAGES (LANG)

## Steve Nelson

In order to receive the Associate of Arts degree, a student is required to either take one year of a foreign language at CEU or receive equivalent credit by taking the CLEP (College Level Examination Program) test in a foreign language administered by the College Testing Center or an approved language test at either Brigham Young University or University of Utah. Students who plan to continue their education at the university level and plan to pursue a degree program in the school of liberal arts are usually required to have two years of a foreign language in order to graduate. The first year of the foreign language requirement may be completed at CEU.

## CAREER OPPORTUNITIES

Students continuing their language studies at the university level will find that a major or minor in foreign language is especially well suited for careers in the following areas:

Foreign Service Officer
Court Interpreter

Police Officer
Health Service Officer
Immigration Inspector
Intelligence Specialist
Teacher of English / other languages

## LANGUAGE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## FREN 1010 First Year French

## Fall

FREN 1010 is a course intended for all students. The student will develop reading, writing, listening and speaking skills. Emphasis will be on basic grammar and conversation. Francophone culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential.

## FREN 1020 First Year French

Spring
FREN 1020 is a course intended for all students. The student will continue to develop reading, writing, listening and speaking skills. Emphasis, as in FREN 1010, will be on basic grammar and conversation. Francophone culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential. Prerequisite: FREN 1010.

## FREN 2988 Special Problems

(1-3:0:1-3)
Fall, Spring
FREN2988is anelectivecourseintended for advanced students. The student will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Francophone culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

FREN 2999 Workshop
(1-3:1-3:0)
Fall, Spring
FREN2999is anelective courseintended for advanced students. The student will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Francophone culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

## GRMN 1010 First Year German

(5:5:0)
Fall
This course is intended for all students. The students will develop reading, writing, listening and speaking skills. Emphasis will be on basic grammar and conversation. German culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential.

## GRMN 1020 First Year German

(5:5:0)
Spring
The student will continue to develop reading, writing, listening and speaking skills. Emphasis, as in GRMN 1010, will be on basic grammar and conversation. German culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential. Prerequisite: GRMN 1010

## GRMN 2988 Special Problems

(1-3:0:1-3)

## Fall, Spring

GRMN 2988 is an elective course intended for advanced students. The student will work individually with theinstructor to developreading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. German culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

## GRMN 2999 Workshop

(1-3:1-3:0)
Fall, Spring
GRMN 2999 is an elective course intended for advanced students. The student will work individually with the instructor to developreading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. German culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

## ITAL 1010 First Year Italian

(5:5:0)
Fall
This course is intended for all students. The student will develop reading, writing, listening and speaking skills. Emphasis will be on basic grammar and conversation. Italian culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential.

ITAL 1020 First Year Italian
(5:5:0)
Spring
This course is intended for all students. The student will develop reading, writing, listening and speaking skills. Emphasis will be on basic grammar and conversation. Italian culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential. Prerequisite: ITAL 1010.

ITAL 2988 Special Problems
(1-3:0:1-3) Fall, Spring
ITAL 2988 is an elective course intended for advanced students. The student will work individually with theinstructor to developreading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Italian culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

ITAL 2999 Workshop
(1-3:1-3:0)
Fall, Spring
ITAL 2999 is an elective course intended for advanced students. The student will work individually with theinstructor to developreading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Italian culture will also be emphasized. Significant reading and work outside of class are required.

## JAPN 1010 First Year Japanese

(5:5:0)

## Fall

This course is intended for all students. The students will develop reading, writing, listening and speaking skills. Emphasis will be on basic grammar and conversation. Japanese culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential.

## JAPN 1020 First Year Japanese

(5:5:0) Spring
The student will continue to develop reading, writing, listening and speaking skills. Emphasis, as in JAPN 1010, will be on basic grammar and conversation. Japanese culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential. Prerequisite: JAPN 1010

JAPN 2988 Special Problems
(1-3:0:1-3)
Fall, Spring
JAPN 2988 is an elective course intended for advanced students. The student will work individually with theinstructor to develop reading,

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writing, listening and speaking skills. Emphasis will beon advanced grammar and conversation. Japanese culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

## JAPN 2999 Workshop

(1-3:1-3:0)
Fall, Spring
JAPN 2999 is an elective course intended for advanced students. The student will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Japanese culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

## NAVJ 1010 Beginning Navajo for Native Speakers

(3:3:0)
A course designed to introduce the native navajo speakers to the written orthography of the Navajo language. Emphasis will be on developing reading and writing skills. Prerequisite: Native Navajo Speaker.

## NAVJ 1030 Beginning Navajo for Non-Native Speakers

(3:3:0)
A course designed to help students achieve basic functional communication skills in the Navajo language. These skills include vocabulary, listening comprehension, pronunciation, reading, writing, and cultural awareness.

## NAVJ 2010 Intermediate Navajo for Native Speakers

(3:3:0)
This is a continuation of NAVJ 1010. Students will continue developing their reading and writing skills. Students are expected to have a fundamental knowledge of vocabulary and Navajo orthography.

## NAVJ 2030 Beginning Navajo for <br> Non-Native Speakers

(3:3:0)
This is a continuation of NAVJ 1030. Students will continue to develop speaking fluency, listening comprehension, reading, and writing skills, comprehension, pronunciation, reading, writing, and cultural awareness. Prerequisite: NAVJ 1030.

## NAVJ 2070 Navajo Literacy for Native Speakers

(3:3:0)
This course assists the Native Navajo speaker build communication skills of reading, writing, and speaking the Navajo language. Special emphasis will be given to utilizing the computer in desktop publishing, personal historical, cultural, and educational materials. Prerequisites: Navajo Native Speaker.

NAVJ 2080 Advanced Navajo for Native Speakers
(3:3:0)
This course assists the Native speaker of Navajo in building advanced writing skills. Emphasis will be given to developing curriculum materials to be used in the public school classroom setting. Curriculum and writing assignments will be done on the computer. Prerequisites: Native Navajo speaker and NAVJ 2070.

NAVJ 2988 Special Problems
(1-3:0:1-3)
Fall, Spring
NAVJ2988is anelective course intended for advanced students. The student will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Navajo culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

## NAVJ 2999 Workshop

(1-3:1-3:0)
Fall, Spring
NAVJ2999is anelective course intended for advanced students. The student will work individually with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Navajo culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

## RUSN 1010 First Year Russian

Fall
This course is intended for all students. The student will develop reading, writing, listening and speaking skills. Emphasis will be on basic grammar and conversation. Russian culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential.

RUSN 1020 First Year Russian
Spring
This course is intended for all students. The student will continue to develop reading, writing, listening and speaking skills. Emphasis, as in RUSN 1010, will be on basic grammar and conversation. Russian culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential. Prerequisite: RUSN 1010

RUSN 2988 Special Problems
(1-3:0:1-3)
Fall, Spring
RUSN2988isanelectivecourseintendedforadvanced students. The student will work individually
with the instructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Russian culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

RUSN 2999 Workshop
(1-3:1-3:0)
Fall, Spring
RUSN 2999 is an elective course intended for advanced students. The student will work individually with the instructor to developreading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Russian culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

## SPAN 1010 First Year Spanish

(5:5:0)
Fall
SPAN 1010 is a course intended for all students. The student will develop reading, writing, listening and speaking skills. Emphasis will be on basic grammar and conversation. Hispanic culture will also be emphasized. The course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential.

SPAN 1020 First Year Spanish
(5:5:0)
Spring
SPAN 1020 is a course intended for all students. The student will continue developing proficiency in reading, writing, listening and speaking skills. Emphasis, as in SPAN 1010, will be on basic grammar and conversation. Hispanic culture will also be emphasized. The course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential. Prerequisite: SPAN 1010

## SPAN 2010 Intermediate Spanish

(4:4:0)
Fall
SPAN 2010 is an elective course intended for all students. The student will build upon reading, writing, listening and speaking skills acquired in First Year Spanish. Emphasis will be on basic grammar and conversation. Hispanic culture will also be emphasized. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential. Prerequisite: SPAN 1010 and 1020.

SPAN 2020 Intermediate Spanish
(4:4:0)
Spring
SPAN 2020 is an elective course intended for all students. A continuation of 2010, the student will continue to build upon reading, writing, listening and speaking skills. Emphasis will be on grammar,
writing and conversation. Hispanic culture will also be emphasized. Spanish 2020 will also include an introduction to Hispanic prose and poetry. This course will be taught using lectures, videos, and extensive group work. Active class participation is absolutely essential. Prerequisites: Spanish 1010, 1020, 2010.

SPAN 2988 Special Problems
(1-3:0:1-3)
Fall, Spring
SPAN 2988 is an elective course intended for advanced students. The student will work individually with theinstructor to develop reading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Hispanic culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

SPAN 2999 Workshop
(1-3:1-3:0)
Fall, Spring
SPAN 2999 is an elective course intended for advanced students. The student will work individually with theinstructor to developreading, writing, listening and speaking skills. Emphasis will be on advanced grammar and conversation. Hispanic culture will also be emphasized. Significant reading and work outside of class are required. Prerequisite: Instructor permission.

FREN, GRMN, ITAL, JAPN, NAVJ, RUSN, and SPAN 2977
Cooperative Education (1-3:0:1-3)
This course provides supervised on-the-job training in any of the languages listed above. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements. Prerequisite: Instructor permission.

## MACHINE TOOL TECHNOLOGY (MACH)

Ed Callor

Dean Collard
Elias Perez

The Machine Tool Technology courses are support courses for the automotive, diesel and welding programs. These courses are open to all students.

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| Certificate of Completion (One year program) |  |  |  |  |  |
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| course |  | c. | Course |  | ${ }^{\text {cr. }}$ |
| мАСН | 1010 | 3 | busn | 2200 | 3 |
| мАСН | 1020 | 3 | -or- |  |  |
| мАСН | 1030 | 3 | Technical Writing |  |  |
| mach | 1040 | 3 | MATH | 1020 | 3 |
| EDDT | 1040 | 3 | WELD | 1010 | 3 |
| EDDT | 2650 | 2 | WELD | 2600 | 3 |
| Human | elations | 3 | Elective |  | 3 |
| (Choose | from BUS | V2320, | (Choose | from |  |
| BUSN 23 | 0, MINT | 1110 or | мАСН | ther |  |
| сомм |  |  | elective |  |  |
| PROGRAM TOTAL 35 |  |  |  |  |  |

## MACHINE TOOL TECHNOLOGY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1010 Machine Tool Technology I
(3:1:5)
This is an introductory course to machining. This course is designed to develop skills needed to safely operate various hand tools, power equipment and precision measuring instruments related to the machining field.

1020 Machine Tool Technology II
(3:2:3)
This course is the second class in the machining program. This course is designed to develop skills needed to safely operate various power equipment and precision measuring instruments related to the machining field. The course work will include: blueprint reading, developing skills in decision making to ensure that productivity and quality is obtained in a safe manner. Additional work on the Turning Machines will entail learning how to setup and operate manual lathes, perform basic and advanced machining operations, lathe cutting tools, all threading operations both internal and external as well as work on drill presses and related tooling. Prerequisite: MACH 1010

## 1030 Machine Tool Technology III

(3:2:3)
This course is an intermediate/ advanced course to machining. This course is designed to develop skills needed to safely operate various power equipment and precision measuring instruments related to the machining field. Students will learn to read blueprints, setup and operate manual machines, perform basic and advanced machining operations,
develop skills in decision making to ensure that productivity and quality is obtained in a safe manner. Prerequisite: MACH 1020.

1040 Machine Tool Technology IV
(3:2:3)
This course is an advanced course to machining. This course is designed to develop skills needed to safely operate various power equipment and precision measuring instruments related to the machining field. Students will learn to read blueprints, setups and operate manual machines, perform basic and advanced machining operations, develop skills in decision making to ensure that productivity and quality is obtained in a safe manner. Students will learn advanced work on the Turning machine, manual lathes, as well as an introduction to CNC lathes and mills. The theory and practice of the vertical milling machine, vertical milling machine construction and operation, and machine setup and milling will also be covered. Prerequisite: MACH 1030

1050 Machine Tool Technology V
This course is an advanced machining course designed to design for students who have reached a level of proficiency in a machine shop environment. This course will cover specialized machining processes with an emphasis on advanced milling operations. Students will read blueprints, setup and operate manual machines, perform basic and advanced machining operations, continue to develop skills in decision making to ensure that productivity and quality is obtained in a safe manner. Prerequisite: MACH 1040 or equivalent skills.

1140 Engine Machining Theory
(2:2:0)
This course instructs students on the techniques of drilling, honing, boring, grinding, etc., using the machines, measuring tools and gauges associated with MACH 1160. Casting inspection and guidelines for re-use is also explained. Prerequisite: Concurrent enrollment in MACH 1160.

## 1160 Engine Machining Lab

(2:0:2)
This course provides hands on experience operating the special equipment used to perform the machine processes done to automotive and diesel engine castings during overhaul. Students will recondition rods, cylinder heads, valve guides and valves, block deck surfaces, cylinder bores, and main bearing bores. The students will also use all precision measuring tools and gauging associated with these processes. Prerequisites: Concurrent enrollment in MACH 1140.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides on-the-job machine shop work experience which is coordinated through the instructor/ coordinator to determine learning objectives, hours of work, and credit. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Machine Tool Technology.

## MATHEMATICS (MATH)

Kevin Bower
Shane Brewer
Dr. Michelle Fleck
Sonnet Gravina
Melanie Nelson
Henry Zwick

The Mathematics curriculum offered by CEU prepares the mathematics major for transfer to the university. Mathematics majors and minors should consult with their academic advisor for assistance in planning their course of study.

During the two years, the students should complete the following sequence or show that they have already completed equivalent courses. The sequence may vary according to the mathematics background of the student.


| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2nd Fall Semester |  |  | 2nd Spring Semester |  |  |
| MATH | 2210 | 4* | MATH | 2220*** | $3^{*}$ |
| MATH | 2270 | 3* | MATH | 2280 | $3^{*}$ |
| SOC | 1010 | 3 | Human Arts | ies or Fine | 3 |
| Fine Arts |  | 3 | Compu <br> Progran <br> Langua | Science ming $e^{* * * *}$ | 3* |
| Technical Electives* |  | 4 | Oral Comm Intensiv | ication | 3 |
| TOTAL |  | 17 | Physica <br> TOTAL | Science | 3* 18 |
| Program Total 70 |  |  |  |  |  |

*Class has a prerequisite. The prerequisites for MATH 1210 are MATH 1050 and 1060.
** Can be chosen from approved classes in Physics, Chemistry, Engineering, Life Science, Computer Science and others.
***Or Technical Elective**
${ }^{* * * *}$ Choose 3 credits of any high level or assembly language programming class
NOTE: For a general education requirement, you will have to take the Computer Literacy test or one of the approved classes in the computer literacy area.

## MATHEMATICS COURSES

After the course title is a designation such as ( $3: 3: 3$ ). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 0970 Fundamentals of Mathematics

(4:4:0)
This course is a developmental course in arithmetic, designed to help students acquire or renew competency in calculations involving whole numbers, place value and rounding, exponents, order of operations, fractions, decimals, ratio and proportion, percents and basic business math. Other topics include elementary, statistics (median, mean, mode, frequency graphs, and histograms), English and metric measurement systems and conversions, perimeter, area and volumes of geometric figures, the Pythagorean Theorem, similar triangles, operations with integers, and an introduction to the basic concepts of algebra. Emphasis is given to the development of skills using work problems and application of these techniques to "real life" situations. MATH 0970 does not count towards graduation, but attempts to prepare the student for MATH 0990.

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## 0990 Elementary Algebra

(3:3:0)
Fall, Spring, Summer
This is a first course in algebra designed to prepare the student for intermediate algebra. Topics include an introduction to real numbers and algebraic expressions, solving equations and inequalities, operations on polynomials, factoring polynomials, rational expressions, and equations, graphs of equations and inequalities, and systems of equations. Word problems are utilized to help the student understand how algebra is used to solve problems. MATH 0990 does not count towards graduation, but attempts to prepare the student for MATH 1010. Prerequisite: MATH 0970

1010 Intermediate Algebra
(4:4:0)
Fall, Spring, Summer
This course is a continuation of MATH 0990. Topics include polynomials, exponents, equations, rational expressions, linear inequalities, straight lines, systems of equations and inequalities, applied problems, factoring, graphs, radicals, the quadratic formula, completing the square, and complex numbers. Prerequisite: MATH 0990, or MATH ACT score of 19-22.

1020 Trade Mathematics
(3:3:0)
Spring
This course is designed to cover the basic skills needed by students who are enrolled in auto mechanics, diesel mechanics, electronics, machine tool technology, and welding. It is not intended to prepare the student for calculus. Topics to be covered include a review of basic arithmetic, precision and accuracy, significant figures, English and metric measurement systems and conversions, ratio and proportion, variation, operations with formulas, solving linear and quadratic equations, systems of equations in two and three variables, fractional equations, perimeter, area and volume of geometric figures, the Pythagorean theorem, basic trigonometry, graphs of linear, quadratic and exponential functions, logarithms, polar coordinates, and the complex number system. Throughout the course, emphasis is placed on solving problems related to the technical fields. Prerequisite: MATH 0990.

1030 Quantitative Reasoning
Fall, Spring, Summer
MATH 1030 is a general education class intended mostly for non-science students, but is open to all students. This class will get students familiar with the following topics: logic, problem solving, Numeration Systems, geometry, measurements, probability, statistics, and more advanced algebra. A term paper or research paper will be required. Prerequisite: MATH 1010, or MATH ACT score of at least 23.

1050 College Algebra
(4:4:0)
Fall, Spring, Summer
This course is an advanced course in algebra. Topics include functions, applied problems, equations, inequalities, graphing, logarithms, exponentials, roots of polynomials, partial fractions, binomial theorem, matrices, determinants, conic sections, sequences, series, combinatorics, mathematical induction, and systems of equations and inequalities. Students may be required to have ACCESS to a graphing utility requirement. Prerequisite: MATH 1010, or MATH ACT score of at least 23.

1060 Trigonometry
Fall, Spring
Trigonometry is the study of functions described by angles and distances. This course covers the basic components of a trigonometry course. Topics include angles and their measure, properties of the trigonometric functions, right triangle trigonometry, graphs, trigonometric identities and equations, laws of sines and cosines, vectors, complex numbers, and polar coordinates. This course is designed to prepare students for the calculus series. Prerequisite: MATH 1050

1100 Calculus Techniques
Spring
This course is also known as Quantitative Analysis or Applied Calculus. It is a non-trigonometry based calculus course. Topics include functions, graphs, limits, continuity, differentiation techniques and applications, integration techniques and applications, exponential and logarithmic functions, growth and decay. Prerequisite: MATH 1050.

## 1210 Calculus I

(4:4:0)
Fall, Spring
Calculus is the mathematical tool used to analyze changes in physical quantities. Its applications are found in engineering, physical and life science, and economics. Calculus I is the first course of study in the calculus series. Topics include functions and limits, differentiation techniques, applications of differentiation, integration, applications of the definite integral, logarithmic and exponential functions, inverse trigonometric and hyperbolic functions. Prerequisites: MATH 1050, 1060.

## 1220 Calculus II

(4:4:0)
Spring
This course is a continuation of Calculus I. Topics include techniques of integration, improper integrals, infinite series, topics in analytic geometry, polar and parametric equations and vectors in 2and 3- spaca. Prerequisite: MATH 1210.

This course is designed to enhance the mathematical background required of prospective elementary school teachers. This course exposes the students to cognitive reasoning and problem solving skills, logic, whole number computations, operations and properties, numeration systems, elementary number theory, and arithmetic algorithms. Other topics include an introduction to geometry, measurement and working with the metric system, an introduction to analytic geometry and a brief overview of algebra. Prerequisite: MATH 1050.

## 2040 Applied Statistics

(4:4:0)

## Fall, Spring

An introduction to the general ideas and techniques of statistics as applied to many disciplines. Topics include an introduction to statistics, descriptive experiments, probability, probability distributions, normal probability distributions, estimates and sample sizes, testing hypotheses, inferences from two samples, correlation and regression, multinomial experiments, contingency tables, and analysis of variance. Statistical software is used in this course to supplement paper and pencil calculations. This course fulfills the math requirement for graduation. Prerequisite: MATH 1050.

## 2210 Multivariable Calculus (Calculus III)

(4:4:0)
Fall
This course is a continuation of Math 1220. Topics include vector valued functions, functions of two or more variables, partial derivatives, multiple integration, line and surface integrals, and theorems of Green and Stokes. Prerequisite or corequisite: MATH 1220.

## 2220 Discrete Mathematics

Spring (on demand only)
This course covers mathematical proofs, logic, sets, functions, recurrence relations, combinatorics, graph theory, Boolean Algebra, Algorithms, and an introduction to grammars and automata. Prerequisite or corequisite: MATH 1220

2250 Linear Algebra and Differential
(4:4:0)
Spring (on demand only)
This course covers theory applications of Vectors, Matrices, Determinants, Systems of Equations, Vector Spaces, Basis Dimension, Rank, Linear Independence, and Dependence, Linear transformations, Eigenvalues, Eigenvectors,

Diagonalization, and Mathematical induction. It will also cover ordinary differential equations in general and their solutions which includes first-order, higher, simple nonlinear equations, Laplace Transforms, and some series solutions. Prerequisite: MATH 1220.

## 2270 Linear Algebra

## Fall

This course covers theory and some applications of vectors, matrices, determinants, systems of equations, vector spaces, basis, dimension, rank, linear independence and dependence, linear transformations, eigenvalues and eigenvectors and diagonalization, mathematic induction, and least square approximations. Prerequisite or corequisite: MATH 1220.

2280 Ordinary Differential Equations (3:3:0) Spring
This course will cover ordinary differential equations in general and their solutions, which includes first-order, higher-orders, simple nonlinear equations, Laplace Transforms, some series solutions, and Numerical Methods. Prerequisite or corequisite: MATH 1220

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training in mathematics. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit agreement. Prerequisite: Instructor permission.

2988 Special Problems
(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Mathematics.

## MEDICAL ASSISTANT PROGRAM

The Medical Assistant (MA) Certificate of Completion program is a complimentary addition to healthcare programs. The MA program provides an excellent alternative path into the healthcare professions. The overlap of job duties between the MA position and a typical nursing position is extensive, including direct patient care, patient charting, phlebotomy, and administrative functions.

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For those in the Certified Nursing Assistant (CNA) vocation, the MA program provides a tangible path to career growth since the CNA credential is one of the requirements in the MA program. In addition, the MA program can be successfully completed outside of a unified cohort system.Entry and exit in the program is more flexible than the trational nursing cohort system.

| First Semester |  |  | Second Semester |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| arse |  | cr | Course |  | $\mathrm{Cr}^{\text {r }}$ |
| NURS | 1000 | 4 | HEAL | 1600 | 6 |
| NURS | 1008 | 2 | Heal | 1700 | 4 |
| MATH | 1030 | 3 | Heal | 2020 | 3 |
| heal | 1030 | 4 | heal | 1860 | 2 |
| BIOL | 1500 | 3 | ENGL | 1010 | 3 |

## HEALTH COURSES

1030 Medical Assisting:
Administrative Competencies
(4:3:3)
This course is focused on knowledge necessary to perform medical assistant administrative duties. The content includes introduction to medical assisting and health professions, ethics, safety, and security in the medical office, integrated administrative procedures, health insurance, medical coding and billing. Communication and management skills in leadership, conflict resolution, and customer service are emphasized.

## 1600 Medical Assisting:

(6:6:0)
This course is focused on knowledge necessary to perform clinical competencies as a medical assistant. The content includes emergency procedures and first aid, therapeutic approach, integrated clinical procedures, diagnostic procedures, and laboratory procedures.

1700 Medical Assisting Internship
(4:4:0)
This course is designed to provide for student attainment of the Entry Level Competencies for the Medical Assistant. Placement in an ambulatory health care setting is required. In an actual work situation, students will perform both administrative and clinical competencies. Administrative competencies include perfomance of clerical functions, bookkeeping procedures and preparation of special accounting entries. Clinical competencies include knowledge of fundamental principles,
specimen collection, diagnostic testing and patient care. Transdisciplinary competencies will be integrated in both the clinical and administrative areas. These include communciation, legal concepts, patient instruction and operational functions.

## 1860 Phlebotomy and Clinical Laboratory

This course is focused on the knowledge and skill necessary to perform phlebotomy and specific clinical laboratory duties. Skills include drawing blood, obtaining blood cultures, using Lancet or a Microlance for a Microdraw or an Infant Heel Stick, and measuring bleeding time. Prerequisite: BIO 1500.

## MEDICAL LABORATORY TECHNICIAN (MLT)

Virgil Caldwell

The Medical Laboratory Technician program is designed to prepare students for careers as certified medical laboratory technicians.

Medical Laboratory Technicians examine and analyze body fluids, tissues, and cells. They look for bacteria, parasites, and other microorganisms; analyze the chemical content of fluids, match blood for transfusions; and test for drug levels in the blood to show how a patient is responding to treatment. They use automated equipment and instruments capable of performing a number of tests simultaneously, as well as microscopes, cell counters, and other sophisticated laboratory equipment. Test results are analyzed and relayed to physicians.

Clinical laboratory personnel need good analytical judgment and the ability to work under pressure. Close attention to detail is esstential, because small differences or changes in test substances or numerical readouts can be crucial for patient care.

Job duties will vary according to employment environments which can vary from large hospitals to clinics and physician offices. Job opportunities are expected to be excellent, because the number of job openings is expected to continue to exceeed the number of job seekers. Although hospitals are expected to continue to be the major employer of clinical laboratory workers, employment is expected to grow faster in medical and diagnostic laboratories, offices of physicians, and other ambulatory health
care services including blood and organ banks (U.S. Deptartment of Labor, 2005).

1010 Medical Laboratory Techniques (3:3:0) This course is focused on introducing students to the professional and technical responsibilities of the medical laboratory technician. Topics include laboratory organization, instrumentation, legal and ethical issues, certification and licensure, communication and computational skills, and quality control. In addition, technical areas of laboratory science (hematology, immunology and serology, urinalysis, clinical chemistry, clinical microbiology and parasitology) will be explore in a laboratory setting. Basic instruction in phlebotomy, specimen collection and processing, and laboratory instrumentation will also be part of the course. Prerequisites: Admission to the MLT program or instructor permission.

## 2230 Clinical Laboratory Practices <br> (2:2:0)

This course discusses the science, theory, and ethics of common laboratory practices. The focus of the course is to teach the theory and application of a proper sample collection, preparation, and identification of simple bodily fluids obtained by invasive and noninvasive procedures. This course also discusses the overall demeanor of the work environment and the student. Prerequisite: Admission to the MLT program or instructor permission.

## 2240 Hematology

(4:4:0)
This course discusses the anatomy, physiology, and pathology of the circulatory system with a specific course of instruction in form, function, and identification of blood cells. Major emphasis in the course is teaching the theory and application of a proper sample collection, preparation, and identification of the formed elements of the human blood. Prerequisite: Admission to the MLT program or instructor permission.

## 2270 Immunology/Serology

(3:3:0)
This course provides an introduction to the study of the immune system, the nature of immune responses and its application to clinical laboratory testing, health and disease. The student will learn the functions of the immune system, immune response, principles of antigen-antibody reactions as well as the principles of serological procedures. Prerequisite: Admission to the MLT program or instructor permission.

2280 Immunohematology
(4:4:0)
Lecture and laboratory will focus on an introduction to the immunological aspect of the circulation system including the theory behind patient compatibility.This will include, but not limited to, blood grouping, Rh typing, compatibility testing, donor screening, and quality assurance issues. Prerequisite: Admission to the MLTprogramor instructor permission.

2430 Clinical Chemistry I
(3:3:0)
This course covers the theory and performance of the basic concepts of Clinical Chemistry laboratory procedures. The analysis of body fluids (blood, urine, and spinal fluid) for electrolytes, carbohydrates, pH , bilirubin, protein, non-protein nitrogen, and enzymes will be performed in the laboratory. The reasons for increased or decreased levels of these chemicals will be discussed in relation to diseases such as diabetes, jaundice, nephritis, muscular dystrophy, cardiovascular disorders, and others. The use of laboratory instrumentation, quality control, and interpretation and presentation of results will be taught. Prerequisites: Successful completion (C or better grade) of courses included in the first year of the MLT program or instructor permisson.

## 2450 Clinical Chemistry II

(3:3:0)
This course is a continuation of MLT 2430, Clinical Chemistry I, and will teach the theory and practice of Clinical Chemistry with a special emphasis on endocrinology, therapeutic drug monitoring, and toxicology. Additional topics will include vitamin analysis, tumor markers, pancreatic and gastrointestinal function, hemoglobin and myoglobin analysis, porphyrins and porphyrias, quality control and laboratory instrumentation. Prerequisite: Successful completion (C or better grade) in MLT 2430 orpermission of the instructor.

2550 Practicum in Medical Technology (3:3:0) This supervised practicum is within the clinical setting and provides laboratory practice in hematology urinalysis, microbiology, serology, clinical chemistry, and immunohematology. Emphasis is placed on clinical skills and performance in areas such as specimen preparation and examination, instrumentation, reporting of results, management of data, quality control, recovery, isolation, culturing and identifying microorganisms, detection and identification of antibodies, the typing of blood, compatibility testing of blood and blood components, computerized instrumentation and the ability to recognize technical problems. Upon completion,

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students should be able to organize tasks and to perform various basic laboratory analyses with accuracy and precision and to be prepared to enter the work force.

2570 Clinical Microbiology I
(3:3:0)
This course introduces instruction in theory practical application and pathogenesis of clinical microbiology. The course will cover the collection, setup, identification, susceptibility testing, and reporting procedures. The laboratory exercises will include emphasis on the identification of clinically significant microorganisms. Students will participate in Standard Microbiological testing including the culture, staining and antibiotic testing of various organisms. Prerequisite: Admission to the MLT program or instrutor permission.

## 2580 Clinical Microbiology II

(2:2:0)
This course is focused on knowledge necessary to perform medical laboratory technician's duties. Instruction will include the theory, practical application and pathogenesis of clinical microbiology. Procedures including collection, set-up, identification and reporting procedures will be used throughout the course. Pathogentic microorganisms will be studied in relationship to disease. The course will include examination of viral agents, medical mycology and parasitology. Routine medical microbiological procedures will be examined. Prerequisite: Admission to the MLT program or instructor permission.

## MINING (MINT)

## MINING COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1060 Mine Orientation

(2:2:0)
A one week course designed to train inexperienced potential miners in areas such as mining methods, mine gases, and detecting instruments, mine ventilation, first aid, safety transportation systems, electricity, fire and explosions, coal preparation and mine equipment.

## 1070 Surface Mine Orientation

(1:1:0)
This is a two day orientation training class for potential surface miners. The course includes areas such as miners rights, health and safety, first aid, transportation, fires and explosions and mining methods.

1080 Eight Hour Retraining
(.5:.5:0)

This course prepares the student in mine safety training which will include: accident prevention, first aid, roof and rib control, ventilation, rules and regulations, electrical hazards, etc. May be repeated for credit.

## 1110 Labor Management Relations

## Human Relations

Spring
This course will identify management and labor responsibility in the workplace, and human relation skills necessary to the working environment. Other topics for discussion will be problems involved in achieving a harmonious working relationship, ethics and customer relations. The class will be taught using lectures, videos and discussions.

## 1120 Coal Production, Preparation and Uses

(2:2:0)
Fall (even years)
This course is for students in the mining program. This course studies common production methods used in coal mining. Modern methods of coal preparation, sizing, testing and future uses of coal will be examined.

## 1130 Coal Mining Laws of U.S. and Utah

(2:2:0)
Fall (even years)
This course will teach students coal mining laws and their interpretation as applied to coal mining in Utah, with special emphasis on Title 30 of the Federal Code.

## 1150 Mine Surveying

(2:2:0)
Fall (even years)
This course is for students in the mining program. The course will teach the use of levels, transits, and other measuring instruments used in underground surveying. Laws and underground conditions are emphasized.

## 1160 Mining Mapping

Spring (even years)
This course is for students in the mining program. This course examines the use of field notes in developing mine maps. Various types of mine maps will be studied and the laws regarding mine maps will be covered.

1170 Mining Methods
Spring (even years)
This class is for students in the mining program. Past, present and future mining methods of both surface and underground mining are studied. Economics which are considered in the selection of
mining methods will be covered. A mine tour is included.

## 1180 Management through Communications

(2:2:0)
Fall (odd years)
This course is for students in the mining program and any students that expect to be in supervisory or management positions in their career. This course teaches supervisory methods to handle everyday problems of discipline, grievances and employee complaints. Communication and listening skills will be studied.

1190 Diesel Training and Qualification (1:1:0) On demand
This class is an elective for students in the mining program. This class fulfills the requirements of CFR30 part 75.1915. Successful students in the course will be qualified to take diesel maintenance and repairs examinations.

2110 First Aid/CPR/Exigency Guidance (2:2:0) Fall
Methods of administrating first aid under emergency conditions with practice in the use of first aid equipment. Cardiopulmonary Resuscitation will be taught using mannequins for practice so the students may attain proficiency. Exigency Guidance is taking the necessary steps to protect yourself while performing first aid and CPR.

2120 Principles of Accident Prevention (2:2:0) Fall (even years)
This course is required for students in the mining program. In the course an accident will be defined and the affects of accidents to employees, and the company will be studied. Accident investigation processes to determine causes will be taught. Accident prevention techniques will be examined.

## 2130 Mine Ventilation

(2:2:0)
Spring (odd years)
This is a required course for students desiring a safety or supervisory emphasis. The course will examine the methods used and the problems involved in supplying the legal requirements of fresh air to the working face of a coal mine.

## 2140 Benchman, Mine Rescue

(.5:.5:0)

This course covers mine rescue apparatus involving repair, testing, maintenance, which will apply toward recertification for Utah State Mine Foreman applicants. May be repeated for credit.

2150 Mine Gases and Fire Protection
(2:2:0) Fall (even years)
This course will contain a study of the sources, properties, control, and the hazards associated with gases that occur in a mine fire. Gas detection will be examined and fire protection methods discussed.

## 2160 Dust and Noise Control

(2:2:0)
Fall (even years)
This course will contain a study of laws concerning dust and noise control in coal mines. Methods of taking, preparing samples, and calibration of equipment will be studied. Solid state pumps and fast response calibrators will be a training focus. This course will prepare a student for MSHA dust and noise certification.

## 2170 Mine Rescue

(2:2:0)
Spring
The student will experience operating, wearing, and testing the Nation Drager 174 three or four hour apparatus. The properties of the Drager BG4 and the Bio-Pac breathing apparatus will be discussed. MSHA certificate will be awarded upon successful completion.

2180 Advance Mine Rescue
(3:3:0)
Team building and team rescue methods. Use of mine rescue equipment in emergency procedures. Simulated rescue practice. May be repeated for credit.

2200 Supervisor Training
(2:2:0)
Spring (odd years)
This course is for students in the mining program. This coursewillexamine thesupervisor's responsibility to the employees, the company, the customer and the methods of satisfying the responsibilities.

## 2210 Initial Electrical (80 hour)

( 6:6:0)
This course will prepare students for the Utah State Mine electrician certification test. It follows both state and federal topics for electrical certification testing. May be repeated for credit.

## 2220 Basic Mine Electricity

(4:4:0)
Fall (odd years)
This is a course of study covering DC and AC theory with an emphasis on electrical applications to mining machinery. Parts 18 and 75 of Title 30, Code of Federal Regulations. The National Electric Code (NEC) and State of Utah Safety Orders.

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2240 Mining Electrical Recertification (.5:.5:0) This course is an intensive study designed to meet a student's need for recertification in mine electricity. May be repeated for credit.

## 2250 Foreman/Fireboss

(4:4:0)
This is a preparation course for the Utah State Coal Fireboss/Foreman certification examination. Topics that are covered include coal mine gases, ventilation, atmosphere detection, strata and methane control, coal mine dust and noise testing procedures, diesel regulations and compliance. May be repeated for credit.

## 2260 Methanometer

(.5:.5:0)

This course is an elective for students in the mining program. This course is a study of methane gas, how it is formed, where and how it is detected. The care, use and maintenance of methane detection devices is emphasized.

## 231040 Hour SARA/OSHA Hazwoper (3:3:0)

 This is a 40 hour course designed to train general site workers involved in any activity with potential for hazardous substance exposure. Maybe repeated for credit.232024 Hour SARA/OSHA Hazwoper (2:2:0) This is a 24 hour course designed to train occasional site workers unlikely to be exposed to hazardous substances above PEL's (published exposure limits). May be repeated for credit.

23308 Hour SARA/OSHA Hazwoper (.5:.5:0) This course is designed as a refresher for people's health and safety in the areas of hazardous material handling.
2340 Confined Space
(.5:.5:0)

This course is designed to enable the worker to recognize a greater degree of safety when confronted with confined spaces. May be repeated for credit.

## 2450 Emergency Medical Technician (EMT)

(8:8:0)
This course is intended primarily for personnel of companies and agencies who may be involved in providing paramedical assistance in the event of injury or illness. It is held in cooperation with the Utah State Emergency Medical System, local physicians and EMT instructors. A certificate of completion will be awarded at the completion of the course. A special EMT fee is required. Dual listed as EMMT 2460.

2460 EMT Recertification or First Responder
(1-3:1-3:0)
This course is designed primarily for company and agency personnel desiring recertification and will include emergency medical care of the patient leading to EMT recertification. This course could be adapted to a 40 hour First Responder course.

2470 First Aid Instructor Course
(2:2:0)
This course is an elective for students in the mining program. This course covers teaching techniques and teaches the principles of first aid. This course is taught in accordance with and meets the requirements of MSHA regulations.

2480 Mine Safety Instructor Course
(3:3:0)
This course is required for students in the mining program. In this course students will study teaching techniques and lesson plan development. This course will cover types and sources of MSHA teaching materials. MSHA required forms will be covered. This course is taught in accordance with MSHA regulations.

2520 Longwall Production Technology
(4:4:0)
Spring (odd years)
An extensive study of longwall production methods. This course will focus on basic operations, development systems, production methods, loading and dynamics of shield support, ventilation, set-up and moving of a longwall.

## 2530 Longwall Safety Technology

Spring (even years)
An indepth study of longwall hazards, the applications of the laws of safety, and safety practices. This course will focus on ventilation, dust and noise control, longwall pillar/barrier design, bounces, gate road study, fire evacuation, shield dynamics and surface impacts.

## 2600 Non-Metal Miner Surface Mine

 Orientaion(1.5:1.5:0)

This is a three day orientation training class for potential surface new miners. The course includes areas such as miners rights, health and safety, first aid, transportation, fires and explosions, mining methods, line of authority and miners representatives and responsibility of supervisors, safety rules and reporting.

## 2605 Non-Metal New Miner/Contractor Surface Mine Orientation

(1:1:0)
This is a two day orientation training course for potential surface new miners. The course includes areas such as miners rights, health and safety, first aid, transportation and fires and explosions.
(.5:.5:0)

This course is designed to train experienced, newly employed miners in areas such as introduction to work environment, hazard recognition, emergency evacuation, health and safety aspects, mining methods, first aid and safety, transportation systems, electricity, fire fighting and mine equipment.

## 2615 Non-Metal/Eight Hour Retraining

(.5:.5:0)

This course covers areas in surface mine safety training including accident prevention, first aid, rules and regulations, electrical hazards, ground control, transportation/ communications, emergency evacuation, highwall, pit, spoilbank hazards, health and respiratory devices.

2977 Cooperative Education (1-3:0:1-3) This course provides supervised on-the-job training in such aspects of a mining career as mining methods, mine gases and detection instruments, mine ventilation, safety and first aid, fires and explosives, coal preparation, and mine equipment. Students meet with the instructor / coordinator to determine learning objectives, hours of work and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of students in Mining.

## MUSIC (MUSC)

Dr. Greg Benson<br>Russell Wilson

The Department of Music offers a two-year college music curriculum for students wishing to major or minor in some phase of the field, whether it be in theory, instrumental, vocal, education, or composition. The department provides the two years of musical training required of music students during their first two years of college work, leading to bachelor and advanced degrees.

*Talent Scholarship students not majoring in music must register for a performing ensemble and are encouraged to be involved in other music courses. Please see scholarship area professor for proper ensemble placement.

## MUSIC COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Introduction to Music

(3:3:0)

## Fine Arts

Fall, Spring
This is a survey course in music history designed to assist the non-musician as well as the music major in developing a useful understanding of and a broader insight into the art of music. Music Appreciation overviews the history, stylistic practices, repertoire and composers of the six periods of Western classical music, from 400 A.D.

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ACCT
ANTH
APPR
ART
AUTO
BCCM
BCIS
BIOL
BUSN
CHEM
CJ
COMM
COST
CS
DANC
DSME
ECON
EDDT
EDUC
ELEC
EMMT
ENGL
ENGN
ESOL
FAML
GEO
GEOG
GHUM
HEAL
HETR
HIST
HYDR
LANG
MACH
MATH
MA
MLT
MINT
MUSM
NURS
PE
PHIL
PHYS
POLS
PRE-PROF
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RECR
SLSC
SOC
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WELD
WILD
PEOPLE
to the present. The class is taught using lectures, videos, and listening selections. Out-of-class writing assignments and concert attendance are required.

1110 Music Theory I (First Year)
(3:3:0)
Fall
1120 Music Theory II (First Year)
(3:3:0)
Spring
Music Theory provides essential background in melodic, harmonic, and rhythmic elements of music. Students who successfully complete the two-semester sequence will be proficient in many aspects related to pitch, rhythm, intervals, scales, key signatures, triads, seventh chords, phrase structure and cadence, harmonization, secondary dominants, and modulation. Students mustcomplete MUSC1110 before enrolling in MUSC 1120. It is recommended that music majors enroll concurrently in MUSC 1130 and 1140 and MUSC 1150 and 1160.

## 1130 Sight Singing/Ear Training I

 (First Year)(1:2:0)
Fall
1140 Sight Singing/Ear Training II (First Year)
(1:2:0)
Spring
Sight Singing and Ear Training provides essential background in rhythmic and melodic sight singing, and rhythmic, melodic, and harmonic dictation. Students who successfully complete the twosemester sequence will be aurally proficient in simple and compound rhythms, melodic and harmonic intervals, diatonic melodies, and triads and seventh chords. Students must complete MUSC 1130 before enrolling in MUSC 1140. It is recommended that music majors enroll concurrently in MUSC 1110 and 1120.

1150 Class Piano II
(First Year Keyboard Skills)
(2:2:0)
Fall
1160 Class Piano II
(First Year Keyboard Skills)
(2:2:0)
Spring
Fulfills elective for the general student and transfer credit for music majors/minors. Group piano instruction is a course designed for the beginning keyboardist with no previous experience. These courses are in a two part series and must be taken in sequence, except with the instructor's permission. Basic music and keyboarding skills will be taught including note reading, rhythm, scales, chords, harmonizing melodies and music interpretation and style. Music majors/minors must take this course concurrently with the music theory sequence in preparation for piano proficiency at the university level.

Private instruction is available for the serious music student who is interested in devoting daily study and practice to developing advanced technique on an instrument or voice. Students will be given a private lesson each week and will be assigned appropriate studies, duets, and solo literature. Opportunity will be given for solo and ensemble recital performance. An instructor's fee is charged in addition to regular tuition and fees. Fall and Spring (all private instruction courses)

1210 Private Instruction Piano
1220 Private Instruction Voice
1230 Private Instruction Woodwinds
1240 Private Instruction Brass

## 2001 Concert Choir

Fall, Spring
Concert Choir is a general choral class for singers of all interests and levels. It provides concerts for the college at large. Most students stay in the choir for the entire year. May be repeated for credit. No audition is required.

## 2011 Wind Symphony

Fall, Spring
Service Learning
Wind Symphony provides experiences for woodwind, brass and percussion players in a concert band setting. Repertoire includes literature representing many traditional and contemporary styles. Performances are presented in various college and community venues. Prerequisite: Audition

## 2021 Chamber Choir

(1:5:0)
Fall and Spring
The CEU Chamber Choir is an auditioned group of excellent singers, and is the premiere performing ensemble in the vocal area. Singers must join for the entire year. The Chamber choir represents CEU at various intercollegiate functions and is the group usually taken on tour for recruitment purposes. It meets four times a week for one hour of credit. May be repeated for credit.

## 2051 Performance Ensemble

(1:1-4:0) Fall, Spring
Performance Ensemble provides experiences in small group settings. Various ensembles are organized on a flexible basis, depending on student interest. Prerequisite: Concurrent enrollment in a major ensemble of the department.

2350 Fundamentals of Conducting Spring
This course is designed to develop skills in the rudiments of conducting instrumental and vocal ensembles, score reading, and a basic understanding of instrumental problems. Student conductors will have the opportunity to work with live instrumental and vocal groups. Students must demonstrate sufficient ability in sight-singing and intervallic and harmonic dictation. Music majors/minors should take this course in their second year of music study. Prerequisites: MUSC 1110, 1120, 1130, 1140 or instructor's permission.

## 2500 MIDI The Fundamentals of Music Technology.

(2:2:0)
Fall, Spring
MIDI Fundamentals is open to anyone with an interest in music and computers. Students will learn the basic why's and how's of MIDI and then apply this knowledge to their own projects. Each student will have his / her own workstation with a Macintosh computerandmulti-timbral synthesizer for hands-on application in the CEU music department MIDI lab. At the completion of this course the student will be able to: create, sequence and notate original musical compositions; and to use a MIDI controller and computer in all phases of music course work, teaching and performance. (Some piano/keyboard experience would be helpful but not required.) Music majors/minors should take this course concurrently with the music theory sequence.

## 2600, 2610 Commercial Composition

(2:2:0 each)

## Fall, Spring

Commercial Composition is a two semester series class focusing on commercial aspects of music composition. Discussions include writing music for films, television, albums and many other areas. Most of the class work is actual composition done on computers. Also included is a general discussion and hands-on application of digital recording techniques. (Some piano/keyboard experience would be helpful.) Music majors/ minors should take this course in their second year. Prerequisites: MUSC 2500 or demonstrated music technology competence and MUSC 1120 (May be taken concurrently).

## 2760 Music in Early Childhood Spring

(2:2:0)

This class is designed for students preparing for careers in early childhood, music education, recreation, and special education. To equip the early childhood major to teach music in the preschool, emphasis will be placed on musical
skills appropriate for classroom music situations. Skills taught will include mastery of basic musical concepts, accompaniment techniques, writing lesson plans, and choosing appropriate materials and objectives for preschool level students.

## 2977 Cooperative Education (1-3:0:1-3)

This course provides supervised on-the-job training in music. The student meets with the instructor/ coordinator periodically to determine and evaluate learning objectives, hours to be worked, and credit. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Independent study work for the serious musician to be approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Music.

## MUSEUM STUDIES (MUSM)

Pam Miller

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Fall Semester |  |  | 1st Spring Semester |  |  |
| course |  | c. | Course |  | cr. |
| ART | 1010 | 3 | ART | 1600 | 3 |
| EnGL | 1010 | 3 |  | -or- |  |
| MATH | 1030 | 3 | BCIS | 2010 | 3 |
|  | -or- |  |  | -or- |  |
| math | 1050 | 4 | BCIS | 1010 | 3 |
| musm | 1010 | 3 | ANTH | 1010 | 3 |
| musm | 1020 | 3 |  | -or- |  |
| Oral Commur | ication | 0 | BCIS | 1010 | 3 |
| total |  | 15-16 |  | -or- |  |
|  |  |  | FAML | 1500 | 3 |
|  |  |  | ENGL | 1070 | 3 |
|  |  |  | BIOL | 1610 | 3 |
|  |  |  | mUSM | 1030 | 3 |
|  |  |  | total |  | 15 |
| Summer Semester |  |  |  |  |  |
| musn | 2090 | 3 |  |  |  |
| total |  | 3 |  |  |  |

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*If you take MUSM 2090 Spring Semester instead of Summer Semester (first year), you must also take two additional elective hours. If you choose not to take MUSM 2090, you must take all five electives.

## MUSEUM STUDIES COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1010 Introduction to Museums
(3:3:0)
In this course, students are introduced to museums and the role museums play in society. A historical and theoretical framework for museums science will be established and museums will be placed in a global perspective. Students will become familiar with the broad-based implications of museum work as a science.

## 1020 Museum Administration

(3:3:0)
Instruction in aspects of museum management and administration, including policies and procedures, personnel management, budget formulation, governance, and interaction with support organizations.

## 1030 Museum Collection Management and Ethics

(3:2:2)
This course defines the role of museum collections and focuses on general museum concepts, procedures, and issues related to the management and care of collections. In addressing ethical considerations and legal obligations of museum collections and management, attention is given to international concerns as well as to state and national issues. Previous or current museum experience or coursework helpful.

2010 Museum Exhibitions I
(3:2:3)
Designed to give students a background in the early aspects of exhibition preparation, this course will emphasize exhibit planning, research and writing. Previous or current museum experience or coursework helpful.

## 2011 Museum Exhibitions II

(3:2:3)
Designed as a continuation of MUSM 2010, this course will emphasize writing and preparing exhibit labels, fabrication of the exhibit, and exhibit evaluation. Prerequisites: MUSM 2010 or instructor permission.

2020 Museum Preventative Conservation (3:3:0) Introduction to the current methods and theories pertaining to museum collections care, with an emphasis on handling, storing, and exhibiting collections as safely as possible. Low cost ideas will be shared. Previous or current museum experience or coursework helpful.

2090 Museum Practicum
(3:1:2-4)
Museum Practicum is designed to meet the needs of individual students or museums. It involves individualized instruction under the supervision of faculty (or museum administrators at other locations) utilizing hands-on experiences in museum administration, collections, education, and exhibitions. It may be done at a student's local museum with approved supervision. A project or paper is required for completion of the course. Prerequisites: Instructor permission.

## 2977 Cooperative Education (1-3:0:1-3)

This course provides supervised on-the-job training in museum studies. The student meets with the instructor/coordinator periodically to determine and evaluate learning objectives, hours to be worked, and credit. Prerequisite: Instructor permissons.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged. Prerequisite: Instructor permission.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Museum Studies. Prerequisite: Instructor permission.

## NURSING (NURS)

Price Faculty

Frances Swasey - Director
Dr. Donna Cartwright
Doris Christensen
Jennifer Decker
Kimball Johnson
Stacey Rorie

## San Juan Faculty

JoAnn Crittenden
Peggy Denton
Adina Free

## PRACTICAL NURSING PROGRAM PLUS AN ASSOCIATE DEGREE PROGRAM OPTION

At the College of Eastern Utah, nursing theory is correlated with knowledge from the biological, physical, and the behavioral sciences. Qualified nurse educators guide students in theory, laboratory practice, and clinical experiences that utilize acute care hospitals, extended care facilities, clinics, home and other health related environments. The program is accredited by the National League for Nursing Accrediting Commission (NLNAC), 61 Broadway - 33rd Floor, New York, NY, 10006.

Students have two options in nursing education. Students can attend one year of classes to obtain a Certificate of Completion in Practical Nursing, and enter the job market; or if they are interested and qualified, can obtain an Associate of Applied Science degree in Nursing. Currently licensed LPN's who desire to continue their nursing education can also apply for entrance in the Associate Degree program.

## EMPLOYMENT OPPORTUNITIES

Graduates of either program may find career opportunities in a variety of health care settings in rural and urban Utah. Jobs are readily available in acute care, extended care, public health, and community health settings.

## ADMISSION INTO THE PROGRAM

Admission into the nursing program is a separate process from admission to the college.
Necessary forms to apply to the nursing program are available from the nursing department.

Enrollment is limited and competitive. Selection is determined by a Nursing Admissions Committee which evaluates work experience, references, awards, pre-requisites and support course completion, GPA and entrance exam results. Candidates will be notified by mail of admission status. Application for Admission are not carried forward. A complete application must be submitted each year by the deadline specified. Applications are available from the Nursing Department as follows: Practical Nursing-January 1st and Associate Degree Nursing - January 15th.

Prior to beginning clinical course work, students must provide documentation of certification in cardiopulmonary resuscitation for health care providers, evidence of receiving the Hepatitis B vaccine series (second dose), evidence of immunity to chicken pox, measles, mumps and rubella, and documentation of a tuberculin sensitivity test within the last 12 months.

The number of support courses completed is taken into consideration during the admission process, therefore students are strongly encouraged to complete some or all of the support course requirements before seeking admission into the nursing program. A minimum grade of " C " is necessary in each prerequisite, support and nursing course. Courses must be completed in sequence when enrolled in the nursing program.

Computer Literacy is very important to the successful completion of nursing. Completion of or successful challenge of computer literacy as outlined in the College of Eastern Utah catalog is strongly recommended prior to entering the LPN program.

If English is not your native language, entry into the nursing program will be contingent on providing a current minimum TOEFL score of 557 written, 220 computer based, or 83 Internet based. Scores can be no older than 2 years.

## PRACTICAL NURSING PROGRAM

The practical nursing program offers a three semester curriculum that begins with the second summer session. Completion of this program qualifies the student to take the NCLEX Examination for Practical Nurse Licensure. Applications are available January 1st from the Nursing Department.

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## REQUIREMENTS FOR ADMISSION

1. Fulfill requirements for admission to College of Eastern Utah.
2. Submit a completed nursing admission application to the nursing department by February 28th.
3. Submit verification of high school graduation or GED requirements.
4. Prerequisites: High School Chemistry or equivalent. High School Biology or equivalent, ENGL 1010, Ability to register for MATH 1030.
5. Successfully complete the nursing entrance examination.
6. Have personal characteristics conducive to working and relating with others.
7. Be able to provide for transportation to clinical sites.
8. Have mental and physical health, which would permit the applicant to safely and competently practice nursing.
9. All accepted students are required to submit results of a criminal background check prior to entering clinical classes.

## First-Year Nursing Course of Study

| 1st Summer Session |  |  |  |  | 2nd Summer Session |  |  |
| :--- | :---: | :---: | :--- | :---: | :---: | :---: | :---: |
| Course |  | Cr. | Course | Cr. |  |  |  |
| ENGL | 1010 | 3 | NURS | 1010 | 2 |  |  |
| PSY | 1010 | 3 | BIOL | 2320 | 3 |  |  |
| PSY | 1100 | 3 | BIOL | 2325 | 1 |  |  |
| TOTAL |  | 9 | TOTAL | 6 |  |  |  |
| Course |  | Cr. | Course | Cr. |  |  |  |


| Fall Semester |  | Spring Semester |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
| NURS | 1020 | 5 | NURS | 1120 | 1 |
| NURS | 1030 | 4 | NURS | 1130 | 1 |
| NURS | 1110 | 2 | NURS | 1220 | 3 |
| BIOL | 2420 | 3 | NURS | 1230 | 4 |
| BIOL | 2425 | 1 | BIOL | 2060 | 3 |
| TOTAL |  | $\mathbf{1 5}$ | BIOL | 2065 | 1 |
|  |  |  | NURS | $1240^{*}$ | 1 |
|  |  |  | TOTAL |  | $\mathbf{1 4}$ |

Program Total 44

* Practical Nursing exit course


## ASSOCIATE OF APPLIED SCIENCE IN NURSING FOR RN LICENSURE

The Associate of Applied Science Degree Nursing curriculum builds upon practical nursing education adding an additional two and one half semesters of study. The program begins in the second summer semester. This program is designed to prepare graduates for positions as beginning Registered Nurses. Graduates from this program will receive an Associate of Applied Science Degree in Nursing and will qualify to take the NCLEX for Registered Nurse Licensure. Students may choose to complete five additional General Education courses and receive an Associate of Science degree. Applications are available from the Nursing Department January 15th.

## REQUIREMENTS FOR ADMISSION

1. Fulfill requirements for admission to College of Eastern Utah.
2. Submit a completed nursing admission application to the nursing department by March 15th.
3. Have a current practical nursing license in good standing in the State of Utah, or be currently enrolled in a practical nursing program. Once admitted, ADN students must pass the PNNCLEX prior to entrance into clinical facilities.
4. Have graduated from the College of Eastern Utah Practical Nursing program within five years prior to application or obtain successful performance on the proficiency examinations in nursing.
5. Have minimum grade of " $C$ " in each prerequisite course. Prerequisite courses are: ENGL 1010, PSY 1100, PSY 1010, BIOL 2320, BIOL 2325, BIOL 2420 (within 5 years), BIOL 2425 (within 5 years), BIOL 2060, BIOL 2065.
6. Have personal characteristics conducive to working and relating effectively with others.
7. Be able to provide for transportation to clinical sites.
8. Have mental and physical health, which would permit the applicant to safely and competently practice nursing.
9. All accepted students will be required to submit results of a criminal background check.
10. Students must verify completion or successful challenge of Computer Literacy as outlined in the College of Eastern Utah catalog by program end.

| Second-Year Nursing Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2nd Summer Session |  |  |  |  |  |
| Course |  | c. | Course |  | cr. |
| MATH | 1030 | 3 | NURS | 2010 | 2 |
| total |  | 5 |  |  |  |
| Spring Semester |  |  | Fall Semester |  |  |
| course |  | cr. | Course |  | cr. |
| NURS | 2220 | 5 | CHEM | 1110 | 3 |
| NURS | 2230 | 5 | CHEM | 1115 | 1 |
| total |  | 10 | NURS | 2020 | 4 |
|  |  |  | NURS | 2030 | 4 |
|  |  |  | NURS | 2120 | 1 |
|  |  |  | GE Electiv | e Hour | 1 |
|  |  |  | total |  | 14 |
|  |  | ram | tal 29 |  |  |

## SAN JUAN CAMPUS NURSING PROGRAM

The Practical Nursing Program (LPN) and Associate Degree Nursing Program (ADN) are both offered in each academic year in conjunction with the Price Campus nursing department. Students must apply through the Price campus. Admission into the nursing program is a separate process from admission to the college. Prospective students should work closely with San Juan Center nursing faculty for assistance with advisement. Necessary application forms are available from the Price campus Nursing Department January 1st for Practical Nursing and January 15th for the Associate Degree Nursing.

## NURSING COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1000 Nursing Assistant

(4:3:4)
This course is offered to the student who is interested in preparing for work in a long term care facility as a nursing assistant. It meets federal and state requirements and allows the student to apply and test for certification as a Utah Certified Assistant. It is separate from the nursing program. Serves as an elective.

1005 Basic Life Support for Health Care Providers
(1:.5:.5)
This course prepares health care givers with the knowledge to implement life support measures in a variety of health care settings. Student may obtain Level C certification through the American Heart Association. Serves as an elective.

## 1008 Medical Terminology

(2:2:0)
This course provides the student with the building blocks of basic medical language. Such understanding will facilitate learning of scientific and medical principles encountered during more advanced career preparation. The relationship of word parts to their anatomical counterparts will be studied. Rules for combining word parts into complete medical terms will be stressed. Accurate pronunciation and spelling of word parts and complete terms will be emphasized throughout the course.

## 1010 Introduction to Nursing <br> <br> Human Relations

 <br> <br> Human Relations}(2:2:0)
This course presents an introduction into the practice of nursing. It includes orientation to the nursing program, personal care management and study habits, medical terminology, nursing history, ethical and legal responsibilities, cultural aspects, health care systems, and roles/issues of nursing. Therapeutic communication techniques and basic elements of nursing process will be introduced. Basic nursing care of the geriatric clients will be explored. Prerequisites: Acceptance into the Practical Nursing Program, PSY 1010, PSY 1100

1015 Introduction to Health Care I
(3:3:0)
This course presents an introduction into the health care professions. Includes orientation to the health care occupations, personal care management and study habits, medical terminology, history of health care, ethical and legal responsibilities, cultural aspects, health care systems, and roles and issues of health care. Therapeutic communication techniques and basic elements of nursing process will be introduced. Special concerns related to caring for pediatric and geriatric clients will be explored.

1016 Introduction to Health Care II
(3:3:1)
During the second semester specific health care occupations will be explored. Professionals from many fields will introduce the students to the educational and licensure requirements, job opportunities, and other issues related to specific professions. Students will spend approximately

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$2 / 3$ of the second semester in job shadowing experiences. Evaluations of the experiences by both the student and the professional will be included in the student's grade. Prerequisite: NURS 1015

## 1020 Fundamental Concepts of Nursing

(5:5:0)
This course introduces the nursing student to the theory and performance of nursing skills. Basic application of the nursing process utilizes a scientific problem solving approach through the use of human response patterns experienced by clients. Elements of psychosocial interactions will be explored. Theoretical knowledge addressed in the classroom and skills practiced in the laboratory are reinforced in the clinical setting and lay the foundation for the development of nursing skills. Corequisites: NURS 1030, 1110, BIOL 2420, 2425

## 1030 Fundamental Concepts of Nursing Clinical <br> Service Learning

(4:0:12)
This clinical lab experience allows the nursing student the opportunity to practice the concepts and principles learned in NURS 1020 classroom. Clinical experiences will be held in area long term care facilities, community, and in acute care hospital. This clinical lab experience is offered concurrently with NURS 1020. Successful completion of all lab, theoretical, and clinical components are required to receive credit for the course. Prerequisites: Acceptance into the Nursing Program, Certification for Basic Life Support for Health Professionals, BIOL 2320, 2325, PSY 1010, PSY 1100. Corequisites: BIOL 2420, 2425 and NURS 1020.

## 1110 Pharmacology

(2:2:0)
A study of theoretical principles that apply to the administration of medications. Emphasis is placed on competence in the administration of medications, assessment of therapeutic and adverse effects, and nursing interventions which will maximize the desired outcome of drug therapy. Prerequisites: NURS 1010, BIOL 2320, 2325, PSY 1010, PSY 1100. Corequisites: NURS 1020, NURS 1030, BIOL 2420, 2425

1120 Family Nursing I
(1:1:0)
The emphasis in this course is on the concepts, principles, and skills of nursing care for the new family during child birth. Emphasis will be placed on caring for the mother, father, and the newborn. Increased awareness of assessment and interventions for these clients are integrated through the use of the nursing process. Other issues related to the male reproductive system and diseases involving the reproductive system are included. Applications
of the theoretical concepts are achieved in the clinical areas of acute care and community settings. Corequisites: NURS 1130, 1220, 1230, 1240, BIOL 2060, 2065

## 1130 Family Nursing I Clinical

(1:0:3)

## Service Learning

This clinical lab experience allows the nursing students to actively participate in caring for the needs of the new family.
Prerequisites: NURS 1010, 1020, 1030, 1110, BIOL 2320, 2325, 2420, 2425 PSY 1010, 1100. Corequisites: NURS 1120, 1230, 1240, 1220, BIOL 2060, 2065.

## 1220 Nursing Process I

(3:3:0))
This course offers theoretical concepts for the care of clients with common health problems. Pathophysiology of all body systems is explored and appropriate nursing care is discussed as it relates to the behaviors assessed through human response patterns. A greater understanding of the nursing process is used as the framework to direct the care of clients across the lifespan. This builds upon previously knowledge and integrates concepts from support courses. Corequisites: NURS 1120, 1130, 12330, 1240, BIOL 2060, 2065

1230 Nursing Process I Clinical
(4:0:12)

## Service Learning

This clinical lab experience allows the nursing student the opportunity to actively participate with clients in multiple health care settings. Emphasis is placed on application of the theoretical concepts presented in the classroom of NURS 1220, Nursing Process I. Prerequisites: NURS 1010, 1020, 1030, 1110, BIOL 2320, 2325, 2420, 2425, PSY 1010, 1100. Corequisites: NURS 1120, 1220, BIOL 2060, 2065.

1240 Practical Nursing Practice
(1:1:0)
This course is designed to prepare the student for the role of the practical nurse. It includes information on preparing and studying for the NCLEX PN exam, licensing requirements, applying for a job, issues and trends in practical nursing, professional organizations, and opportunities in nursing. Designed for students who will exit the nursing program after completion of one year. Prerequisites: NURS 1010, 1020, 1030, 1110, BIOL 2320, 2325, 2420, 2425, PSY 1010, 1100. Corequisites: NURS 1120, 1220, BIOL 2060, 2065.

2010 Transition to AD Nursing
(2:2:0)
A course designed to introduce the student to the philosophy and policies at CEU and to assist the student with the transition to the role of the Associate Degree nurse. Course content consists of self-study modules, theory, and lab activities to ensure that the
student demonstrates competency in the following areas: nursing process skills, communication skills, pharmacodynamics, pharmacological math, selected nursing skills, and concepts basic to care through all developmental stages. A review of assessment skills will be conducted followed with instruction on more advanced techniques by the ADN student. Theory and nursing care of intravenous therapy will be taught. Prerequisite: Acceptance into the Associate Degree nursing program, current Certification in Basic Life Support for Health Professionals. Corequisite: MATH 1030.

## 2020 Nursing Process II

(4:4:0)
This course is designed to develop a more in depth knowledge base necessary as a provider of care at the associate degree level of nursing. Content focuses on student development of critical thinking and problem solving skills in assessing human response patterns, establishing nursing diagnoses, and determining priorities for the implementation and evaluation of holostic nursing care, as well as functioning as a member of the discipline. Pathophysiological aspects of illness are included. Prerequisites: NURS 2010, MATH 1030. Corequisites: NURS 2030, 2120, and CHEM 1110, 1115.

## 2030 Nursing Process II Clinical

(4:0:12)

## Service Learning

This clinical lab experience allows the AD nursing student to integrate theoretical knowledge with clinical application. The student is expected to demonstrate increased knowledge, advanced nursing skills, and increase proficiency in the use of the nursing process. Clinical experiences will be done in acute care settings of the hospital and with local home health agencies. Prerequisites: NURS 2010, MATH 1030. Corequisites: NURS 2020, 2120, and CHEM 1110, 1115.

## 2120 Family Nursing II

(1:1:0)
This course is designed to address advanced theoretical nursing care needs of the new family during the child birthing process. It builds upon theoretical concepts and skills of previous coursework. Family needs are addressed through the use of critical thinking and problem solving which address the holostic needs of the mother, father, and the newborn. Prerequisites: NURS 2010, MATH 1030. Corequisites: NURS 2020, 2030, CHEM 1110, 1115.

## 2220 Manager of Care

(5:5:0)
This theoretical course is the culmination of all prior nursing and support courses. and builds upon theoretical concepts and skills of previous
course work toward the application of the nursing process to meet holistic needs of clients. Concepts and clinical skills include the associate degree nursing role of provider of care, communicator, teacher, and manager. Prerequisites: NURS 2010, 2020, 2030, 2120, MATH 1030, CHEM 1110, 1115. Corequisite: NURS 2230.

## 2230 Manager of Care Clinical

(5:0:15)

## Service Learning

This clinical lab experience is designed to integrate the theoretical concepts learned throughout the program, and to apply this knowledge during the direct care of clients. Critical thinking and problem solving skills are used during the nursing role performances of provider of care, manager of care, and member within the discipline. Clinical experiences will be done in various hospitals, long term care facilities, and community settings. Prerequisites: NURS 2010, 2020, 2120, CHEM 1110, 1115, MATH 1030. Corequisite: NURS 2220.

2977 Cooperative Education (1-3:0:1-3)
This course provides supervised on-the-job experience for students in most aspects of nursing, record keeping and laboratory procedures. The student establishes learning objectives, hours to be worked, and a credit agreement with the faculty/ coordinator at the beginning of the semester. The student then meets with the faculty/coordinator to review progress. Prerequisite: Instructor permission.

## 2988 Special Problems.

(1-3:0:1-3)
Individual or group work project relevant to nursing knowledge base arranged between a nursing faculty member and the student. The student establishes learning objectives and goals, and a credit agreement with the faculty/ coordinator at the beginning of the semester. The student then meets periodically with the faculty/ coordinator to review progress. Prerequisite: Instructor permission.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Nursing. Instructor permission required.

## PRE-BACCALAUREATE NURSING PROGRAM

Since the freshman and sophomore requirements for a baccalaureate degree in nursing differ from college to college, it is recommended that the student obtain a catalog from the college in which he or she plans to graduate with a baccalaureate

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degree in nursing, determine the lower division course requirements and then take the courses from CEU that will fulfill these requirements. The following is a suggested one or two year pre-nursing program at CEU or for the student who plans to transfer into a baccalaureate nursing program.

| Recommended Electives |  |  |  |
| :---: | :---: | :---: | :---: |
| General Education Requirements plus the following: |  |  |  |
| Course |  | Name | Cr. |
| CHEM | 1110 | Elementary Chemistry | 3 |
| CHEM | 1115 | Elementary Chemistry Lab | 1 |
| CHEM | 1120 | Elementary Bio-Organic Chemistry | 3 |
| CHEM | 2310 | Organic Chemistry | 4 |
| FAML | 1020 | Foundations of Nutrition | 2 |
| BIOL | 1610 | Biology I | 3 |
| BIOL | 2320 | Human Anatomy | 3 |
| BIOL | 2325 | Human Anatomy Lab | 1 |
| BIOL | 2420 | Human Physiology | 3 |
| BIOL | 2425 | Human Physiology Lab | 1 |
| BIOL | 2060 | General Microbiology | 3 |
| BIOL | 2065 | General Microbiology Lab | 1 |
| MATH | 1030 | Quantitative Reasoning | 3 |
| MATH | 2040 | Applied Statistics | 4 |
| PSY | 1010 | Introduction to Psychology | 3 |
| PSY | 1100 | Human Dev. Across the Lifespan | 3 |
| SOC | 1010 | Introduction to Sociology | 3 |

## PHYSICAL EDUCATION (PE)

Scott Madsen<br>Brent Martindale<br>Dave Paur<br>Brian Zollinger

A student may major in physical education with a specialization in elementary physical education, secondary physical education, sports, dance, or prephysical therapy.

## CAREER OPPORTUNITIES

Career opportunities are available in athletics (coaching, sports management, etc.), pedagogy, certified athletic training, strength training, and professional fields such as sports medicine, physical therapy, rehabilitation, bio-engineering, biomechanics and research. Students who wish to major or minor in physical education, health, or recreation fields, should consult with their advisor for assistance in planning their course of study.

RECOMMENDED COURSE
OF STUDY FOR PHYSICAL EDUCATION, SPORTS MEDICINE*, PHYSICAL PEDAGOGY, COACHING OR ATHLETIC TRAINING

*Students enrolled in Sports Medicine must also complete:

- Math through Trigonometry
- Organic Chemistry (one year)
- Inorganic Chemistry (one year)
- University Physics

If the student is interested in any type of BioEngineering, a full year of calculus is also required before you advance to the upper division level.

## PHYSICAL EDUCATION COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1010 Aerobics I
(1:0:1)
Fall, Spring
May be repeated for credit
This is a course based on the intermediate fitness level. It uses low impact and step aerobics. There is also strengthening and stretching exercises using the latest techniques. The class is designed to meet the needs of dancers and athletes and is good for cross training. Open to anyone that has been involved in personal fitness. It is performance based but involves measuring and being aware of heart rate and the appropriate difference between resting heart rate and maximum heart rate for the age of the individual. A text is used and written examinations are given.

## 1043 Jogging Cross Country

(1:0:5)

## 1055 Pilates

(.5:1:1)

Pilates is the perfect method of body conditioning for strength and flexibility. No equipment is required. This method of body conditioning is the most practical application of exercise that blends East and West. The instructor will use a combination of live instruction and the Winsor Pilates method on DVD.

1057, 1058 Yoga I/Yoga II
(1:1:1)
Fall, Spring
These elective courses will provide an opportunity for students to learn and practice basic and intermediate Hatha Yoga skills. May be elective credit depending on major. These courses will focus on warmups, posture, and floor exercise. Skills learned in this course will assist in the development of strength, muscle tone and weight regulation. This course will also increase endurance, flexibility, and peace of mind, while providing for a means of eliminating stress. Class includes lectured lab.

## 1063 Conditioning I

(1:0:3)
A course designed for anyone interested in physical fitness and conditioning. This class emphasizes improving aerobic conditioning, strength and flexibility through walking, jogging, stretching, and some weight training. Includes lectures, workouts and audio-visual aids.

## 1085 Weight Training I

(.5:0:2)

A course designed for anyone interested in a physical fitness activity including a total body workout to improve strength and muscle tone. Course includes bi-weekly workout with individualized or personalized programs at BDAC fitness labs. Fees required for personalized
program. Emphasis on free weights and machines. May be repeated for credit.

## 1086 Weight Training II

(.5:0:2)

These advanced courses are designed for anyone interested in physical fitness activity as a total body workout to improve strength and muscle tone. Course includes bi-weekly workouts with individualized or personalized programs at BDAC fitness labs. Fee required for personalized program. Emphasis on free weights and machines. Prerequisite: PE 1085 or approval of instructor. May be repeated for credit.

## 1097 Fitness for Life

(2:2:0)
This class is designed to help students learn and apply overall wellness principles, including physical, psychological, and social areas, to help improve and maintain what would be considered a healthy life style. Successful completers should learn to assess, prescribe, and implement exercise, nutrition, weight control, and stress management programs through class discussions, individual fitness evaluations, and class assignments. There is not a prerequisite, although it would benefit students entering the fitness or sports professions.

## 1100 Tennis I

(.5:0:2)

Fall, Spring, Summer
This course is designed for anyone interested in learning the basic concepts and skills of the game of tennis, including scoring, forehand, backhand, volley, service, and overhead. Teaches basic tennis rules and techniques for singles and doubles. Includes labs, lecture, audiovisual, practice and interclass participation. Taught on block only.

## 1101 Tennis II

(.5:0:2)

Fall, Spring, Summer
This course is designed for anyone interested in learning advanced techniques of tennis, including net game, various serves, top-spin and slice shots and competitive strategies for singles and doubles. Includes labs, lecture, audio-visual, practice and inter-class participation. Taught on block only. Prerequisite: PHED 1100 or instructor approval. May be repeated for credit.

## 1110 Racquetball I

(.5:0:2)

A course designed for anyone interested in learning fundamental skills of the game of racquetball with an emphasis on the rules and strategies necessary to play and enjoy the game. Class includes demonstrations, labs, audio-visual, practice and interclass participation and competition. May be repeated for credit.

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## 1111 Racquetball II

(.5:0:2)

A course designed for anyone with advanced racquetball skills with an emphasis on improvement of all basic shots and strategies used in playing singles, doubles, and cutthroat matches. Class includes demonstrations, labs, videos, practice and interclass participation and competition. Successful completers should develop skills to enjoy the game or to compete in tournament competition. May be repeated for credit.

## 1120 Power Tumbling

Fall, Spring
May be repeated for credit
This course is designed for the beginning and intermediate gymnast who is interested in developing his or her tumbling skill only. Each student is required to produce health insurance information and sign an indemnity agreement holding CEU harmless. The class involves proper conditioning exercises and tumbling progressions from the simple forward roll to a back tuck and punch front and branies. They learn correct spotting techniques as well as safety requirements and regulations. Students are graded on attendance and their own improvement.

## 1130 Golf I

(1:1:0)
A course designed for anyone interested in learning the fundamental skills of the game of golf with an emphasis on the rules and strategies necessary to play and enjoy the game.

1135, 1136 Archery I/Archery II (1:1:1 each) These elective courses are to introduce the student to the fundamentals of archery. These courses will also teach the history and development of bow shooting. These courses include lecture, lab and range shooting. Some student equipment may be required.

## 1145 Bowling I

(1:1:1)
This elective course is designed to introduce the student to the sport of bowling. Each student will develop bowling skills and be introduced to the game rules. Some student equipment may be required. Class includes lecture, lab and hands on experience.

## 1146 Bowling II

(1:1:1)
This elective course is designed to develop bowling skills and teach the rules of bowling. Each student will participate in developing the skills and knowledge to play and enjoy this life time sport. Some student equipment is required. Course includes lecture, lab and hands on experience.

## 1170, 1171 Gymnastics I/Gymnastics II

(1:1:1 each)
These elective courses will provide an opportunity for students to learn basic and intermediate gymnastic skills. May be elective credit depending on major. Coaching on all four events: vaults, bars, beam and floor exercise. Class includes lectured labs

1200 Basketball I
(.5:0:2)

Spring (first block)
A course designed for anyone interested in learning the game of basketball. Class includes introducing the basic skills and rules of basketball through instruction, demonstrations, practice and interclass participation. (Co-Ed)

## 1201 Basketball II

(.5:0:2)

Spring (second block)
Designed for those students who have a desire to play men's basketball. The emphasis will be on team play with students learning all the basic skills associated with the game of basketball. Includes working out and practicing with the men's basketball team the last 7 weeks of Spring Semester.

## 1210 Volleyball I

(1:1:0)
This course is to help any men and women students who want to learn the beginning skills and rules of volleyball through in-class repetition of drills. Areas of emphasis include basic ball control, offensive and defensive strategies.

## 1211 Volleyball II

(1:0:3)
A more competitive course for men and women desiring to increase skills and intensity of volleyball. Requirements are PHED 1210 or comparable volleyball experience and permission from instructor. Through in-class repetition of drills and competition, successful completers should become skilled and more experienced at the higher levels of competitive volleyball. (Co-Ed).

## 1300, 1301 Swimming I/Swimming II

(1:1:1 each)
These elective courses are designed for recreational, fitness or competitive swimmers. May be elective credit depending on major. Instructions for improvement of individual swimming strokes, skills, fitness, endurance and techniques. Students must have a CEU student activity card or a Desert Wave Pool lap pass. Class includes lectured labs.

1340 Life Guard

1345 Water Safety Instructor
(1:1:1) Prerequisites: Must be able to tread water for two minutes, to swim the Side Stroke, Breast Stroke and Back Crawl Stroke, 500 yards each. A qualifications test will be given before the first day of class.

1400 Basic Self Defense
(1:1:2)
This courses is a study of the basic principles of self defense as applied to karate. Included in the course are the study of self motivation and personal worth. Also included are basic karate methods, presentation, and objectives. Class includes lecture, lab and some controlled contact.

## 1610 Alpine Skiing

(1:0:32)

## 1625, 1630 Cross Country Skiing I/Cross Country Skiing II

(1:1:1)
Fall, Spring
These courses are designed for students interested in developing a healthy life style and an appreciation of the outdoors during the winter season. May be an elective for all majors. The course provides for skill building in areas such as basic techniques, clothing, safety, equipment, awareness and group management. The student will gain general understanding of the mountain and desert winter environment. The student will also develop leadership skills. Class includes field work, labs, video tapes, and handouts. Completers will have knowledge of basic cross country touring and of career opportunities in the recreation field. Prerequisites: Courses must be taken in sequence.

## 1800 Sports Officiating, Fall Sports <br> (1:1:2)

 FallThis course is designed for anyone wishing to officiate in Fall intramural programs. This course teaches rules, techniques, problems and procedures of volleyball, basketball, and flag football. Lecture, media, guest lecturers and practical game situations will be the teaching methods used for the class.

## 1810 Sports Officiating, Spring Sports <br> (1:1:2)

 SpringThis course is designed for anyone wishing to officiate in Spring intramural sports. This course teaches rules, techniques, problems and procedures that may be encountered in the Spring sports of basketball, softball and soccer. The use of lecture, media, guest lecturers and practical game situations are the teaching styles used.

1900 Mental Strategies
(2:1:2)
A survey of the mental strategies and techniques used by pro athletes, star entertainers, and top executives to attain and maintainhigh performance levels in their fields and how those strategies and techniques can be applied in sports, business, etc.

2020 Introduction to Physical Therapy (2:2:0) This course is designed to provide students considering a career in physical therapy with a general introduction to the field of physical therapy and affiliated health care professions. This introduction is intended to be broad in order to provide students with a little bit of knowledge, hands on experience, and observation of a number of physical therapy and affiliated health care practice settings. Through this brief exposure, students will be able to make a decision whether or not to pursue physical therapy or associated health care professions as a career more seriously.

## 2300 Introduction to Fundamentals of Coaching

(2:2:0)
This course is designed for youth as well as secondary coaches. Class overviews, methods, teaching techniques, coaching philosophies and practical experiences in both team and individual sports. Includes lecture demonstration, media presentations, game scouting, field project and class journals. Course stresses motivation, selection, discipline, management and the technical aspects of coaching.

## 2380 Facility Management

(2:1:3)
This course teaches the student how to properly maintain an athletic field. The student will learn to care for the playing surface and also the grounds around the playing surface. This is a "handson" course. The students will meet for a short description on what is to be accomplished each day, and the reminder of class time will be spent working on actual projects.

## 2500 Introduction and History of Physical Ed

(2:3:0)
An introductory course in the related fields of physical education, fitness, sports, and sports medicine designed for students pursuing degrees related to those areas. Successful completersshould develop a knowledge of the career opportunities available, history and development, techniques, and its importance in society. Includes class lectures, assignments and group discussions.

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2550 PE for Young Children
A course for early childhood and elementary students which combines the philosophy of physical education with the practical planning and implementing of physical education experiences for children in the primary and elementary settings. Dual listed as FAML 2030.

## 2650 Kinesiology

(3:3:0)
The study of the anatomical, physiological, and mechanical principles applied to human movement.

2710 Introduction to Athletic Training (3:3:1) An introductory course in the field of athletic training for students interested in physical therapy, coaching, or training and physical education fields. Course includes lectue. demonstrations, and laboratory experience in basic first aid and CPR principles, injury prevention, evaluation and treatment of injuries with emphasis on protective taping. Prerequiste: First Aid training is recommended.

2977 Cooperative Education (1-3:0:1-3)
This course provides supervised on-the-job training in physical education. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by the instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Physical Education.

## VARSITY SPORTS

## 1805 Varsity Soccer

Spring
Course designed for men and women Club Soccer Team members. Includes participation in practice and competitive team play. Emphasis will be on strategy of both offense and defense along with coordination, balance, agility, speed, endurance, team effort and team play. May be repeated once. (Co-Ed) Prerequisites: Instructor permission.

1815 Cheerleading (Freshman)
(1:0:10)
Fall
1820 Cheerleading (Freshman)
(1:0:10) Spring
These courses are designed for those students who audition and make the cheer squad. Emphasizes the physical, psychological, safety and nutritional guidelines established by AACCA (American Association of Cheerleading Coaches and Advisors). The squad is divided into song leaders, yell leaders and cheer leaders who act as a liaison between the team and crowd. Involves tumbling, partner stunts, pyramids and dances.

1830 Eagle Dancers/ (Freshman)
(1:0:10)
Fall
1840 Eagle Dancers (Freshman)
Spring
These courses are designed for students who audition and are selected as members of the Dance Team. Emphasizes learning and rehearsing a variety of dance styles for performance at athletic events. Includes physical fitness, weight management, nutrition, choreography, sportsmanship, and intermediate to advanced level dance technique. Team members are required to take a weight management course each semester and Basic Ballet I or higher.

## 1850 Varsity Weight Training (Freshman)

(1:0:2)
Students who participate in varsity sports as a freshman must be concurrently enrolled in PHED 1850.

1860 Varsity Tennis (Freshman)
Fall
1870 Varsity Tennis (Freshman) Spring
These courses are designed for advanced players desiring to participate on a competitive basis. Includes extensive practice and competition.

## 1880 Varsity Baseball (Freshman)

(1:0:10)
Fall
1890 Varsity Baseball (Freshman)
(1:0:10)
Spring
These courses are open to all students. The emphasis will be on team play with students learning all the basic skills associated with the game of baseball. Includes demonstrations and application in pitching, hitting, base running and defensive skills.

## 1910 Varsity Women's Volleyball (Freshman)

(1:0:10)
Fall
1920 Varsity Women's Volleyball (Freshman)
(1:0:10)
Spring
These courses are open to all students. The course includes daily practice, conditioning and competition with teams in Regions 18. Successful completers should be responsible for personal offseason conditioning, being on time and ready for every practice, game and condition session.

## 1930 Varsity Men's Basketball (Freshman)

(1:0:10)
Fall
1940 Varsity Men's Basketball (Freshman )
(1:0:10)
Spring
These courses are open to all students. The emphasis will be on teaching individual techniques and team play through practice drills, intrasquad scrimmages, and competition against other intercollegiate basketball teams with a high level of competence being expected.

## 1950 Varsity Women's Basketball (Freshman)

(1:0:10)
Fall
1960 Varsity Women's Basketball (Freshman)
(1:0:10)
Spring
These courses are open to all students. Course includes offensive sets and various defensive strategies to be taught in 2-hour daily practices. Emphasis will be on team play with students competing against other women's intercollegiate basketball teams

## 1970 Varsity Golf (Freshman)

(1:0:10)
A course designed for students who qualify for the Club Golf Team. Team members must qualify and attend golf matches. Students will compete in Utah Junior College League. Successful completers should be able to enjoy the game of golf and be able to compete in league competition.

2810 Cheerleading (Sophomore)
(1:0:10)
Fall
2820 Cheerleading (Sophomore)
(1:0:10)
Spring
These courses are designed for those students who audition and make the cheer squad. Emphasizes the physical, psychological, safety and nutritional guidelines established by AACCA (American Association of Cheerleading Coaches and Advisors). The squad is divided into song
leaders, yell leaders and cheer leaders who act as a liaison between the team and crowd. Involves tumbling, partner stunts, pyramids and dances.

## 2830 Eagle Dancers (Sophomore)

(1:0:10)
Fall
2840 Eagle Dancers (Sophomore)
(1:0:10)

## Spring

These courses are designed for students who audition and are selected as members of the Dance Team. Emphasizes learning and rehearsing a variety of dance styles for performance at athletic events. Includes physical fitness, weight management, nutrition, choreography, sportsmanship, and intermediate to advanced level dance technique. Team members are required to take a weight management course each semester and Basic Ballet I or higher.

## 2850 Varsity Weight Training (Sophomore)

(1:0:2)
Students who participate in varsity sports as a sophomore must be concurrently enrolled in PHED 2850.

2860 Varsity Tennis (Sophomore)
(.5:0:2)

Fall
2870 Varsity Tennis (Sophomore)
(.5:0:2)

Spring
These course are designed for advanced players desiring to participate on a competitive basis. Includes extensive practice and competition. Prerequisite: Coach Approval

2880 Varsity Baseball (Sophomore)
(1:0:10)
Fall
2890 Varsity Baseball (Sophomore) (1:0:10) Spring
These courses are open to all students. The emphasis will be on team play with students learning all the basic skills associated with the game of baseball. Includes demonstrations and application in pitching, hitting, base running and defensive skills.

## 2910 Varsity Women's Volleyball (Sophomore) <br> Fall <br> 2920 Varsity Women's Volleyball (Sophomore)

(1:0:10)
(1:0:10)
Spring
These courses are open to all students. Includes daily practice, conditioning and competition with teams in Regions 18. Successful completers should be responsible for personal off-season conditioning, being on time and ready for every practice, game and condition session.

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## 2930 Varsity Men's Basketball <br> (Sophomore)

(1:0:10)
Fall
2940 Varsity Men's Basketball (Sophomore)
(1:0:10)
Spring
These courses are open to all students. The emphasis will be on teaching individual techniques and team play through practice drills, intrasquad scrimmages, and competition against other intercollegiate basketball teams with a high level of competence being expected.

## 2950 Varsity Women's Basketball (Sophomore)

Fall
2960 Varsity Women's Basketball (Sophomore)
(1:0:10)
Spring
These courses are open to all students. Course includes offensive sets and various defensive strategies to be taught in 2-hour daily practices. Emphasis will be on team play with students competing against other women's intercollegiate basketball teams.

2970 Varsity Golf (Sophomore)
(1:0:10)
A course designed for students who qualify for the Club Golf Team. Team members must qualify and attend golf matches. Students will compete in Utah Junior College League. Successful completers should be able to enjoy the game of golf and be able to compete in league competition.

## PHILOSOPHY (PHIL)

Jennifer Truschka

## PHILOSOPHY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1000 Introduction to Philosophy Humanities <br> Fall, Spring

PHIL 1000 is a general education class intended for all students. It emphasizes western philosophy focusing on the main branches of this field (metaphysics, epistemology, aesthetics, etc.), but also includes some discussion on eastern thought. The course is taught through lecture, and includes class discussion. One term paper is required.

## 2600 Introduction to Philosophy of Religions <br> Oral Communication Intensive

Humanities
This course explores the importance of spirituality for human life. The first half of this course looks at the role of myth, symbolism and ritual as found in ancient religion. The second half of this class looks at the transition from polytheism to monotheism and the effect it has had on human nature. Some time will be dedicated to the understanding of Native American, Eastern and alternative religions.

## 2977 Cooperative Education <br> (1-3:0:1-3)

This course provides supervised on-the-job training in philosophy. The student meets with the instructor/coordinator periodically during the course to determine learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

2988 Special Problems
(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Philosophy.

## PHYSICS (PHYS)

Dr. David Kardelis<br>Dr. Mark Noirot

The physics courses at CEU are organized into 3 levels. The first level Physics 1010, Elementary Physics and Physics 1050 Technical Physics emphasize the concepts of physics. While these courses use math, they are not math intensive. The second level is the Physics 2010 General Physics series. This two semester series is aimed at life science and pre-med students. Math is required, but not beyond trigonometry. The course covers material in more detail than the Physics 1010 course. The last level is the Physics 2210 Physics for Scientists and Engineers series. This two semester series is aimed at engineering majors and physical scientists. These courses are the most in depth and involve the most problem solving and higher mathematics.

| Recommended Course of Study |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1st Fall Semester |  |  | 1st Spring Semester |  |  |
| Course |  | Cr. | Course |  | Cr. |
| MATH | 1210 | 4 | MATH | 1220 | 4 |
| CHEM | 1210 | 4 | CHEM | 1220 | 4 |
| CHEM | 1215 | 1 | CHEM | 1225 | 1 |
| ENGN | 1000 | 2 | ENGL | 2010* | 3 |
| ENGN | 1005 | 1 | America | Institutions | 3 |
| ENGL | 1010* | 3 | Fine Arts |  | 3 |
| Life Science TOTAL |  | 3 | TOTAL |  | 18 |
|  |  | 18 |  |  |  |
| 2nd Fall Semester |  |  | 2nd Spring Semester |  |  |
| Course |  | cr. | Course |  | cr. |
| MATH | 2210 | 4* | MATH | 2280 | 3 |
| MATH | 2270 | 3 * | PHYS | 2220 | 4 |
| PHYS | 2210 | $4^{*}$ | PHYS | 2225 | 1 |
| PHYS | 2215 | 1* | Hum or |  | 3 |
| Earth Sci | nce | 3 | Social Sc | ence | 3 |
| Humanit |  | 3 | Comput | Literacy | 0 |
| Oral Commu | ication | 0 | Approve | Electives** | 3 |
| TOTAL |  |  | total |  | 17 |
| Program Total 71 |  |  |  |  |  |

Students are encouraged to take English during their first year. If a student enters college with their English requirement complete, the student may choose other electives or general education to fill their schedule.

Students that do not enter college with enough mathematics to enter Calculus I in the fall of their first year, should take the appropriate math classes their first year so that they may start the Calculus and Physics sequences in the fall of their second year. Students should consult their Physics Advisors to determine the correct courses needed.

* Means a course has a pre-requisite and/or co-requsite.
${ }^{* *}$ Electives can be chosen from Math, Chemistry, Geology, Computer Science, Electronics Biology or others.


## PHYSICS COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1010 Elementary Physics
(3:3:0)
Physical Science
Fall, Spring
This course will introduce the students to the basic principles of classical physics, such as the scientific method, conservation laws, properties of matter and how these ideas have shaped the world in which we live. The course is aimed at non-science majors to expose them to the physics all around them. With the lab course PHYS 1015, the course can be taken as a Physical Science General Education course for those students that need a lab science course. Additionally this course is recommended for students planning on taking PHYS 2010 or 2210. The course will be taught using lecture, video, in class experiments and class discussion. Prerequisite: MATH 1010 competency.

## 1015 Elementary Physics Lab

(1:0:3)
PHYS 1010 must be taken concurrently with PHYS 1015, but PHYS 1015 is optional.

## 1040 Elementary Astronomy Earth Science or Physical Science <br> Fall (evening)

This course will introduce students to the nature and formation of the solar system, the sun and the planets, moon, asteriods, and comets in terms of modern theories and observations. Students will also learn about the characteristics of other astronomical bodies such as binary stars, variable stars, normal stars and clusters in stellar material. Formation and classifications of stars will be studied as well as the formation of our galaxy and other galaxies. Current theories of the history and future of the universe will be discussed. Basics of universal motion, the nature of light and energy, and theory of relativity are also part of the course. Students will be taught using lectures, videos, online tutorials and by direct observation.

## 1050 Technical Physics

(3:3:0)
The study of laws of Physics as might be encountered in trade and technical fields. Subjects studied will include basic technical mathematics, measurements, forces, vectors, equilibrium, friction, torque, rotational equilibrium, uniformly accelerated motion, acceleration, energy, momentum, rotational motion, simple machines, properties of solids and properties of fluids. The class is designed for the students in technical areas such as welding, mining, automotive, electronics, machine technology, etc.

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## 2010 <br> General Physics I

Fall
This course is an algebra based physics course on the study of motion and heat including 1-D and 2-D kinematics, Newton's three laws of motion, rotations, laws of gravitation, periodic motion, and mechanical waves including sound. Heat topics will include calorimetry, the three laws of Thermodynamics, the meaning of temperature, and heat as a process or transfer of energy. The class will be taught using lectures, demonstration, videos, and group problem solving. Students will be required to explain their homework solutions on the board to the entire class. Can be used by science majors to complete the Physical Science General Education requirement. It is intended for students seeking to enter dental, pharmacy, veterinarian programs and life science areas. Prerequisite: MATH 1060. Corequisite: Must be taken concurrently with PHYS 2015.

## 2015 General Physics Lab I

(1:0:3)
Fall
PHYS 2015 is a lab to accompany PHYS 2010. The labs are meant to supplement the material covered in PHYS 2010 and help students visualize and experience the material being covered in lecture. PHYS 2015 will be taught using a combination of traditional labs and computer based discovery labs. Corequisite: Must be taken concurrently with PHYS 2010.

## 2020 General Physics II

(4:5:0)
Spring
PHYS 2020 is an algebra based physics course on the study of electricity, magnetism and light. The material covered will include forces between point charges, the ideas of electric potentials, the relationship between potential, charge and energy. Other E-M material covered will include basic AC and DC circuits, forces on currents in magnetic fields, and the relationship between electricity and light. Light topics covered will include geometric optics, lenses and mirrors and the wave nature of light, diffraction and interference. The class will be taught using lectures, demonstrations, videos, and group problem solving. Students will be required to explain their homework solutions on the board to the entire class. Can be used by science majors to complete the Physical Science General Education requirement. Prerequisites: PHYS 2010, 2015. Corequisite: Must be taken concurrently with PHYS 2025.

## 2025 General Physics Lab II <br> Spring

PHYS 2025 is a lab to accompany PHYS 2020. The labs are meant to supplement the materials covered in PHYS 2020 and help students visualize and
experience the material being covered in lecture. PHYS 2025 will be taught using a combination of traditional labs and computer based discovery labs. Corequisite: Take concurrently with PHYS 2020.

## 2210 Physics for Scientists and Engineers I

Fall
This course is a calculus based physics course on the study of motion and heat including 1-D and 2-D kinematics, Newton's three laws of motion, rotations, laws of gravitation, periodic motion, and mechanical waves including sound. The class will be taught using lectures, demonstrations, videos, and group problem solving. Students will be required to explain their homework solutions on the board to the entire class. Can be used by science majors to complete the Physical Science General Education requirement. It is intended for students entering engineering fields or the physical science areas. Prerequisites: MATH 1060, MATH 1210 or concurrent enrollment in MATH 1210 is required. Corequisite: Must be taken concurrently with PHYS 2215.

## 2215 Physics for Scientists and Engineers Lab I

(1:0:3)
Fall
PHYS 2215 is a lab to accompany PHYS 2210. The labs are meant to supplement the material covered in PHYS 2210 and help students visualize and experience the material being covered in lecture. PHYS 2215 will be taught using a combination of traditional labs and computer based discovery labs. Typically a design project using the material covered in mechanics will be required. Corequisite: Must be taken concurrently with PHYS 2210.

## 2220 Physics for Scientists and Engineers II

(4:5:0)
Spring
This course is a calculus based physics course on the study of electricity, magnetism and light. The material covered will include forces between point charges, the ideas of electric potentials, the relationship between potential, charge and energy. Also covered will be Gauss' Law, Faraday's Law, and Lenz's law. These ideas will then be used in AC and DC circuits discussed. Light topics covered will include geometric optics including lenses and mirrors and the wave nature of light including diffraction and interference and polarization. The class will be taught using lectures, demonstrations, videos, and group problem solving. Students will be required to explain their homework solutions on the board to the entire class. Can be used by science majors to complete the Physical Science General Education requirement. It is intended for students seeking to enter dental, pharmacy, veterinarian
programs and the life science areas. Prerequisites: PHYS 2210 and 2215, MATH 1220 or concurrent enrollment in MATH 1220 is required. Corequisite: Must be taken concurrently with PHYS 2225.

## 2225 Physics for Scientists and Engineers Lab II <br> (1:0:3)

Spring
PHYS 2225 is a lab to accompany PHYS 2220. The labs are meant to supplement the material covered in PHYS 2220 and help students visualize and experience the material being covered in lecture. PHYS 2225 will be taught using a combination of traditional labs and computer based discovery labs. Typically a design project using the material covered in mechanics will be required. Corequisite: Must be taken concurrently with PHYS 2220.

## 2977 Cooperative Education

(1-3:0:1-3)
Thiscourseprovidessupervisedon-the-jobtraining in physics. The student meets with the instructor/ coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by the instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to meet the changing needs of the student in Physics.

## POLITICAL SCIENCE (POLS)

Jennifer Truschka

Political Science is a useful major for students interested in a broad liberal arts education, or for those whose career interests include government service, postgraduate study in law or business administration, or future research and teaching within the discipline of political science. Because there are several alternative emphases within political science, majors and minors should work closely with their faculty advisor in planning their program

Recommended Course of Study

| $\begin{array}{l}\text { 1st Fall Semester } \\ \text { Course }\end{array}$ |  |  |  | cr | 1st Spring Semester |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| course |  |  |  |  |  |  |  |$]$ cr


| 2nd Fall Semester |  |  | 2nd Spring Semester |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course |  | Cr | Course |  | Cr |
| BCIS | 1010 | 3 | CHEM | 1010 | 3 |
| POLS | 1110 | 3 | SLSC | 2500 | 3 |
| BIOL | 1010 | 3 | POLS | 2100 | 3 |
| MATH | 1030 | 3 | PSY | 1010 | 3 |
| POLS | 2200 | 3 | ECON | 1740 | 3 |
| ECON | 1010 | 3 | TOTAL |  | 15 |
| TOTAL |  | 18 |  |  |  |

Program Total 63

## POLITICAL SCIENCE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1010 Introduction to Political Science (3:3:0) Social Science
Fall, Spring
The course will present an overview of the five major subdivisions of political science: American institutions, theory, public policy, comparative politics, and international relations. To successfully complete the course, the student should demonstrate a basic understanding of the development of democratic theory, how American institutions function, how policy is created and implemented, how other nations function, and the causes of conflict and cooperation in the international arena. Instructional methods will include lecture, slides, videos and class discussion. This course requires short-answer and multiple choice quizzes, a mid-term and a final examination. This course is also intended for political science and pre-law majors.

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## 1100 American National Government American Institutions

Fall, Spring
The student will become familiar with the form and functions of the three branches of government: the Executive, Judicial and Legislative. Additionally, the student should gain an overall understanding of the conditions relevant to the framing of the Constitution and the Bill of Rights with an emphasis on the federal concept of government. Depending on the instructor, instructional methods will include all or most of the following: lecture, class discussion, computer exercises, slides and videos. This class will require essay and / or multipe choice tests, short papers on supplementary readings or computer assignments. It also is required for all political science majors.

## 1110 State and Local Government

(3:3:0)
(Bi-annually)
An introduction to the three major areas of government relating specifically to state and local politics; federal government, state and local institutions and political behavior at the state and local level. Specific attention is given to Utah political institutions and politics.

## 1200 Native American Government

(3:3:0)
Examines traditional and contemporary Native American government. Explores the variety of political forms among Native American groups, tribal governments today, and the impacts of interaction with the Federal government.

## 2100 Introduction to International Relations

(3:3:0)
Spring
This course is designed to acquaint students with a basic historical knowledge of 19th and 20th century diplomatics, a geopolitical basis from which to better understand global politics, and a basic knowledge of the theories and approaches to international relations currently employed at the research level. However, the course is not intended to instruct students in the mechanics of empirical research, nor is it intended to be either a history or geography course. Rather, the goal is to relate specific international actions to the aforementioned theories and approaches, thus, allowing the student to better understand the complexity and interdependent nature of international relations. Prerequisite: POLS 1010 or 1100.

## 2110 Contemporary Indian Affairs (3:3:0)

This introductory course will explore current issues and trends in U.S. Indian affairs. Topics covered include: national, state and tribal legislation;
issues concerning sacred geography, economic development, activism, religious conflicts, education, urban Indian, Pan-Indian movements, and cultural preservation.

## 2200 Comparative Politics

Fall
The purpose of this course is to introduce the student to the method and substance of comparative politics with a focus on regional characteristics. The course consists of an overview and history of comparative politics including terms and definitions used in this discipline. Within the parameters of liberal democracy and socialism, the difficulties of eastern Europe's transformation from socialist economies are explored, as is the predicament in which the third world finds itself today. After completion of the course, students should find themselves better equipped to understand political, social and economic forces in other countries, and how the United States should react to those forces. Prerequisite: POLS 1010 or 1100.

## 2300 Political Theory

(3:3:0)
Social Science/ Oral Communication Intensive
This course is devided into two sections. In the first part of this course we will study the development of political thought from Plato through Nietzsche. In the second part of this class we will look at contemporary political ideologies including nationalism, liberal democratic theory and Marxism. We will also focus on the development of the two major American political ideologies: liberalism and conservatism. Upon completion of this course you should be able to: identify and discuss the major questions associated with political philosophy, briefly discuss the development of Western Political thought, discuss the major political ideologies of the 20th century and understand the development of liberalism and conservatism in the US.

2977 Cooperative Education
(1-3:0:1-3)
This course provides supervised on-the-job training in political science. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

2988 Special Problems
(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

2999 Workshop
(1-3:0:1-3)
A course designed to meet the changing needs of the student in Political Science.

## PRE-PROFESSIONAL PROGRAMS

The following pre-professional programs are offered at College of Eastern Utah. Students must work closely with their advisor to insure correct pre-professional registration, desirable elective credit options, and up-to-date pre-professional transfer and professional school admission requirements. Students are encouraged to consult the catalog of the college or university to which they intend to transfer upon completion of the Associate Degree.

## PRE-FORESTRY, FISHERIES, RANGE, AND WILDLIFE MANAGEMENT

College of Eastern Utah offers the freshman and sophomore years of study in forest, fisheries, range and wildlife management. The first two years furnish the student with the background information for their professional courses. Specialization in the major field of study begins the junior year at another institution. The fields of specialization in the College of Forest, Fisheries, Range, and Wildlife Management at other universities and at other institutions offering degrees in these areas include options in general forestry, timber management, forest recreation management, conservation of natural resources, and watershed management, wildlife management, and fishery management. The specific course requirements for these different options differs slightly and the student should confer with their advisor when they have decided which option they intend to pursue. Generally, students planning on majoring in these areas should plan on taking the following:

| Recommended Courses |  |  |  |  |  |
| :---: | :---: | :---: | :--- | :--- | :--- |
| Course | Cr. | Course | Cr. |  |  |
| BIOL | 1610 | 3 | CHEM | 1210 | 4 |
| BIOL | 1615 | 2 | CHEM | 1215 | 1 |
| BIOL | 1620 | 3 | CHEM | 1220 | 4 |
| BIOL | 1625 | 2 | CHEM | 1225 | 1 |
| BIOL | 2030 | 3 | MATH | 1210 | 4 |
| BIOL | 2035 | 1 | PHYS | 2010 | 4 |
| BIOL | 2220 | 3 | PHYS | 2015 | 1 |
| BIOL | 2225 | 1 |  |  |  |

## PRE-LAW

Students planning to go into law may follow a course of study primarily in the Humanities and Social Sciences. Students should read the requirements for the pre-law course of the college they plan to attend. Courses necessary for the first two years are offered at CEU. The following electives are recommended; political science, public speaking, and economics. Students should be sure to fill the general education requirements for an Associate of Science degree at College of Eastern Utah.

## PRE-DENTAL, PRE-MEDICAL

| Recommended Course of Study |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Course | Cr. | Course | Cr. |  |
| BIOL | 1610 | 3 | CHEM | 1210 |
| BIOL | 1615 | 2 | CHEM | 1215 |
| BIOL | 1620 | 3 | CHEM | 1220 |
| BIOL | 1625 | 2 | CHEM | 1225 |
| BIOL | 2030 | 3 | CHEM | 2310 |
| BIOL | 2035 | 1 | CHEM | 2315 |
| BIOL | $2060^{*}$ | 3 | CHEM | 2320 |
| BIOL | $2065^{*}$ | 1 | CHEM | 2325 |
| BIOL | $2320^{*}$ | 3 | ENGL | 1010 |
| BIOL | $2325^{*}$ | 1 | ENGL | 2010 |
| BIOL | $2420^{*}$ | 3 | MATH | 1210 |
| BIOL | $2425^{*}$ | 1 | PHYS | 2010 |
| Computer Literacy | 0 | PHYS | 2015 | 3 |
| Fine Arts | 3 | PHYS | 2020 | 4 |
| Humanities | 3 | PHYS | 2025 | 1 |
| Social Science | 3 | American Institutions | 3 |  |
| Humanities or Fine | 3 | Oral Comm Intensive | 0 |  |
| Arts |  |  |  |  |

* These courses are not required, however they are highly recommended.


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| Recommended Course of Study |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Course |  | Cr. | Course | Cr. |  |
| BIOL | 1610 | 3 | CHEM | 1210 | 4 |
| BIOL | 1615 | 2 | CHEM | 1215 | 1 |
| BIOL | 1620 | 3 | CHEM | 1220 | 4 |
| BIOL | 1625 | 2 | CHEM | 1225 | 1 |
| BIOL | 2320 | 3 | CHEM | 2310 | 4 |
| BIOL | 2325 | 1 | CHEM | 2315 | 1 |
| BIOL | 2420 | 3 | CHEM | 2320 | 4 |
| BIOL | 2425 | 1 | CHEM | 2325 | 1 |
| MATH | 1050 | 4 | ENGL | 1010 | 3 |
| MATH | 1060 | 3 | ENGL | 2010 | 3 |
| MATH | 1210 | 4 | PHYS | 2010 | 4 |
| MATH | 1220 | 4 | PHYS | 2015 | 1 |
| Computer Literacy | 0 | PHYS | 2020 | 4 |  |
| Fine Arts | 3 | PHYS | 2025 | 1 |  |
| Humanities | 3 | American Institutions | 3 |  |  |
| Humanities or Fine | 3 | Social Science | 3 |  |  |
| Arts |  |  |  |  |  |
| Oral Comm Intensive | 0 |  |  |  |  |

## PRE-PHYSICAL THERAPY

The pre-physical therapy program usually takes two years and should include the courses or their equivalent from the list below.

| Recommended Course of Study |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Course |  | Cr. | Course | Cr. |  |
| BIOL | 1610 | 3 | CHEM | 1110 | 3 |
| BIOL | 1615 | 2 | CHEM | 1115 | 1 |
| BIOL | 1620 | 3 | CHEM | 1120 | 3 |
| BIOL | 1625 | 2 | CHEM | 1125 | 1 |
| BIOL | 2030 | 3 | ENGL | 1010 | 3 |
| BIOL | 2035 | 1 | ENGL | 2010 | 3 |
| BIOL | 2320 | 3 | HEAL | 1020 | 2 |
| BIOL | 2325 | 1 | PHYS | 2010 | 4 |
| BIOL | 2420 | 3 | PHYS | 2015 | 1 |
| BIOL | 2425 | 1 | PHYS | 2020 | 4 |
| MATH | 1050 | 4 | PHYS | 2025 | 1 |
| MATH | 1060 | 3 | PSY | 1010 |  |
| MATH | 2040 | 4 | PSY | 2300 |  |
| Computer Literacy | 0 | American Institutions | 3 |  |  |
| Fine Arts | 3 | Humanities | 3 |  |  |
| Humanities or Fine | 3 | Oral Comm Intensive | 0 |  |  |
| Arts |  |  |  |  |  |

## PRE-VETERINARY

| Recommended Course of Study |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Course |  |  |  |  |  |
| BIOL | 1610 | 3 | Cr. | Course |  |
| BIOL | 1615 | 2 | CHEM | 1210 | 4 |
| BIOL | 1620 | 3 | CHEM | 1220 | 1 |
| BIOL | 1625 | 2 | CHEM | 1225 | 4 |
| BIOL | 2030 | 3 | CHEM | 2310 | 1 |
| BOL | 2035 | 1 | CHEM | 2315 | 1 |
| ENGL | 1010 | 3 | CHEM | 2320 | 4 |
| ENGL | 2010 | 3 | CHEM | 2325 | 1 |
| MATH | 1050 | 4 | PHYS | 2010 | 4 |
| MATH | 1210 | 4 | PHYS | 2015 | 1 |
| Computer Literacy | 0 | PHYS | 2020 | 4 |  |
| Fine Arts | 3 | PHYS | 2025 | 1 |  |
| Humanities | 3 | American Institutions | 3 |  |  |
| Social Science | 3 | Humanities or Fine | 3 |  |  |
| Oral Communication | 0 |  |  |  |  |

## PSYCHOLOGY (PSY)

## Dr. Heath Earl

The student planning to major in psychology at a four-year institution may obtain an Associate of Science or Arts degree at College of Eastern Utah. Students will want to take as many psychology courses as possible. Students should also acquire a background in behavioral science, literature, mathematics, biological science, social science, and physical science. The students should consult their advisor at College of Eastern Utah and the catalog of the college to which they plan to transfer for suggestions as to which courses they should take at CEU.

Students interested in psychology as a major field of study can expect to complete important foundational courses while attending the College of Eastern Utah. A range of courses are offered to help prepare the individual for further undergraduate study or entry-level work in several human services areas. Psychology as a discipline offers a deepening understanding of human behavior through empirical study and personal application. Students completing courses in psychology can also expect to be challenged to apply the principles of psychology to practical, real-life situations while developing a deeper sense of self-understanding.

## CAREER OPPORTUNITES

Career opportunities for students studying psychology at the College of Eastern Utah can be somewhat limited given that most professional activities in psychology require advanced graduate-level education. In light of this, a select number of opportunities are available to students choosing to complete an associate's degree in psychology at CEU. These include social positions providing administrative/clerical duties and some clinical and research settings where a supporting role is required in the investigation and treatment of psychological issues. Graduates of this program may also find career opportunities in community mental health centers, state and local social services departments, and private and public institutions of higher learning where supporting duties may be provided to clinical/ research professional staff.


## PSYCHOLOGY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

0710 Career Exploration
(1:1:0)
This course is designed to equip the student with skills and information used for job hunting, interview, writing resumes and job applications. It is also designed to aid the student in choosing a career through the use of videos, printed materials and personal contact with professionals and vocational experts. This course covers information on more than 150 careers.

## 1010 Introduction to Psychology

## Social Science

Fall, Spring, Summer
This course is a general education class intended for all students. It covers major areas of scientific psychology, including biological foundation, sensation, and perception, learning, motivation, human development, social psychology, and abnormal psychology. Writing assignments will be required. Prerequisite: ACT English score of at least 14 is strongly recommended.

## 1020 Psychology in Action: Careers and Work

(1-2:1-2:0)
A course designed to explore the philosophy, psychology, value, and meaning of work. Reading in the subject area will be assigned. Coverage of practical areas such as personal testing, career exploration, writing resumes and applying for jobs will provide useful experience for students.

## 1040 Applied Psychology

(2:2:0)
Applications of the principles of psychology in the clinic, school, business, and industry, and in other human affairs.

1060 Professional Issues in Psychology: Methods and Skills
(1:1:0)
An introduction to the major in psychology. Focus will be given to the following professional issues: choosing the major in psychology, research methods including the use of library and internet search tools, ethical issues, career issues in psychology, critical thinking skill-development, and introduction to the research and therapeutic factors that weave throughout the formal study of psychology at the university level. Emphasis will also be given to developing students' familiarity with APA writing style and the scientific literature in psychology. This course is recommended for students choosing psychology as a major and anticipating a career and/or advanced studies in the field. A seminar format will be used for the course. Prerequisite: PSY 1010 or instructor permission.

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POLS
PRE-PROF
PSY
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## 1100 Human Development Across the Life Span

(3:3:0)
Social Science
Fall, Spring, Summer
(Dual listed as FAML 1500)
This course is a general education class intended for all students. It is required for all pre-elementary education and nursing students. It will introduce students to stages of development from prenatal and infancy through childhood, adult and old age. Major developmental theories will be considered, as will the domains of development such as physical, cognitive, psycho social, and moral, and the behavioral aspects of each. Lecture, video, and slides will be used in teaching, and a term paper and several out-of-class assignments will be required.

## 1150 Career Planning and Decision Making

(2:2:0)
This course will focus on the student, providing them with learning experiences designed to improve their skills in personal decision making. Included in this experience will be opportunities to examine personal values, attitudes, abilities, aspirations, and experiences as they relate to decision making. The vehicle for this experience is a career choice exercise which will aid the student in making or affirming their own choice.

## 1200 Successful Life Management

(3:2:2)
This class is designed to help students succeed in college and in their subsequent professional lives by teaching them skills and information needed to take charge of their lives through assertiveness training which among other skills includes: stress management, problem solving, communication and decision making skills. It focuses on evaluating and changing oneself through various techniques and activities.

1210 Psychology of Human Development (3:3:0) A life span human development course including parental, infancy, childhood, adolescent, adult and old age stages. Major theories of development will be covered as they pertain to the physical, cognitive, and psychosocial aspects of human growth. (Same as FAML 1100).

## 1310 Human Relations in Business and Industry

(2:2:0)
Astudy of the basicpsychological principlesinvolved in human relationships, such as communications with others, and ethical and professional behavior. Students also will learn about how to work with other people from diverse backgrounds, cope successfully with workplace problems and how to exercise leadership and take responsibility in a satisfactory manner.

1500 Techniques of Effective Study Skills
(2:2:0)
This course is intended for all students who wish to learn to study more efficiently and effectively. The course will cover methods and skills of studying such as the SQ3R method, outline, note taking from books and lectures, and methods of dealing with examinations.

## 2200 Multicultural Psychology

Social Science
Multicultural Psychology is the study of behavior and mental processes and these that are influenced by their cultural context. Both similarities and differences, between and across cultures, are addressed. As a survey course. Multicultural Psychology will focus on major themes in modern psychology from a comprehensive perspective. However, students will have the opportunity to study a particular culture or subculture in depth.

## 2300 Introduction to Abnormal Behavior

(3:3:0)
A biosocial approach to the study of maladaptive behavior and personality. A review of abnormal human behavior, its etiology, symptoms and treatment. Prerequisites: PSY 1010 or instructor permission.

## 2370 Introduction to Psychology of Gender

Fall
for students with special interests in psychology, social work, or sociology. Deals with gender differences as they are experienced by males and females across the lifespan. Explores gender differences and similarities. Examines changing gender roles in the family and in society. Studies history of gender difference, myths, and stereotypes. Students become more sensitive to issues of gender.

## 2470 Applied Statistics

Descriptive and inferential statistic, correlation, " t " and "chi-square" distribution. (Same as MATH 2040). Prerequisite: MATH 1050

2500 Social Psychology
Social Science
Fall
Social Psychology is defined as the study of how individuals think, feel and behave in social situations. This course examines individual behavior in group situations, and considers the interplay of culture and personality in social contexts.

2600 Introduction to Sport Psychology (3:3:0) The study of the psychological processes which underlie involvement in sport and exercise activities. Focus will be given to issues of performance, motivation and aggression, interventions in sport, team and spectator factors, and socialization. Research and therapeutic factors will also be introduced to support the applied nature of the course. Prerequisite: PSY 1010 or instructor approval.
$2830 \begin{aligned} & \text { Introduction to the Analysis of } \\ & \text { Behavior }\end{aligned}$
(3:3:0)
Analysis of behavior based on the principles of classical conditioning and operant learning. Prerequisite: PSY 1010 or instructor permission.

## 2840 Introduction to the Analysis of Behavior Lab

(1:0:1)
A laboratory course that provides the student with the opportunity to apply the principles of learning using simulated animal and human examples. Importance is given to student-directed completionofguided experiments. Recommended for psychology majors intending to transfer to four-year programs in psychology, (Required for students participating in the Utah State University Extension program). Prerequisites: PSY 1010 or instructor approval and concurrent enrollment in PSY 2830.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training in psychology. The student meets with the instructor/coordinator during the course to determine and evaluate learning objectives, hours to be worked and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of students in Psychology.

## RECREATION (RECR)

Steve Christensen
Jim Huffaker

## RECREATION COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Recreation and Outdoor Puruits

(3:3:0)

## Fall

This course is designed to introduce the general student and the recreation major to the history, theories and concepts of recreation and outdoor pursuits. The student will learn the role and function of recreational and outdoor venues and the issues that need to be considered when these activites occur on private and public lands. Current issues, trends and ethical issues will be discussed. Students will be given an introduction to risk management, safety protocols and ethical use of natural resources and become aware of their effects on events in the outdoor recreational environment. Students will learn to design, plan and carry out activities in the skills areas of recreation and outdoor progams. The student is expected to participate in organization and planning of actual events in the program

1020 Basic Gunsmithing
(2:2:2)

## 1030 Handguns I

(2:1:2-5)
The student will become familiar with the fundmentals of handgun shooting. Students will understand safe gun handling, cleaning and storage. Students will learn basic marksmanship and safety rules of hand gun use. Students will become familiar with law as it pertains to handgun ownership use and concealed carry. Students will learn the four basic designs of handguns and what each is used for. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips and a lab fee is required.

## 1040 Fly Tying

(1:1:2-5)
Spring
This is a course designed to introduce the student to the recreational opportunity of fly tying. Fly tying requires knowledge of the necessary tools, materials, and the methods of using them. Some understanding of entomology and its relationship to fly tying. Some of the insects found in local

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streams will be emphasized. The course will introduce students to outdoor ethics and career opportunities. Some student equipment will be required.

## 1050 Fly Fishing

(1:1:1)
Spring
This course is designed to introduce the student to the life time recreation opportunity of fly fishing. Successful fly fishing requires knowledge and understanding of entomology, hydrology, stream flow dynamics, as well as the mechanics of casting and safety. Trout fishing will be emphasized, with fishing for other species also introduced. This course will teach the philosophies and history of fly fishing, as well as introduce outdoor recreation ethics and career opportunities. Some student equipment will be required. Course involves lab, lecture and field trips. Some student equipment will be required. Lab fee required.

## 1100 Traditional Western Life Recreation

(2:2:0)
Fall, Spring
This elective course is designed to introduce the student to business opportunities in the growing industry of farm and ranch recreation to supplement agricultural income. May be an elective credit for all majors. Ranch recreation is any recreational activity enjoyed by guests for a few hours or a few weeks, while on a farm or ranch. Course work will include choosing, developing appropriate activities, resources, marketing, risk management and insurance. Course teaching methods include lecture, video, and labs.

## 1110 Intro to Firearms Handling and Safety

(2:1:2-5)
This course is designed as an introductory basic training program for students interested in recreational shooting, hunting, competition shooting, gun collecting, home safety or personal protection. This program will teach you the basic safety principals and help you develop the knowledge, skill and attitudes that are needed to successfully pursue your shooting interests. This course is the preprequsite for RECR 1160. This course will introduce the student to and familiarize them with the various types of firearms, the mechanics, care and cleaning, history of each type and the unique handling requirements for the following: rifles, shotguns, revolvers and semiautomatic firearms. A large portion of the course will center around general firearm etiquette and safety procedures and students will have the opportunity to practice on a firing range. Safety protocols will be learned
and adherence to those policies is mandatory. The course involves lecture, lab and field trips and a lab fee is required.

## 1130 Guitar Making

(3:1:2)
The students will be introduced to a variey of techniques used in the construction process of a guitar. The course will cover safety, design, acoustics, materials, and finish. Students will be introduced to Hot-pipe, form and blanket bending techniques. These are common techniques for bending the wood for the sides of the guitar. During the class, the instructor will illustrate the traditional techniques used in building a classical guitar through short lectures and demonstrations. The demo process will help the student, as the instructor constructs a guitar right along with the students.

## 1140 Marksmanship I

(1:1:2-5)
This course provides the opportunity for students to become familiar with small bore target shooting. This course starts with small bore firearms, usually using the 22 Long Rifle caliber firearm. The student will become familiar with and understand the basic concepts of precision shooting, breathing control, sighting techniques and proper trigger squeeze. Basic shooting positions will be discussed and practiced. Ballistics and firearm response will be taught. A large portion of the course will center around general firearm etiquette and safety procedures and students will have extensive opportunities to practice on a firing range. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips. A lab fee is required.

## 1141 Marksmanship II

(1:1:2-5)
This course is a continuing opportunity for students to become familiar with large bore target shooting. This course utilizes large bore center fire rifles. The student will further explore and understand the basic concepts of precision shooting, breathing control, sighting techniques and proper trigger squeeze. Basic shooting positions will be discussed and practiced. Ballistics and firearm response will be taught. A large portion of the course will center around general firearm etiquette and safety procedures and students will have extensive opportunities to practice on a firing range. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips. A lab fee is required.

## 1160 Trap and Skeet Shooting (2:1:1 each)

Fall, Spring
This course will introduce students to clay traget sports. The student will learn the history as well as the difference between trap, skeet and sporting
clays. Students will learn how clay target sports evolved and how to play several different games. The main emphasis will be on trap shooting. Proper stance, target acquisition, trigger squeeze and follow through will also be taught. The course involves lecture, lab and field trips. A lab fee is required. Prerequisite: RECR 1110.

## 1200 River Running I

(1:1:2-5)
Fall, Spring
This course is meant to introduce students to the sport of river running. The course will provide students the opportunity to gain the knowledge and skills necessary to enjoy river running safely. Students will participate in rafting rivers up to class 3 . Skills involved with paddle boats will be emphasized. Safety, environmental, and ethical issues will be considered. Students need to be in good physical condition. Safety protocols will be learned and adherence is mandatory. The student must be a good swimmer. Field trips will be taken and lab fees assessed to rent equipment and pay for river trips.

## 1210 Backpacking

(1:1:1)
Fall, Spring
This elective course is designed to introduce the student to the fundamental skills and lifetime recreational opportunities of backpacking. May be an elective credit for all majors. As more and more people head into the backcountry for a wilderness experience it becomes critical that they have the knowledge and skills required to safely and fully enjoy that wilderness and at the same time preserve it for others. The course will also teach the philosophies, history, personal outdoor ethics of backpacking and career opportunities which are available. Teaching methods include lecture, videos, labs, and field work. Some student equipment will be required.

## 1260 Outdoor Photography

(2:1:2-5)
This course introduces the outdoor enthusiast to the means and methods of taking pictures in the outdoor environment. The student will examine a variety of equipment that suits the nature of the activities related to outdoors. Students will go on field trips to explore and apply the information learned in lecture. The use and applications of normal, wide angle and telephoto lenses will be discussed and applied to composition and lighting. Film types and digital imaging will be examined and applied to conditions related to the outdoor environment. Weather conditions, time of day and time of the year factors will be evaluated and how each applies to these conditions. A portfolio
of images will be required. Safety protocols for outdoor photography will be learned and adhered to. This course will require some hiking activities.

## 1300 Bike Touring

(1:1:1)
Spring
This elective course is designed for students interested in developing advanced cycling skills and knowledge. May be an elective for all majors. The course provides knowledge and confidence in use of the bicycle as a vehicle for extended cross country and touring use. Class includes field work, labs, video tapes and hand outs. Completers will have knowledge of basic touring requirements and of career opportunities in the recreation field.

## 1310 Mountain Biking

(2:1:1)
Fall
This elective course is designed for students interested in developing basic to advanced mountain biking skills and knowledge. May be an elective for all majors. The course includes classroom and outdoor instruction. The emphasis will be on outdoor instruction and skill building.

1320 Outdoor Ethics
(3:3:2-5)
This course is one of five foundation courses required for the Outdoor Recreation program. The course covers four basic outdoor ethical areas: Ecological issues for activities in the wilderness, Federal and State rules and regulations for activities on their land, Archeological and Paleontological ethics and The consequences of human decisions on the environment. The student will learn the nine basic principles of "no trace left behind" which mitigates the hikers / campers impact on the natural environment. Students will learn how to conduct themselves in a wilderness environment with a minimal impact on geology, flora and fauna. Astudent will become familar with the general rules and regulations for participation on State and Federal land. The primary "do's and don'ts will be covered for BLM, Forest Service and State or Federal Park lands. The last area covers policies related to archeological and paleontological artifacts and what the law requires from participants who encounter these artifacts. This course involves lecture, lab,and field trips and an activity fee is required. Adherence to safety protocols is mandatory for field trips.

## 1330 Outdoor Safety

(2:1:1) Spring
This elective course is designed for students interested in developing an awareness of safety and survival techniques necessary for a variety of activities such as backpacking, mountaineering,

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skiing, and prospecting. May be an elective for all majors. The course provides for basic skill building so that should an unexpected outdoor emergency occur the student is prepared to survive. The student will gain general understanding of trip planning, attitude, safety, and survival techniques and principles. The class includes field work, labs, guest lecturers, video tapes and handouts. Completers will have knowledge of basic survival and of career opportunities in the recreation field.

## 1350 Scuba Diving I

(1:1:2-5)
Scuba Diving I teaches student divers the foundational knowledge and skills they need to be able to dive with a buddy and be independent of supervision. A student will learn to plan, conduct and log open water "no stop" dives when properly equipped and when accompanied by a buddy in conditions in which they have training and/or experience. Professional Association of Diving Instructors (PADI) standards will be used and at the end of the course the student may choose to take the test to be "Open Water Diver" certified. Students must be in good condition and be able to swim. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips and a lab fee is required.

## 1440 Horsemanship I

(2:1:1)
Fall, Spring
This course is designed for students interested in developing skills and knowledge for the competent care and recreational use of horses. May be used as an elective for majors. The course provides knowledge and confidence in use of the horse as an enjoyable weekend activity or as a possible career. Class includes field work, labs, video tapes and handouts. Completers will have knowledge of basic horsemanship and of career opportunities in the recreation field.

## 1441 Horsemanship II

(2:1:1)
Fall and / or Spring
This elective course is designed to introduce the student to the competent care and recreational use of horses. May be elective credit depending on major. The course provides advanced knowledge and confidence in the use of horses as an enjoyable weekend activity or as a possible career. This course will also teach the history of horsemanship and introduce recreation ethics. Some studentequipment will be required. Class is lecture and lab.

1444 Martial Arts Tang Soo Do
(2:1:2-5)
This course is an introduction to a Korean form of martial arts called Tang Soo Do. The course will take the student through physical training specific to the discipline in preparation of learning the
style basics for stances and blocking in defensive moves and techniques of punching and kicking in offensive moves. The history and philosophy of the discipline will also be taught. Respect and etiquette of this style of art are factors that will lead a student to understand and demonstrate self control and self awareness. This course requires physical exertion and physical contact.

## 1445 Martial Arts Tae Kwon Do <br> (2:1:2-5)

This ancient style on martial arts come from South Korea. Its translation in Korean means. 'A way of being through the study of Foot and Fist." This style of Martial Arts teaches defense and counter attacks only. The five tenets of Tae Kwon Do describe our teachings well: courtesy, integrity, perseverance, self control, and indomitable spirit. Tae Kwon Do is a very patriotic and peaceful style. Students need to be in good physical condition. Safety protocols will be learned and adherence to those policies is mandatory.

## 1446 Shorinji Kempo

(1:1:1)
This elective course allows the student to progress through various levels of the Japanese martial art of self defense known as Shorinji Kempo. Instruction includes both "soft" techniques (escapes, arm locks, throws, and pins) and "hard" techniques (blocks, punches,and kicks). Through mastery of skills, the student may progress from the white belt of the beginner through the colored belts of more advanced ranks. Qualifying exams by a Branchmaster will determine advancement. Repeatable credit is available so that this class can be taken multiple semesters to allow accomplishment of individual goals.

## 1480, 1490 MountaineeringI/

 Mountaineering II (2:1:1 each) SpringThese elective courses are designed to introduce and acquaint the students with mountaineering skills and knowledge such as: rock climbing, mountain travel, and camping at elevation, as well as route finding and safety procedures. May be an elective credit depending on major. In order to enjoy the class outings, students should be in good health and physical condition. Some student outdoor equipment and clothing may be required. Course includes lecture, lab and field experience.

## 1500 Canoeing I

(1:1:2-5)
This course is meant to introduce students to the sport of canoeing. The course will provide students the opportunity to gain the knowledge and skills necessary to enjoy floating class I and II rivers safely. Students will participate in day trips.

Safety, environmental, and ethical issues will be considered. Students need to be in good physical condition and must be able to swim. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips and a lab fee is required.

## 1505 Kayaking I

(1:1:2-5)
The Kayaking I class is meant to introduce students to the sport of kayaking and to learn the skills necessary to make kayaking safe and fun. Students will become familiar with techniques necessary to properly handle a kayak and to "right" and maneuver a kayak when it is in a forced roll. These techniques will, in the beginning, be taught in the controlled environment of a pool under the supervision of a qualified instructor. Proper gear and equipment will be emphasized. Kayaking history, river ethics and environmental considerations will also be taught. Safety protocols will be learned and adherence is mandatory. The student must be a good swimmer. Field trips will be taken and lab fees assessed to rent equipment and pool time. Students need to be in good physical condition. Safety protocols will be learned and adherence to those policies is mandatory.

## 1506 Kayaking II

(1:1:2-5)
The Kayaking II class is a continuation of Kayaking I, where students will put their skills to use learning how to navigate and handle kayaks in the river environment. Students will become familiar with techniques necessary to properly handle a kayak on a variety of river conditions utilizing the skills they were previously taught. These techniques will be practiced and taught under the supervision of a qualified instructor on field trips that will provide the student the ability to test their skills under conditions. Proper gear and equipment will be emphasized. Kayaking history, river ethics and environmental considerations will be taught. Safety protocols will be learned and adherence is mandatory. The student must be a good swimmer. Field trips will be taken and lab fees assessed to rent equipment and pay river permits. Prerequisite: PE 1505

## 1508 River Guide Preparation

(3:2:2-5)
This course is meant to introduce students to responsibilities of river guiding and to learn the skills necessary to become an apprentice river guide. Safety and environmental considerations will be emphasized. Students need to be in good physical condition. History, river ethics and environmental considerations will also be taught. Safety protocols will be learned and adherence is
mandatory. The student must be a good swimmer. Field trips will be taken and lab fees assessed to rent equipment and travel.

## 1520 Hiking I

(1:1:1)
This course will introduce students to the activity of hiking. Emphasis will be on preparation, physical condition, clothing, and gear. Students will learn to be prepared for the unexpected. Hiking opportunities will be provided. Safety, environmental, and ethical issues will be considered. Students need to be in good physical condition. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips and a lab fee is required.

1524 GPS Orienteering/Navigation (1:1:2-5) This course will teach a basic understanding of the GPS (Global Positioning System) and related systems. GPS skills are a tool in the modern tool belt of many disciplines ranging from recreation to the sciences. GPS is found in an ever increasing number of facets of our everyday lives as this class will demonstrate. Students in this class will understand how to leverage this technology to improve both their personal lives and their professional opportunities.

## 1527 Rock Climbing I

(1:1:2-5)
This course is meant to introduce students to the sport of rock climbing and to learn the skills necessary to make rock climbing safe and fun. A variety of climbing techniques will be taught for various rock environments in the area. Students will learn about the required climbing gear, harnesses, ropes, and safety devices. The history of climbing, as well as ethical, environmental and protection considerations will be learned. Compliance to these standards will be required. Students need to be in good physical condition and those who are incapable of passing the basic skills requirement on the climbing wall will not be allowed to continue in the class. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips and a lab fee is required.

## 1530 Bouldering

(1:1:1)
This course is meant to introduce students to the sport of Bouldering and to learn the skills necessary to make Bouldering safe and fun. Safety and environmental considerations will be emphasized. Students need to be in good physical condition - this can't be emphasized enough. Students who are incapable of doing the basics on the climbing wall will not be allowed to continue in the class. This is for the student's own safety.

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## 1536 Desert Backpacking

(1:1:2-5)
This course will teach minimum-impact camping skills, outdoor cooking, basic first-aid, map and compass use, route finding, knot tying and rope handling. You will backpack through the challenging sandstone and slick rock terrain and stop along the way to explore ruins and interesting geology. Your instructors teach you the history of ancient inhabitants and the geological formations. As the course progresses and your skills and experience increase, your instructors turn more and more responsibility over to your patrol. This is your opportunity to make the course your own unique experience - setting up each day's challenges, creating a pace that is "doable" for everyone, becoming each other's friends and confidantes, and having some fun. Students need to be in good physical condition. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips and a lab fee is required.

## 1580 Canyoneering I

(1:1:2-5)
Canyoneering is a term used to describe an adventure sport that combines hiking, wading, swimming, boulder hopping, rock climbing, and rappelling. This course is meant to introduce students to the sport of canyoneering. Students will learn the skills necessary to make canyoneering safe and enjoyable. Safety and environmental considerations will be emphasized. Outings will include training at the Spring Canyon Climbing Area and outings to the world famous canyons of the San Rafael Swell. Students need to be in good physical condition. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips.A lab fee is required.

1600 Outdoor Foods and Clothing
(1:1:0)
This course is designed to introduce the novice student to the art of outdoor survival, with emphasis on food, clothing and self reliance. This course will also teach the philosophies and history of the outdoor experience. Some student equipment will be required. Course includes lecture, guest speakers, lab and hands on experience.

## 1610 Silversmithing

(1:1:2-5)
Silversmithing is a course designed to introduce students to the basic techniques of creating jewelry from silver. The class will provide the students with the knowledge and understanding of sterling silver, soldering, fabricating and silver finishing. Throughout the semester, students will learn the enjoyment of turning their creative ideas into original silver designs. The class will introduce
the student to and familiarize them with the basic terminology used in silversmithing, the tools and equipment required, and a brief overview of the association of lapidary and silversmithing. This is a "hands on" class that will teach the fundamentals needed to make silversmithing a life long recreation or career opportunity. Some student equipment and a lab fee will be required.

1620 Stone Cutting and Polishing (1:1:2-5) This is an introductory course for students wishing to learn about the craft of stone cutting and polishing. The student will be introduced to the acquisition of local stones, slab cutting, trim cutting, shaping and polishing stones for a variety of uses. These techniques will be applied to various projects that bring out the beauty and inner nature of stones and how to prepare them for display or incorporate them into fine jewelry.

## 1655 Snow Shoeing I

(1:1:2-5)
This course is meant to introduce students to the sport of snowshoeing and to learn the skill necessary to make wilderness travel safe and enjoyable. Avalanche training will be provided. safety, environmental, and ethical issues will be considered. Students need to be in good physical condition. Safety protocols will be learned and adherence to those policies is mandatory. The course involves lecture, lab and field trips and a lab fee is required.

## 1700 Break Dancing I

(1:1:2-5)
This course is designed for those interested in learning Break Dancing basics. It is designed to develop a foundation in the major areas of breaking in which a student can build on to create his or her own style. A student will learn the basic and complex moves involved in this type of dancing. This class is taught using the "hands on "approach". It provides an opportunity for students to enhance their dancing skills utilizing group and "one-onone" learning environments.

## 1800 Service Learning

(1-3:0:1-3)

## Service Learning

This course is designed to provide students with experience in the process and development of their altruistic tendencies. Students must select approved service areas. Learning will be experiential. Students will become aware of the needs in the community and adopt techniques and practices that will be beneficial to the recipient of the service. Students will profit from the opportunity to serve.
(2:2:1)
Spring
This course is designed to help students understand the importance of western culture and heritage. Tourism in a rapidly growing recreation industry. May be a transfer credit depending on major. Students will investigate how to transform underdeveloped western culture and historic sites into value added enterprises. Business and marketing skills will beblended with recreation site development skills resulting in a comprehensive recreation enterprise. Class includes lecture, lab and field trip. Prerequisite: RECR 1100

## 2200 Beginning Chess

(1:1:1)
This class teaches the rules of chess, as well as basic opening and end game theory. The class is specifically for people who have never played before or have forgotten how to play. The goal of the class is to provide skills necessary for a life long pursuit of the game.

## 2210 Intermediate Chess

(1:1:1)
Builds on the basic skills and knowledge from RECR 2200. The class will strengthen chess skills and explore advanced topics of strategy and play. Prerequisite: RECR 2200 or instructor's permission.

## 2610 Sign Language I

(2:2:0)

## 2611 Sign Language II

(2:2:0)
The goal of these two courses is to assist students with understanding of the deaf world. These courses will expose the students to techniques that will prove of immediate value with their first deaf communications and will provide students with opportunitiesfor practicing thesetechniquesunder conditions as realistic as possible. The courses will include lecture, lab and video tape presentations, as well as out of class participation.

## 2977 Cooperative Education

(1-3:0:1-3 )
The course provides supervised on-the-job training in recreation. The student meets with the instructor/coordinator during the course to determine and evaluate learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

2988 Special Problems
(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to meet the changing needs of the student in Recreation.

## SOCIAL SCIENCE (SLSC)

Jane Johnson
Dr. Robert McPherson
Todd Olsen
Kelli Shaw
Shanny Wilson

## SOCIAL SCIENCE COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1010 New Student Orientation (.5:.5:0) This course is designed to provide incoming students with a working knowledge of the opportunities and services available to them at College of Eastern Utah. This two-phase course will assist in the student's transition to college and successful completion of his/her academic goals. During Phase I of orientation, instruction includes an overview of academic regulations, graduation requirements, CEU policies and procedures, the advising process, and course registration. Students are familiarized with CEU resources, personnel, and functions of academic and student support services. During Phase II, students have the opportunity to interact in a social setting with student leaders, student service personnel, faculty advisors, and fellow students, as we seek to establish a connection between the student and campus community.

1030 International Student Orientation (1:1:0) Fall, Spring, Summer
This class will provide first-semester students with knowledge of the services and regulations governing international students while attending CEU. This course will aid in the student's cultural transition to U.S. education and will provide particulars of complying with BCIS (Bureau of Citizenship and Immigration Service) rules and regulations governing F-1 visa holders. Course will include an overview of academic regulations, graduation requirements, CEU policies and procedures. This class meets daily for the first three weeks of each semester. Course is required of all new F-1 international students.

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## 1050 College Success Skills

Service Learning
Fall, Spring, Summer
College Success Skills is a course designed to increase the student's success during the college experience. The course will emphasize test taking strategies, effective note taking, listening skills, time management and personal issues necessary to survive college.

1110, 1120, 1130, 1140 Leadership Perspectives (1-3:1-3:1-3 each)

## Service Learning

This course will be a discussion of the styles and skills of leadership, utilizing historic and contemporary models and emphasizing traits of responsible Leadership. Students will develop a leadership project of their own choosing. They will also research the biography of a significant world leader and present the information to the class; combined with reflection and discussion in small groups on issues of Leadership. Prerequisite: Approval of course coordinator

## 1200 Native Americans and the Environment

(3:3:0)
Examines historical and contemporary issues of Native American land use. Explores opposing views with information allowing critical assessment of issues. Folk and scientific resources will be used.

## 1300 Tutoring Training

(1:2:0)
This course is designed to teach tutors how to effectively provide students with quality academic assistance, while promoting independent learning. The course will cover the following: tutoring policies and procedures, basic tutoring techniques, learning styles, learning disabilities, study skills techniques, and communication and active listening skills. The course will use several types of information delivery including: lectures, videos/DVD's, and reading material.

## 1800 Leadership in Civic Engagement

(2:2:2)

## Service Learning

This course provides students who have been selected as a service leader an opportunity to strenthen leadership skills, work with community agencies, organize and carry out service projects, and work with and encourage students to become involved with service. Prerequisite: Must apply and be selected as a SUN Involvement Center Leader.

## 2500 Research Methods for the Social Sciences

(3:3:0)
(Bi-annually)
An introduction to theory and research methodology which will prepare the student to understand,
evaluate, and do empirical research. (i.e., an inquiry that seeks general verified explanations for any class of phenomena.) The course includes, but is not limited to, instruction in data collection, sample selection, definition and measurement, surveys, and statistical analysis. It is a must for every student of the social sciences.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training in social science. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit agreements. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to meet the changing needs of the student in Social Science.

## SOCIOLOGY (SOC)

## SOCIOLOGY COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

1000 Choices on Alcohol Consumption
(.5:1.5;1.5)

This course is offered in conjunction with New Student Orientation as an option to obtain a full one credit hour for your participation. This course consists of 2-90 minute group discussions that will educate you about the effects of alcohol on your behavior, allow you to evaluate your drinking patterns, and acquire coping strategies to assist you with making informed decisions about alcohol consumption.

## 1010 Introduction to Sociology

## Social Science

Fall, Spring, Summer
This course will introduce the students to the study of human social relations, groups, societies and their institutions. Social diversity and inequality will be examined, and students should learn that we are effected by global forces. Current concepts and research methods will be introduced, and students should be constantly challenged to use critical thinking.

1020 Social Problems
(3:3:0)
An elective course designed for all students. An analysis of major social problems in modern society, including substance abuse, crime, delinquency, deviant behavior, poverty, as well as other issues. A major focus of this course is on values and decision making.

## 1050 Introduction to Gerontology

(3:3:0)
The course is designed for the student with general interest in Gerontology and for the student from agencies which work with older persons. The student will learn how to cope with and understand the biological and psychological needs and wants of the aging person. They will also find out the individual and social worth of these people and how they specifically fit into our society.

## 1070 Introduction to Social Work (3:3:0)

 Social work is a helping profession which examines social welfare as a broad system intended to maintain the well-being of individuals within a society. The roles and functions of social work professionals who work within the social welfare system are also explored. Ten hour field observation, supervised volunteer experience in social service agency.
## 1820 Drugs, Society, and Human Behavior

(2:2:0)
Through lecture format, this course examines the incidence, effects and dangers of substance use. Personal assessment and strategies for behavior change are emphasized. The student will be introduced to past, present and future trends of drugs, their uses, and misuses. The course will dispel the myriad of myths and misconceptions associated with drugs and their uses.

## 2400 Parent and Community Involvement in Bilingual Programs <br> (3:3:0)

This course is part of CEU's Bilingual Education endorsement program. Classes will generally center around current Bilingual/Multicultural, social, education, and political contexts in San Juan County and on the adjacent Indian reservation. Speakers will be invited into the classroom. Discussions and panels involving experts, parents, other community members, and students are envisioned. Knowledge and perspectives gained in the classes will be applied by students in defining for themselves the importance of parent and community involvement in bilingual programs. Prerequisite: Completion of Utah teaching credentials, or instructor permission.

2650 Social Welfare System
(2:2:0)
Students will become familiar with the social welfare system from a historical as well as a contemporary perspective. Also will become familiar with social policies and legislation that sanction social service programs. Prerequisites: SOC 1070.

2910 Sociology of Gender
(3:3:0) An introduction to the biological, cultural, and economic aspects of gender roles, sex role socialization, marriage, and careers, child rearing, family violence, and divorce. The sexual revolution and discrimination are related to the changing role of women in today's society and will be compared with women in other societies.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-thejob experience for students in areas of social problems, group processes, and clinical therapy. The student establishes learning objectives, hours to be worked and a credit agreement with the instructor/coordinator at the beginning of the semester. The student then meets with the instructor/coordinator to review progress. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Sociology.

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## THEATRE (THEA)

Dr. Cory Ewan
Grady McEvoy


## THEATER COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1013 Survey of Theatre

(3:3:0)

## Fine Arts

Fall, Spring
Study of fundamental theories and cultural function of the theatre in society, intended to aid the student in acquiring a discriminating appreciation of the theatre and to provide a basic background in dramatic arts.

## 1023 Introduction to Film

(3:2:2)

## Fine Arts

A study of the fundamentals of film, including its history, the reflection and impact of film on society, and an understanding of the language of film. The intent of this course is to aid the student in acquiring a greater appreciation of the motion picture art form and provide a basic background in film.

## 1033 Acting I

(3:1:3)
Fall
Study and practice in actor awareness and acting techniques. Understanding theories and methods for achieving skills in movement, observation, concentration, creation and action.

1113 Voice and Diction
Oral Communication Intensive

## Spring

Training in understanding the physiology of the voice. An introduction to basic techniques and skills required to develop a program of individualized vocal development for the theatre.

1223 Makeup
Fall
This course will teach the student the knowledge and skill for one and three dimensional illusion, focusing on aging, character, and period makeup.

1513 Stage Craft
(3:1:5-6)
Fall
Introduction to physical theatre forms, standard stage equipment and methods of staging plays. Basic practices in set and costume construction.

## 1713 Script Analysis

(3:3:0)
Fall
A textual study of scripts from historical and contemporary performance texts for analysis of plot, character, language, ideas, and staging.

## 2033 Acting II

(3:1:3)
Spring
Develop skills in text analysis for the actor. Study techniques for advanced work with genres and styles. Prerequisite: THEA 1033

## 2044 Auditions

(2:1:2)
Fall
This course will provide the graduating sophmore theatre students the necessary instruction and training in audition techniques preparatory to auditioning for four-year university theatre programs, conservatories, or professional theatre venues. Prerequisites: THEA 1033 and 2033

## 2440 Children's Theatre

(2:1:4

## Summer

This course will introduce students to creative drama, selection, preparation, and presentation of children's plays. Recommended for those majoring in theatre and for prospective elementary school teachers.

## 2510 Scene Painting/Properties

(2:1:3) Spring
Instructioninscenepaintingtechniques. Construction and alteration of stage properties. Course will include lab and practical application of skills.

The study of stage lighting as it applies to both drama and dance, to include color, drafting, instrumentation, control boards, and electricity. Prerequisite:THEA 1513

## 2550 Stage Management

(2:2:0)
Spring
Acquiring the knowledge and skills necessary to be a competent stage manager. Included will be organization, delegation, scheduling, and personnel management.

2670 Costume History
(3:3:0)

## Spring

Historical survey of theevolution of costumes from the Egyptian period to the present, emphasizing costume reproduction for the stage. Will examine the effect of period costume on movement and manners.

## 2800 Theatre Practicum

(1-2:0:2-8)

## Fall, Spring

Practical theatre experience through production. Student training is gained through hands-on practice and performance of actual production. Prerequisite: Instructor permission. Student must have a participatory assignment in a theatre performance activity. Course may be repeated for credit, not to exceed 8 hours.

## 2910 Private Instruction in Theatre Arts

(1-3:1-3:2-8)
Fall, Spring
Practical theatre experience through production. Student training is gained through hands-on practice and performance of actual production. Prerequisite: Instructor permission. Student must have a participatory assignment in a theatre performance activity. Course may be repeated for credit, not to exceed 8 hours.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training in theatre. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to provide the student for activities related to Theatre Arts, using seminars, workshops, visitations and lectures.

## TRANSITIONAL STUDIES (TRST)

Jane Johnson

## TRANSITIONAL STUDIES COURSES

## 1050 Academic Reading

(3:3:0)
Designed to provide general strategies for improving reading skills for academic course work. Includes critical reading, comprehension, analysis, synthesis and evaluation. Also encompasses skills in taking notes, preparing for exams, and interpreting visual aids. Dual listed as ESOL 1050.

## 1055 Vocabulary

(2:2:0)
Emphasis is on academic vocabulary. Develops strategies for increasing vocabulary using context clues and word parts (root words, prefixes and suffixes). Class will prepare students for academic course work and standardized test taking. Dual listed as ESOL 1055.

## WELDING (WELD)

Mike Tryon
Lon Youngberg

Welding students have three degree options in which to choose:

Students can obtain a one year Certificate of Completion in Welding Technology in preparation to enter the job market as a skilled welder. Proficient students are able to obtain welder certifications for SMAW, GMAW, FCAW, and GTAW to AWS code requirements.

The second option is to pursue an Associate of Applied Science degree in Welding Technology. Students pursuing this degree are expected to be qualified candidates for welding equipment salesman, inspectors, foreman or supervision responsibilities in welding related fields.

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The third option consists of students working toward an Associate of Science degree with an emphasis in Welding Technology. This option is for students planning to pursue a baccalaureate degree at a four year institution after graduating from CEU. Articulation agreements are already in place at Weber State University for Manufacturing Engineering Technology and at Utah State University for the Industrial Teacher Education major. The Technology Management degree at Utah Valley State college is also well aligned with the CEU welding program.

Students should work closely with their academic advisor when scheduling classes, transferring, and filling out the necessary matriculation forms. The advisor can be a useful source of information and assistance; however, it is the student's responsibility to seek an advisor's aid and meet the necessary graduation requirements.

## ADMISSION REQUIREMENTS

1. New freshman admitted to CEU in good standing qualify for admission to this program.
2. Transfer students from other institutions need a 2.5 GPA for admission to this major.
3. Students transferring from other CEU majors need a total GPA of 2.5 for admission to this major.
4. No welding courses below a C may be applied toward meeting graduation requirements.
5. Visual acuity requirements: $20 / 40$ vision and Jaeger J-2 at 12 inches, with or without corrective lenses. If corrective lenses are required to attain this level of visual acuity, the corrective lenses must be worn during class periods.

| Certificate of Completion (One year Program) |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Course |  | cr | Course |  | cr |
| ENGL | 1010 | 3 | Human Relations Course |  | 3 |
| MATH | 1020 -or <br> higher | 3 |  |  |  |
| Welding Courses - 23 Hours Required <br> Listed below are suggested courses to fill the welding requirement for a one year periiod. Consult with your advisor for additional courses. |  |  |  |  |  |
| course |  | CR | course |  | CR |
| WELD | 1100 | 7 | WELD | 2400 | 3 |
| WELD | 1110 | 3 | WELD | 2500 | 3 |
| WELD | 1120 | 7 | WELD | 2600 | 3 |

Program Total 32

Associate of Applied Science Degree Program

| course | cr course |  |  |  | cr |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| EDDT | 1040 | 3 | WELD | 1130 | 3 |  |  |
| ENGL | 1010 | 3 | WELD | 1140 | 7 |  |  |
| MACH | 1010 | 3 | WELD | 1150 | 7 |  |  |
| MATH | 1020 -or- <br> higher |  | WELD | 2400 | 3 |  |  |
| Human Relations | 3 | WELD | 2410 | 3 |  |  |  |
| Course |  |  |  |  |  |  |  |
| WELD | 1100 | 7 | WELD | 2500 | 3 |  |  |
| WELD | 1110 | 3 | WELD | 2600 | 3 |  |  |
| WELD | 1120 | 7 | General Electives | $3^{*}$ |  |  |  |
|  | *Suggested Electives |  |  |  |  |  |  |
| PHYS | 1010 | 3 | PHYS | 1040 | 3 |  |  |
| CHEM | 1010 | 3 | PHYS | 1050 | 3 |  |  |
| ENGN | 1000 | 2 | EDDT | 2650 | 2 |  |  |

Program Total 64

## WELDING COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1010 Beginning Shielded Metal Arc Welding (SMAW)

(3:1:4)
A course designed for the general public and for related trades such as auto mechanics, carpentry, diesel mechanics and mining. This is a beginning course which covers the basics of SMAW and oxy-fuel cutting theory. The course permits 4 lab hours per week for practical hands-on experience. Emphasis is on safety, joint types, base material and electrode identification, welding positions, and proper care and use of equipment.

## 1100 Shielded Metal Arc Welding (SMAW)

(7:2:10)
A course designed for welding technology majors who plan on choosing a career in the welding industry. This is also a beginning course but covers more theory and hands-on practice to help develop the necessary skills to become a proficient welder. This course will cover safety aspects associated with welding and fabrication, SMAW, carbon arc cutting and oxy-fuel cutting, fundamentals of electricity as it relates to the SMAW process, joint design and base metal preparation, preheat/ interpass temperatures, heat input/cooling rates, AWS electrode classifications, ASTM base metal
identification, and welding procedures and quality of the welds associated with the SMAW process. Proper use of oxy-fuel with portable and line burning applications will also be taught. (5 joint designs)

## 1110 Advanced Shielded Metal Arc Welding (SMAW) <br> (3:1:4)

A course designed for welding technology majors and for people who are already in the industry working as welders. This course is designed to help prepare certify welders to any of the following welding codes: AWS D1.1, API 1104, and ASME Section I to meet current industry qualification standards for employment. Course emphasis is on welding open root structural and pipe joints with E6010, and fill with E7018 electrodes. Training will be performed in all appropriate welding positions. At the end of the course, welding technology students will be required to take certification test in accordance with AWS D1.1 Structural Welding Code book. Mostly butt welds on grouve joints. Prerequisite: WELD 1100

## 1120 Beginning Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW) <br> (7:2:10)

A course designed for welding technology majors to cover theory and practical hands-on experience with semiautomatic wire fed machines. Emphasis is on safety and maintenance of equipment, basic fundamentals of each process, mode of transfers associated with GMAW process, and electrode selection, gas selection, proper regulator and flowmeter calibration. Joint design and equipment troubleshooting will also be discussed.

## 1130 Advanced Gas Metal Arc Welding(GMAW) and Flux Cored Arc Welding (FCAW) <br> (3:1:4)

A course designed for welding technology majors and for people who are already in the industry working as welders. This course is designed to certify welders to any of the following welding codes: AWS D1.1, API, 1104, and ASME Section IX to meet current industry qualification standards for employment. Course emphasis is on welding structural steel with the five basic joint designs. Training will be performed in all appropriate welding positions. At the end of the course, welding technology students will be required to take an all-position certification test in accordance with AWS D1.1 Structural Welding Code book. Prerequisite: WELD 1120

1140 Related Welding Processes
(7:2:10)
A course designed for welding technology majors to expand their knowledge of other related welding processes such as: Submerged Arc Welding, Stud Welding, Plasma Arc Cutting and Welding, Electroslag Welding, Thermal Spraying, Explosion Weld, Laser Beam and Water Jet Cutting, Brazing and Soldering. Combination of theory and practice.

## 1150 Beginning Gas Tungsten Arc Welding (GTAW) <br> (7:2:10)

A course designed for welding majors to cover theory and practical hands on experience with the manual GTAW process. Emphasis is on safety, equipment maintenance, material selection, gas selection, and proper regulator and flowmeter use. Joint design and equipment troubleshooting will also be discussed.

## 1160 Advanced Gas Tungsten Arc Welding (GTAW) <br> (3:1:4)

A course designed for welding technology majors and for people who are already in the industry working as welders. This course is designed to prepare welders to certify to various industry qualification standards for employment. Course emphasis is on welding structural steel with the five basic joint designs. Training will be performed in all appropriate welding positions. Prerequisite: WELD 1150

## 1500 Professional Vocational Leadership

Fall, Spring
(1:.5:1)
This course supports and facilitates the goals and objectives of Vocational Industrial Clubs of America (Skills USA). Students will gain skills in the following areas: personal development, service, team building and leadership, workplace skills, and interview skills. Students may participate in regional, state and national competitions. May be repeated as desired.

2400 Print Reading for Welders
(3:3:1)
A course designed for the person who has had no previous experience with reading blueprints or mechanical drawings. This course includes learning how to determine arrangement of views, shape analysis, pictorial sketching, types of lines used in prints, dimensions/tolerances, finish marks, bill of materials, and threads; with special emphasis on welding symbols in accordance with the American Welding Society.

2410 Practical Fabrication and Layout (3:1:3) A course designed for students to simulate on-the-job work experience. Students will work with plans, determine size and selection of building

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materials, perform cost estimation, and build projects. This course is intended to use current fabrication techniques on personal and industry related projects.

## 2500 Weld Inspection

(3:3:1)
A course designed for students who plan on taking the Certified Welding Inspector's Test. This course will outline the general duties and responsibilities of welding inspectors. Each welding code book will be briefly discussed in order to familiarize students with procedure qualifications and welder qualifications that are currently used in industry. Destructive and non-destructive methods of inspection will be covered.

## 2600 Metallurgy

(3:3:1)
A course designed for welding technology majors. This is a beginning course which covers the study of metal characteristics and how those characteristics are affected by common welding techniques. Common heat treating processes such as quenching, annealing, normalizing, tempering, and crystallization will be discussed. Students will learn to recognize the internal structures of various metals and metal identification techniques used in industry. Mechanical properties, failure and deformation, isothermal transformation diagrams and iron carbon diagrams will be discussed.

## 2977 Cooperative Education

(1-3:0:1-3)
This course provides supervised on-the-job training in welding. The student meets with the instructor/ coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit. Prerequisite: Instructor permission.

## 2988 Special Problems

(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

## 2999 Workshop

(1-3:1-3:0)
A course designed to meet the changing needs of the student in Welding.

## WORKFORCE EDUCATION

CEU's Workforce Education Division provides opportunities for open-entry, open-exit, competencybased education for high school and adult students. The division working in close cooperation with business and industry, local school districts and the local agencies, provides a broad range of specialized long-term and short-term certificate training, as well as customized training and small business development assistance.

Students are assisted in acquiring the basic skills necessary to succeed in these technical training programs. Workforce Education prepares students to enter, re-enter, upgrade, or advance in the workplace, which contributes to economic development, and improves the quality of life for local citizens.

Workforce Education plays a vital role in CEU's mission as a community college. The division provides the local communities with a nimble and responsive resource for educational needs, while providing a means for college departments to better connect with the training needs of the local communities.

## ACCT 0111 Accounting I WE

(60 Hours)
Learn the fundamentals of a double-entry accounting system through hands-on experience working through the accounting cycle of a service business from source documents to financial statements. Competencies will include:Understand basic record keeping procedures, understand double-entry accounting, analyze, journalize, and post transactions, complete the accounting cycle using the worksheet to prepare financial statements, understand accounting for cash and banking procedures.

## ACCT 0112 Accounting II WE (60 Hours)

Learn how to properly maintain payroll records. The additional accounting records for a merchandising business are presented. Financial statements are prepared. Payroll records are prepared and maintained. Competencies will include: Demonstrate mastery of payroll records and procedures, understand the process of maintaining accounting records for merchandising businesses, complete accounting cycle by using the worksheet and by preparing financial statements involving merchandise.

## ACCT 0800 Introduction to QuickBooks WE

(30 Hours)
This course willintroduceastudenttotheQuickBooks software, where a student will learn how to set up a companies accounting for daily transaction, how to manage inventory, process payroll, prepare financial statements and work with bank accounts. Competencies will include:Learn the QuickBooks software, learn how to start up a company, learn Charts of Accounts, manage revenue, expenses and inventory, and learn to reconcile statements.

## BCIS 0002 Introduction to Computers I WE

(30 Hours)
This course is very basic. A student is assumed to have no computer skills. Personal computer basics along with basic introduction to Microsoft Word
and Excel are included. Basic instruction on the Internet, E-mail, and building a home page.
Competencies will include: Know how to use Windows XP, know how to use a Word Processor, know how to use basic formulas in Excel, create and manage E-mail, know how to use the Internet.

## BCIS 0010 Computer Fundamentals WE

(90 Hours)
A course designed to teach fundamental understanding of computing including knowledge and use of computer hardware, software, and operating systems. The course will cover basic use and common features of applications (Word Processing, Spreadsheet, and Database) including Internet use and e-mail. Competencies will include: Identify computing fundamentals such as computer hardware, software, and operating systems, learn to navigate the Windows environment, gain knowledge of primary application such as common program, word processing, spreadsheet, and database functions and learn to use online computing, including Internet and electronic mail.

BCIS 0300 Internet Applications WE (30 Hours) This course discusses the Internet and its practical uses for research, information exchange, and general business operations. Competencies will include: Understand Internet terminology, understand Internet structure, utilize browser capabilities, utilize search engine, demonstrate advanced search techniques. understand research capabilities and limitations, understand legal and ethical issues, identify risks and safety concerns

## BCIS 0405 Word Processing Applications I WE <br> (90 Hours)

Focuses on basic word processing features used in creating, editing, saving, and retrieving business documents. Practical business applications involving creating and correctly formatting business documents, completing projects, and solving problems will be covered.
Competencies will include: Understand basic program menus and toolbars, operate Help features, create, modify, and save documents, demonstrate basic text and page formatting options, create and modify tables, columns, and lists, manage output, edit and format business documents.

## BCIS 0406 Word Processing Applications II (90 Hours)

This is a continuation of Word Processing Applications I and is designed to provide students with an advanced knowledge of word processing
skills. Competencies will include: Manage menus, toolbars, and documents, sort and select data, perform advanced document manipulation, utilize special software features, add and manipulate visual elements, format documents using macros and styles, create specialized tables and indexes.

## BCIS 0411 Introduction to Excel WE

(30 Hours)
This beginning course will guide the student throughout the basics of setting up and maintaining workbooks to make daily business or home based tasks faster and automated. Some basic computer skills will be needed before starting this course. Competencies will include: Learn to prepare an Excel Worksheet, learn to Format an Excel Worksheet, learn how to insert Formulas in Worksheets, learn how to Enhance a Worksheet, learn how to Move Data within and between Workbooks, learn how to Maintain a Workbook, learn how to create a Chart in Excel, enhance the Display of Workbooks.

## BCIS 0412 Spreadsheet Applications I WE

(60 Hours)
This course will introduce spreadsheet functions and applications. Students will learn how to design, create, manipulate, calculate, and present data. Students will utilize critical-thinking skills and apply spreadsheet techniques in developing information for business applications. Competencies will include: Understand basic program menus and toolbars, operate Help features, input and format data, create, modify, format, and save spreadsheets, understand use of formulas and functions, name ranges and utilize in formulas, create basic formulas, understand relative and absolute cell references, create charts and graphs, and understand data sharing, manage output.

## BCIS 0413 Spreadsheet Applications II WE

(60 Hours)
This is a continuation of Spreadsheet ApplicationsI and is designed to provide students with advanced knowledge of formatting techniques, spreadsheet functions, analysis tools, and management techniques. Competencies will include: Manage menus and toolbars, format worksheets, utilize spreadsheet templates, understand workbook manipulations, demonstrate advanced formulas, utilize spreadsheet analysis tools, and demonstrate data sharing.

## BCIS 0421 Introduction to Access WE

(30 Hours)
Teaches the creation of databases and introduces the application of database capabilities for

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information management. Students will learn how to design, create, manipulate, extract, and present data. Competencies will include: Understand basic program menus and toolbars, operate Help features, understand database principles, input, modify, format, and save data, design tables, create queries, generate forms and produce reports, manage input and output.

## BCIS 0422 Database Applications I WE

(60 Hours)
Teaches the creation of database and introduces the application of database capabilities for information management and data manipulation. Students will learn how to design, create, manipulate, extract, and presentdata. Competencies will include: Understand basic program menus and toolbars, operate Help features, understand database principles, input, modify, format, and save data, design tables, create queries, generate forms and produce reports, and manage input and output.

## BCIS 0423 Database Applications II WE

(60 Hours)
This is a continuation of Database Application I and is designed to provide students with advanced skills in database design and creation, data extraction and presentation, database relationships, and data interconnectivity.Competencies will include: Utilize advanced table features, create and refine queries, manipulate forms and reports, understand and create relationships, utilize security and access tools demonstrate data sharing and manage input and output.

## BCIS 0900 Keyboarding Basics WE

(30 Hours)
This course is designed for students to learn or increase their keyboarding ability. Students will learn basic keyboarding techniques and will work towards improving accuracy and or keyboarding speed. Competencies will include: Achieve 25 - 30 nwpm, and demonstrate proper keyboarding techniques and finger placement

BCIS 0901 Keyboarding I WE (60 Hours) Provides intensive skill building practice using drills and timed writings, which will help students increase speed and accuracy on a computer keyboard. The course covers an introduction to the computer keyboard and keyboarding techniques. Competencies will include: Demonstrate ability to keyboard by touch, and perform keyboarding rate of 40 nwpm on a 5-minute timed writing with corrections allowed.

BCIS 0902 Keyboarding II WE (30 Hours)
This is a continuation of keyboarding I and is designed to increase speed and accuracy to a minimum job-market level of 50 nwpm. The course is taught using computers with an emphasis on correct keyboarding techniques. Timings and drills are used to enhance keyboarding skills. Competencies will include: Demonstrate ability to keyboard by touch, perform keyboarding rate of 50 nwpm on a 5-minute timed writing with correction allowed.

BCIS 0903 Keyboarding III WE (30 Hours)
This is a continuation of Keyboarding II and is designed to increase speed and accuracy to a minimum job-market level of 60 nwpm. The course is taught using computers with emphasis on correct keyboarding techniques. Timings and drills are used to enhance keyboarding skills.Competencies will include: Demonstrate ability to keyboard by touch, and perform keyboarding rate of 60 nwpm on a 5minute timed writing with correction allowed.

## BUSN 0191 Electronic Presentation WE

## (60 Hours)

Focuses on electronic presentation software, including designing and creating a presentation, adding, visual and audio elements, creating output, and presenting information. Competencies will include: Understand basic program menus and toolbars, operate Help features, plan and create electronic presentations, insert and modify text elements, insert and modify visual and audio elements, modify presentation formats and manage output.

## BUSN 0200 Business Writing I WE (90 Hours)

Focuses on business English essentials, including sentence structure, grammar, punctuation, parts of speech, and proofreading. Competencies will include: Practice correct word usage, utilize correct grammar rules and use correct punctuation.

BUSN 0201 Business Writing II WE (90 Hours)
Reinforces essential English skills while developing and applying effective written business communication skills. This course will focus on the ability to produce clear and concise business documents in a mail able format. Students will utilize correct sentence structure, paragraph structure, word usage grammar, and punctuation while composing business correspondence.Competencies will include: Apply skills learned in Business English, write logical sentences and paragraphs, utilize correct word usage, grammar, and punctuation rules, compose clear and concise messages, and produce mailable business documents

BUSN 0300 Introduction to Entrepreneurship WE
( 24 Hours)
Introduction to entrepreneurship uses the entrepreneurial approach to help students develop not only their entrepreneurial skills but also their management skills. Students learn about entrepreneurship and the fundamentals of entrepreneurship strategy. The business plan is covered. Competencies will include: Apply basic business management skills, understand the entrepreneurship opportunities including ecommerce and global markets, list advantages and disadvantages of startups, buyouts, franchises and the family business, understand the 4 P 's of marketing, have a basic understanding of finances and financial statements, describe the role of customer service, product, distribution, pricing, and credit strategies, describe how to manage the business's assets and risk, properly do market research for a small business, prepare a business plan for a small business

## BUSN 0390 Communication I WE

(24 Hours)
An introduction to the study of sociology through the concepts and principles used to understand and evaluate daily lifein society. Competencies will include: Become familiar with self communication terms and concepts learn the social/cultural forces that mold individuals within society, and to understand how you are affected by the society in which you live

## BUSN 0391 Communication Skills II WE

(60 Hours)
An introduction to the study of sociology through the concepts and principles used to understand and evaluate daily life in society. Competencies will include: Become familiar with sociological terms and concepts, learn the social/cultural forces that mold individuals within society and understand how you are affected by the society in which you live

## BUSN 0392 Workplace Communications I WE (16 Hours)

Basic application of skills necessary to communicate effectively. Coverage of workplace communication skills, including, reading, writing, speaking, and listening, inboth formal and informal settings.Competencies will include: Demonstrate informal and formal communication skills, and understand nonverbal communication.

## BUSN 0393 Workplace Communications II WE <br> ( 90 Hours)

Development and application of skills necessary to communicate effectively. Comprehensive
coverage of workplace communication skills, including, reading, writing, speaking, and listening, in both formal and informal settings. Competencies: Develop reading, writing, speaking, and listening skills, demonstrate informal and formal communication skills and understand nonverbal communication

## BUSN 0394 Business Leadership I WE

(16 Hours)
Basic skills necessary to gain the competitive edge through career development, self-improvement, and volunteer programs. Competencies will include: Developleadershipskills, work effectively as a team member and develop character and self-confidence.

## BUSN 0395 Business Leadership II WE

(30 Hours)
Develop skills necessary to gain the competitive edge through career development, selfimprovement, and volunteer programs. Competencies will include: Develop leadership skills, work effectively as a team member, organize and conduct group activities including guest speakers, field trips, and projects and develop character and self-confidence.

## BUSN 0396 Job Seeking Techniques I WE <br> (16 Hours)

Basic skills to prepare students to apply for a job, get it, and skills to keep it. This course will present job-seeking skills needed to find gainful employment. Competencies will include: Complete a job application form, develop a current resume, create a letter of application, and perform successfully in an interview

## BUSN 0397 Job Seeking Skills II WE

(30 Hours)
Prepare students to apply for a job and get it. This course will present job-seeking skills needed to find gainful employment. Competencies will include: Complete a job application form, develop a current resume, create a letter of application, perform successfully in an interview, and demonstrate appropriate follow-up procedures.

BUSN 0398 Customer Service I (16 Hours)
This course is an introduction to the skills and attitudes necessary to build strong customer relations and providing outstanding customer service. Competencies will include: Explain the importance of customer relations and service in business, identify and discuss the principles of quality customer service, apply the principles of good customer service to typical business

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PHIL
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situations, demonstrate appropriate interactions in a variety of customer service situations, and apply appropriate complaint handling techniques to various customer service situations

## BUSN 0399 Customer Service II WE(90 Hours)

Dynamic training designed to provide the tools needed to impact your work environment, benefiting both customers and employees. Competencies will include: Explain the importance of customer relations and service in business, identify and discuss the principles of quality customer service, apply the principles of good customer service to typical business situations, demonstrate appropriate interactions in a variety of customer service situations, and apply appropriate complaint handling techniques to various customer service situations

## BUSN 0400 Employment Relations I WE

(16 Hours)
An introduction to essential human-relation skills needed to maintain gainful and satisfying employment. This course includes familiarization with problematic areas found in the workforce, including, solving problems, understanding relationshipsanddiversity,increasingpersonalethics, and developing strong personal, interpersonal, and human relations skills Competencies will include: Utilize problem-solving skills, understand working relations and diversity, understand business ethics, develop interpersonal skills, develop personal and human relations skills.

## BUSN 0401 Employment Relations II WE

(60 Hours)
Develop essential human-relation skills needed to maintain gainful and satisfying employment. This course includes familiarization with problematic areas found in the workforce, including, solving problems, understanding relationships and diversity, increasing personal ethics, and developing strong personal, interpersonal, and human relation skills. Competencies will include:
Utilize problem-solving skills, understand working relations and diversity, understand business ethics, develop interpersonal skills, develop personal and human relations skills.

WEDU 0951 A+ Vocabulary I WE (180 hours)
This course focuses on introduction sounds, long and short vowel sound, special sounds formed by various letter combinations, using the " $y$ " as a vowel, silent vowels, various diphthongs, initial and final consonants, like and unlike letters, blends and digraphs, basic sight words, word families, root words, and compound words, syllabification skills, dictionary skills, special vocabulary words, base
words, compound words, synonyms, and antonyms, Thesaurus skills and usage, parts of speech, words in context analogies, Latin and Greek roots, Synonyms, antonyms, homonyms homographs, multiple meanings of words. Competencies will include: Learn the fundamentals of vocabulary such as basic sight words, learn to apply the fundamentals of vocabulary using compound words, consonants, base words and blends, learn dictionary skills and thesaurus skills. learn techniques in letters and sounds, learn the differences between synonyms and antonyms, suffixes and prefixes, learn how to use consonant blends, learn Latin and Greek roots and the basic parts of speech, and learn about multiple meaning words

## WEDU 0952 A+ Vocabulary II WE (90 hours)

This course is a continuation of Vocabulary I. The student will learn identification and use of closed, open, and accented syllables, using a pronunciation key, synonyms, antonyms, words in context, words borrowed from names and places, foreign phrases test taking strategies, identifying the " $y$ " sound in words, vowel clusters, separate sounds for the consonants " $c$ " " $g$ " and " $s$ ", origin of words, review parts of speech, analogies, homonyms, homographs, foreign terms. Competencies will include: Learn advanced vocabulary techniques, learn the different parts of speech along with Latin and Greek word, learn about multiple meaning words, learn the difference between prefixes and suffixes. learn dictionary skills. learn and understand what Etymology is, learn about Foreign Phrases and Foreign Terms

## WEDU 0953 A+ Writing I WE (180 hours)

This course focuses on English essentials including, sentence structure, grammar punctuation, parts of speech, nouns, verbs, conjunctions, adjectives, capitalization, sentence types, contractions, abbreviations, subject, adverbs, verb tenses, contractions, conjunction, cases, pronouns, tricky words, prepositional phrases, using direct quotations, importance of parallelism, correct placement of modifiers, apostrophes, punctuation of bibliographies, titles, letters, dialogue, parallelism, and sentence mechanics. Competencies will include: Learn the fundamentals of writing, learn English essentials and how to apply them in proper sentence structure, learn how to use word application and make grammar improvements, learn to identify a noun, pronoun, verb, adverb, and adjective in a sentence, learn when to use capitalization and conjunctions correctly in a sentence and learn the importance of parallelism

WEDU 0954 A+ Reading I WE (180 hours) This course will increase reading comprehension and vocabulary skills. It includes other aspects of reading fundamentals such as, Word families, vowels, consonants, antonyms, homophones, compound words, synonyms, phonograms, prefixes, suffixes, nouns, verbs, predicting outcomes, interpreting feelings, story details, similarity, difference, cause, effect, syllables, analogies, sequencing, main ideas and details, fact and opinion, common expressions, story elements, alphabetizing, folktales and fables, reality and fantasy, Fiction and non-fiction, literary forms, figurative language, sound-letter, correspondences, blends, pronunciation and syllabification, comprehension skills, propaganda and bias, word analysis skills, sight words, conflict and climax, poetry. Competencies will include: Learn basic reading comprehension skills, learn definitions of cause and effect and how to identify them, learn to identify three patterns from memory, learn when to use first person, second person and third person, learn to correct placement and use of prefixes, learn how to identify and use root words without spelling changes, root words with spelling changes, learn to identify short vowel sounds and sound letter correspondences and correctly read and sound out words, and learn to correctly use abbreviations and punctuations

## WEDU 0955 A+ Reading II WE (90 Hours)

This course is a continuation of Reading I. The student will learn Greek and Latin words, connotation and denotation, word similarities, abbreviations, comprehension skills, including classifying, comparing and contrasting, recognizing cause and effect, point of view, literary terms, elements of fiction, newspaper writing poetry, drama, figurative language, predicting outcomes, common expressions, poetry, literary devices, letters and pronunciation, spelling review, context clues, literary forms, mood, tone, farce and satire. Competencies will include: Learn advanced reading techniques, learn proper use of abbreviations and common expressions, learn the difference between connotation and denotation, learn the different elements of fiction and literary devices, learn proper ways of compiling poetry. learn how to become a creative writer using ideas and opinions and learn story details and proper sequencing.

## WEDU 0956 A+ Math I WE

(180 hours)
This course is an introduction to mathematical concepts. The student will learn numbers and counting, ordering numbers, ordinal numbers, addition, number sense, subtraction, fact families, story problems, telling time, three dimensional
figures, symmetry, fractions, odds and evens, money and money strategy, graphing, using a calculator, measurement and estimating, logic, counting bills and coins, using a number line, mental math, bar graphs, estimating differences, estimating and measuring time, mass, reading temperatures in Celsius and Fahrenheit, multiplication, dividing, probability, plane figures, ordered pairs, plane figures, identifying faces, edges, and corners, five-step process for problem solving, grouping addends, writing decimals, comparing maps and grids, exponents, use of line and circle graphs, Venn diagrams, least common multiples, lines and angles, circles, perimeter, circumference, pyramids, and probability, prime numbers, ratio, percents concepts, positive and negative integers, and ordered pairs. Competencies will include: Learn the fundamentals of math such as addition, subtraction, division and multiplication, learn to apply the fundamentals of math in fractions, money, story problems, decimals, diagrams and graphing. learn techniques in calculating, estimating, mass and reading temperatures in Celsius and Fahrenheit, learn the formulas needed for geometry and apply them using two and three dimensional objects, learn about integers and how to read a number line.

## WEDU 0957 A+ Writing II WE (30 Hours)

This course is a continuation of Writing I. The students will learn identifying the audience, writing introductory and concluding sentences, using a variety of techniques, organizational skills, identifying sentence types and their punctuation, writing narrative or expository stories, summarizing skills, writing biographical sketches, essays, and creative writing, brainstorming to publishing, specialized writing assignments including journal writing, writing paragraphs, writing using formal and informal language, letter writing, analogies, summaries, and book reports, identifying and narrowing a topic, drafting, editing, publishing, writing complete sentences, correct word choices, writing biographical sketches, ideas and opinions, using the library, writing short stories, poetry. Competencies shall will include: Learn advanced writing techniques, learn the proper way to compose a book report, learn creative writing skills, learn how to compile sentences to create short stories and essays, learn when to use capitalization and conjunctions correctly in a sentence, learn how to become a creative writer using ideas and opinions

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ENGL
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ESOL
FAML
GEO
GEOG
GHUM
HEAL
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HIST
HYDR
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MACH
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## WEDU 0958 A+ Math II WE <br> (90 hours)

This course introduces the student to advanced math; the student will learn distributive properties, inverse operation, factors, number theory, mixed numbers, ratios, percent concepts commissions, measurements of length, mass/weight, metric units, points, angles, calculating perimeter, area, volume, using a number line, graphing ordered pairs randomly occurring events, counting principle factorials, introduction to algebra, rays, quadrilaterals, Pythagorean Theorem, slope, binomials, determinants, Cramer's rule, number notation, multiplicative property of zero, inverse operations of multiplication and division, factors, exponents, statistics, scatter plots, basic geometric terms, circles, area, volume, sine, and cosine ratios. Competencies will include: Learn problem solving skills in advanced mathematics, learn to apply these skills in expressions, inequalities, inverse operations, integers, binomials and polynomials, learn advanced techniques in addition, subtraction, multiplication and division, learn pre-algebra and algebraic skills, and learn how to apply and use the Pythagorean Theorem and Cramer's Rule

## WILDERNESS STUDIES (WILD)

Nathan Wilson

Wilderness Studies, an academic program for serious students, centers around a required 3-credit hour Humankind and the Environment course and a 2 credit hour Field Experience course. Historical and contemporary perspectives of human relationship to the environment, environmental ethics, global concerns, and other topics are discussed. Through backpacking trips into wilderness areas, field camps, museum tours, guest lectures, and river trips, students become acquainted with ways others perceived and adapted to the environment.

The student's schedule is completed from a selection of courses drawn from the general offerings of the college. Students are expected to have and maintain at least a 2.5 GPA.
The program is in no way a survival course. Trips into the wilderness follow a no-impact philosophy. Students should be in good physical condition, but need no special athletic abilities. Many of our participants are first-time backpackers.

There is a special $\$ 50.00$ fee required and backpacks, tents, stoves, sleeping bags, and other equipment
are available. for further information, contact the Department of Wilderness Studies, College of Eastern Utah, Price, UT, 84501, (435) 613- 5288.

## SUMMER EXPERIENCE IN BLANDING

Summer Experience blends academic courses and field trips into a fun-packed, seven-week adventure. Classes are combined with a variety of field experiences in anthropology, astronomy, geology, natural history, recreation, and humanities. A specific fee is required.
Students may visit an observatory or explore ancient Anasazi sites in rugged desert terrain, for natural history credit, students study plant and rock samples in the unspoiled wilderness of southeastern Utah. A rafting trip down the winding San Juan River fills a recreation credit. Cultural events include museum tours, attendance at an opera or the Shakespearean Festival. Summer Experience is a great way to enhance textbook studies in an outdoor setting. for more information, contact the San Juan Campus, 639 West 100 South, Blanding, Utah 84511. (435) 6782201, ext. 135 or 121.

## WILDERNESS STUDIES COURSES

After the course title is a designation such as (3:3:3). The first number is the number of credits, the second number is the hours spent in lecture and the third number is the hours spent in lab.

## 1210 Field Experience

(2:2:0)
Eastern Utah and its varied and spectacular landscapes offer the perfect laboratory for relating knowledge gained in the classroom to the real world environment. Through a combination of carcamping, backpacking, river running, mountain biking or skiing.

## 2010 Humankind and the Environment

This introductory course provides a basic overview of environmental science and a discussion of vital environmental issues concerning humankind throughout the world today. WILD 2010 introduces students to the discussion of both the factual and philosophical aspects of environmentalism as well as the history of environmental thought and activism in the United States since the late 19th century. Through a multi-disciplinary students will become familiar with basic environmental scientific thought, will gain a comprehensive understanding of local, national and global environmental issues, and will relate knowledge gained in class to the real world
through four major field trips, service projects, and personal writing and research projects. Students will be evaluated through written examinations, quizzes, discussion, group research projects, and a personal journal. Prerequisite: Concurrent enrollment in WILD 1210. Enrollment in the program by instructor permission.

## 2977 Cooperative Education

(1-3:0:1-3) This course provides supervised on-the-job training in wilderness studies. The student meets with the instructor/coordinator periodically during the course to determine and evaluate learning objectives, hours to be worked, and credit. Prerequisite: Instructor permission.

2988 Special Problems
(1-3:0:1-3)
Individual work approved by instructor. Time and credit to be arranged.

2999 Workshop
(1-3:1-3:0)
A course designed to meet the changing needs of the student in Wilderness Studies.

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