COURSE DESCRIPTIONS

Central Oregon Community College has a diverse selection of transfer and Career and Technical Education (CTE) courses. Prerequisites are specified in many of the course descriptions. It is the student’s responsibility to meet the prerequisite conditions before enrolling in the course.

Courses are grouped alphabetically by the subject prefix and then by number. Not every course is offered every term; consult the COCC credit class schedule online (cocc.edu) for details of courses offered by term, format, location and time.

COURSE NUMBERING

Courses with subject names (e.g., MTH 111) and numbered 100–299 are designed to meet COCC certificate or degree requirements.

Courses with subject names (e.g., MTH 065) and numbered below 100 do not normally transfer to four-year institutions.

Adult continuing education courses offered through Community Learning are non-credit, non-transferrable classes. A schedule of these courses, available through Community Learning, is published prior to each term. This schedule gives city and site locations for Community Learning classes throughout the College district.

HOW TO READ A COURSE DESCRIPTION

COURSE LISTING

BA 220 – BUSINESS ANALYSIS AND BUDGETING
This course is designed to develop mathematical analytical skills in performing the daily tasks of a manager or salesperson. The course has a threefold focus: strengthening understanding and use of business terminology in regards to financial information; development of spreadsheet skills in evaluating the costing, pricing and financing strategies of products and services; and development of skills in evaluating and making budgeting, financial and investment decisions. This is a hands-on, skills-oriented course. Prerequisites: BA 104, CIS 131, BA 112. Recommended preparation: CIS 125E.

Credits: 4    Lecture: 3  Other: 2

EXPLANATION

The course number and the title of the course are listed in all capital letters.

The course description briefly summarizes the course content.

Prerequisites, (or instructor’s approval) if any, are listed by course number after the course description. It is important to note prerequisites prior to registering. A prerequisite is a course that must be completed with a “C” grade or better. A prerequisite with concurrency is a course which must be completed prior to or while attending the selected course. A corequisite is a course which must be completed while attending the selected course.

The content in the stated course is recommended beforehand for student success in the selected course, but is not required for registration.

The number of credits earned by taking the course and the number of hours per week in lecture and labs or other.
ALLIED HEALTH

AH 111 - MEDICAL TERMINOLOGY I
Covers terminology pertaining to medical term construction, body structure, integumentary, hematopoietic/lymph, cardiovascular, oncology, respiratory and musculoskeletal systems. Includes standard abbreviations, anatomic, diagnostic, symptomatic and operative terms related to these body systems. Students (online and face-to-face) must pass a face-to-face written final exam at 70% or higher to pass this class. The overall grade parameter to pass this class is “C” (75%) or higher.
Credits: 3    Lecture: 3

AH 112 - MEDICAL TERMINOLOGY II
The second of a two-quarter sequence that provides continuity from AH 111 in medical terminology used in the health sciences that pertain to the human body. This course studies neurologic terms and disorders; the digestive system; urogenital system; endocrine system; gynecologic and obstetric terminology; fetal and neonatal disorders and anomalies; terminology relating to psychiatry, anesthesiology, pharmacology, and emergency medicine; and the sense organs of sight and hearing. Students (online and face-to-face) must pass a face-to-face, written final exam at 70% or higher to pass this class. The overall grade parameter to pass this class is “C” (75%) or higher. Prerequisites: AH 111.
Credits: 3    Lecture: 3

AH 113 - INTRODUCTION TO THE STUDY OF DISEASE
Reviews abnormal pathological changes that occur within individual organs and body systems as the result of a disease process. Disease processes are studied in detail with regard to the cause, pathological features, physical signs and symptoms, diagnostic procedures, current preferred treatment, prognosis and pertinent public health issues. Recommended preparation: or to be taken with BI 122 or BI 233.
Credits: 5    Lecture: 5

AH 115 - CULTURAL RESPONSIVENESS IN ALLIED HEALTH
Highlights the impact of cultural differences on both the patient and the caregiver. Examines the major categories of diversity, language, heritage, biases, and stereotypes and how these might impact patient care. Examines how knowledge of diversity issues can be essential to the caregiver in communication and treatment. Prerequisites: WR 121.
Credits: 3    Lecture: 3

AH 199 - SPECIAL TOPICS: ALLIED HEALTH
This course is in development. Reserved for courses that cover topics of general interest in health occupations.
Credits: 1 to 3

AH 205 - MEDICAL ETHICS
Explores the relation of traditional ethical precepts to current biomedical ethical controversies. Open to all students without prerequisites, but recommended primarily for students enrolled in, or planning to enroll in, programs in nursing or other health care professions. Recommended preparation: WR 121.
Credits: 3    Lecture: 3

AH 299 - SELECTED TOPICS: ALLIED HEALTH
This course is in development.
Credits: 1 to 4

ANTHROPOLOGY

ANTH 102 - ARCHAEOLOGY
Provides an introduction to archaeological method and theory along with a survey of human world prehistory through the rise of great civilizations. In this course we will address questions relevant to the practice of archaeology: What is archaeology? Why do archaeologists dig holes? How do archaeologists know where to dig? What is material culture? How do archaeologists analyze and understand what they find? Topics include archaeological concepts, survey, excavation, analysis and interpretation of data, dating techniques, research methods and theories of cultural change.
Credits: 4    Lecture: 4

ANTH 103 - CULTURAL ANTHROPOLOGY
Provides an introduction to the diversity of human beliefs and behaviors around the world. Explores cross-cultural similarities and differences in systems of values, family, religion, economics, politics, and social structure, including issues of race and ethnicity. The goals of this course are to foster an appreciation of cultural diversity, to use this appreciation to better understand the student’s culture(s) and to learn to be active and aware participants of local and global communities.
Credits: 4    Lecture: 4

ANTH 141 - FILM & SOCIETY: RACE, GENDER AND CLASS
Examines the representation of race, social class and gender in film. Special attention is given to how particular representations reflect the broader historical context surrounding when the films were produced and culturally-based audience sentiments. Anthropological and sociological analyses of the films will be provided to give a multi-disciplinary account of how films reflect, create and support various ideological positions regarding race, class and gender. This course is also offered as SOC 141; students cannot use credit from both courses.
Credits: 2    Lecture: 1 Lab: 3

ANTH 142 - FILM & SOCIETY: GLOBAL CULTURES
Examines global issues in both foreign and domestic films from sociological and anthropological perspectives. Selected films cover topics that are relevant to understanding global processes such as global economy and Islam in the contemporary world, as well as films that address the more regionally localized processes of community and family. The purpose of the course is to use film to expose students to diverse perspectives and to encourage the critical awareness of the global interconnections that influence and constrain our modern lives. Films will include documentaries, as well as feature films.
Credits: 2    Lecture: 1 Lab: 3

ANTH 143 - FILM & SOCIETY: CONTEMPORARY ISSUES
Examines contemporary issues in film from sociological and anthropological perspectives. Selected films cover topics as youth culture, nationalism, local culture and poverty, mental health or other social problems. The content of the films, as well as issues of film production, historical context and audience reception will be the major focus of analysis.
Credits: 2    Lecture: 1 Lab: 3

ANTH 188 - SPECIAL STUDIES: ANTHROPOLOGY
Examines topics of current interest in the discipline.
Credits: 1 to 4

ANTH 199 - SELECTED TOPICS: ANTHROPOLOGY
This course is in development.
Credits: 1 to 4

ANTH 202 - ARCHAEOLOGY OF OREGON
Investigates the diverse nature of Oregon archaeology. Prehistoric patterns of human occupation in five distinct regions will be analyzed: the Great Basin, Columbia Plateau, Lower Columbia and Coast, Willamette Valley and the Southwestern Mountains. Furthermore, the course will investigate how the diversity of eco-scapes within Oregon shaped the manner in which humans culturally, technologically and spiritually adapted to their environments. Recommended preparation: WR 121 and ANTH 102.
Credits: 4    Lecture: 4

ANTH 234 - BIOLOGICAL ANTHROPOLOGY
An introduction to biological anthropology. The goal of this course is to achieve the basic scientific literacy necessary to understand and think critically about contemporary human variation, bio-cultural interactions, and five million years of human evolution. It examines the biological evidence for human evolution and population variation. Lecture topics include the mechanisms of evolution, cell biology and human genetics,
primate behavior, the human fossil record, and modern human variation and adaptations.

Credits: 4 Lecture: 3 Lab: 3

ANTH 235 - EVOLUTION OF HUMAN SEXUALITY
Examines the complex interplay between culture and biology in human sexual behavior with particular attention to anatomy and physiology as traits that have evolved from our primate and mammalian ancestors. Focus will be on theoretical issues in evolution and the implications of these theoretical models on human behavior. Topics include human mating systems across cultures, sexual selection, reproduction, physiological and hormonal processes, as well as the non-reproductive aspects of human sexuality and the physiological and hormonal processes of sexuality. Recommended preparation: ANTH 234.

Credits: 4 Lecture: 4

ANTH 237 - FORENSIC ANTHROPOLOGY
This course teaches the basic analysis of human remains for the medico-legal profession, and will cover the history of the discipline, the human skeleton, determining postmortem interval, trauma evaluation and individual identification. It will also cover the investigation of crime scenes, the role of the forensic anthropologist, and case studies from a number of various situations. Recommended preparation: ANTH 234.

Credits: 4 Lecture: 4

ANTH 240 - LANGUAGE AND CULTURE
An introduction to the relationship between communication and culture. Designed to help students become familiar with and understand the mechanics of language from brain structure to how we make sounds; cross-cultural and historical variations between and within communicative systems; and language as a form of social interaction, specifically exploring the complex and diverse relationships between language, socio-cultural, politics and identity. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ANTH 250 - FOOD AND CULTURE
Provides an introduction to the diversity of food ways and the cultural significance of food and eating around the world. Topics explored will include food rules and rituals, consumption and health, food movements, food scarcity and poverty, global movement of foods, as well as the gendered dimensions of food and eating, with particular focus on body and body image. By the end of the course, students will have gained a broad-ranging familiarity with the cultural, political and economic aspects of past and present human food systems and be able to recognize and analyze the social linkages and hierarchies embedded in food systems. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ANTH 254 - MAGIC, WITCHCRAFT, RELIGION
Introduces students to the subject of religion in the broad anthropological context, contributes to a deeper awareness of diverse expressions of religious faith in a multicultural world, and promotes openness to and tolerance of world views different from the student’s own. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ANTH 283 - INTRODUCTION TO MEDICAL ANTHROPOLOGY
Introduces the main theories, concepts, and methods of exploring health, illness, disease and health care systems from a medical anthropological perspective. Uses a cultural interpretive approach to explore health beliefs, healing practices, and healer’s and patient’s roles within the context of world health care systems. Includes an examination of the biomedical model of health care as a cultural construct created through Western belief systems. P/NP grading. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ANTH 295 - GENDER AND SEXUALITY IN AN ANTHROPOLOGICAL PERSPECTIVE
Examines the constructions of femininities, masculinities and sexualities from a cross-cultural perspective. The cross-cultural focus will provide students with the comparative framework necessary to understand the diversity of gender roles within the context of specific cultural, political and economic processes. While exploring how both Western and non-Western cultures from diverse parts of the world imagine, negotiate, and even contest gender identities and relations, this course will also address key theoretical issues and anthropological approaches to understanding gender. Recommended preparation: WR 121 and ANTH 103.

Credits: 4 Lecture: 4

ANTH 298 - INDEPENDENT STUDY: ANTHROPOLOGY
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: Instructor approval. Recommended preparation: prior coursework in the discipline.

Credits: 1 to 4

ANTH 299 - SELECTED TOPICS: ANTHROPOLOGY
This course is in development.

Credits: 1 to 4

APPRENTICESHIP

APR 101 - ELEC/MFG PLANT 1 - BASIC ELECTRIC THEORY
Students will be introduced to content in trade math, fundamental concepts of electricity, resistance, Ohm’s law, series circuits, parallel circuits, grounding, grounding electrode systems, and the National Electrical Code. This course will be taught in a lecture/lab format with hands-on use of meters, power supplies, relays and switches.

Credits: 4 Other: 8.4

APR 102 - ELEC/MFG PLANT 2 - BASIC WIRING
This course includes principles of inductance, capacitance, transformer fundamentals, generator fundamentals, electric motors, enclosure grounding, and the National Electrical Code as it applies to these topics. This course will be taught in a lecture/lab format, with labs demonstrating the electrical functions of the various elements.

Credits: 4 Other: 8.4

APR 103 - ELEC/MFG PLANT 3 - INDUSTRIAL WIRING
Students will be introduced to commercial building plans and specs, reading drawings, branch and feeder circuits, appliance circuits, lighting circuits, panel boards, protection circuits, cooling systems, and the National Electrical Code as it applies to these topics. This course will be taught in a lecture/lab format, with a field trip to either a hospital, a newspaper publishing facility or a mill.

Credits: 4 Other: 8.4

APR 104 - ELEC/MFG PLANT 4 - COMMERCIAL WIRING
Course content includes industrial plans and site work, substations, panel boards and feeders, wire tables, determining conductor size, motors, controllers, ventilating, system protection, site lighting hazards, programmable logic controllers, and the National Electric Code as it applies to these topics. This course will be taught in a lecture/lab format, with labs demonstrating the electrical functions of the various elements.

Credits: 4 Other: 8.4

APR 111M - METERING BASICS
This course is an introduction to electrical trade theory for Meterman Apprentices and will review math concepts including percentages, scientific notation, metric prefixes, ratios, proportions, and equations. Apprentices will also be introduced to electrical topics such as current, voltage, resistance, Ohm’s Law, power, DC series and parallel circuits. Lastly students will learn about single phase metering, Blondel’s Theorem, metering vocabulary, single phase transformers and working safely within the electric field.

Credits: 4 Other: 8.4

APR 118M - TRANSFORMER CONNECTIONS
This course is designed to instruct Meterperson Apprentices on the fundamentals of transformer bank connections: delta-delta, wye-wye, wye-delta and single-phase regulators. Apprentices will also learn about
conditions that can cause back feed, while continuing to learn about single phase metering.
Credits: 4 Other: 8

APR 121 - BOILER OPERATOR 1 - STATIONARY ENGINE PRINCIPLES
The course will cover stationary engineering principles, boiler types and accessories, and trade math.
Credits: 4 Other: 8.4

APR 121M - METERING FUNDAMENTALS I
This course is designed to instruct second year Meterperson Apprentices on the fundamentals of AC theory. This includes: DC review, trigonometry review, RC, RL, TLC circuits, series and parallel resonance. Apprentices also learn how to apply mathematical and vectorial approaches for deriving the values of Real, Apparent and Reactive Power in an electrical service. Additionally they learn about instrument rated three phase metering and refining what they have already learned about single phase metering.
Credits: 4 Other: 8

APR 122 - BOILER OPERATOR 2 - BOILER ACCESSORIES
The course content will cover boiler accessories, fuel burning equipment, combustion and draft controls.
Credits: 4 Other: 8.4

APR 122M - METERING FUNDAMENTALS II
This course is designed to instruct second year Meterperson Apprentices on the graphic representation of system parameters (i.e. currents & voltages) and various transformer line-ups that create those parameters. Apprentices learn how to apply mathematical and vectorial approaches for deriving the values of Real, Apparent and Reactive Power in a electrical service. Additionally they learn about instrument rated three phase metering and refining what they have already learned about self-contained three phase metering.
Credits: 4 Other: 8

APR 141 - SHEET METAL CORE CURRICULUM
This course is an introduction to construction and maintenance skills used in various crafts. Basic concepts in safety, math, tools, blueprints and rigging are examined this first term. In addition, employment opportunities will be explored through various apprenticeship trades.
Credits: 4 Other: 8

APR 142 - SHEET METAL I
This course presents related training material consistent with the minimum skill requirements of the sheet metal trade. The content includes elements of trade specific tools and fundamentals of duct layout and safety as it relates to the sheet metal trade.
Credits: 4 Other: 8

APR 143 - BASIC LAYOUT
Introduction to trade, terminology, trade math, tools, shop safety, shop equipment, basic layout of duct work and fittings.
Credits: 4 Other: 8

APR 144 - SHEET METAL MATH
Covers fractions and decimals, geometric shapes, equation solutions, ratios and proportions, perimeters, areas and volumes of geometric shapes; powers and use of the scientific calculator. Emphasis is on applications to applied sheet metal fabricators. There will be lab time in the class to work on assignments.
Credits: 4 Other: 8

APR 145 - BLUEPRINT READING
Introduction to blueprint reading, drafting blueprints, scaling existing buildings and drafting mechanical systems.
Credits: 4 Other: 8

APR 146 - ARCHITECTURAL SHEET METAL
The study of architectural sheet metal in the context of today’s industry. The course of study includes the following: discovery of various types of materials; study profiles of roofing panels, water conductors, various types of roof flashings; related trades that are integral with this trade; the philosophy of layout in the field; and the application of actual installations, safety equipment and practices applicable to the trade.
Credits: 4 Other: 8

APR 201 - ELEC/MFG PLANT 5 - MOTOR CONTROLS
Course of study includes reversing circuits applied to motors, power distribution systems, transformers, electronic control devices, relays, photoelectric and proximity controls, programmable controllers, starters, preventive maintenance and the National Electric Code as it applies to these topics. This course is taught in a lecture/lab format, with labs covering wiring and operation of listed equipment to control a small motor.
Credits: 4 Other: 8.4

APR 202 - ELEC/MFG PLANT 6 - MOTOR CONTROLS/CIRCUITS
Course of study includes reversing circuits applied to motors, power distribution systems, transformers, electronic control devices, relays, photoelectric and proximity controls, programmable controllers, starters, preventive maintenance, and the National Electric Code as it applies to these topics. This course will be taught in a lecture/lab format, with the lab portion including the demonstration of and hands on programming of variable speed drives.
Credits: 4 Other: 8.4

APR 203 - ELEC/MFG PLANT 7 - MOTOR APPLICATIONS
Topics include safety, commercial and residential calculations; wiring methods; related theory and the National Electric Code as it applies to these topics. This course will be taught in a lecture/lab format. Lab will include field trip to a commercial building with walk-through of service equipment and heating/cooling equipment.
Credits: 4 Other: 8.4

APR 204 - ELEC/MFG PLANT 8 - NEC CODE
Topics include theory and application of motor controls, solid state fundamentals, special termination, layout, hazardous locations and transformer locations, operation and maintenance of high voltage switchgear and starters, and a thorough review of the National Electric Code. This course will be taught in a lecture/lab format, with students having the opportunity to take practice quizzes and practice code exams.
Credits: 4 Other: 8.4

APR 221 - BOILER OPERATOR 3 - BOILER OPERATION
The course content will include boiler operation, maintenance, water treatment and boiler room safety.
Credits: 4 Other: 8.4

APR 222 - BOILER OPERATOR 4 - STEAM USAGE
The course content includes steam usage and management, basic electricity principles and basic knowledge of steam turbines.
Credits: 4 Other: 8.4

APR 223 - TURBINE OPERATOR 1 - APPLIED MECHANICS
The course content will include mathematics, mensuration, applied mechanics, thermodynamics, steam and internal combustion engines, steam and gas turbines, refrigeration, air compression and lubrication.
Credits: 4 Other: 8.4

APR 224 - TURBINE OPERATOR 2 - INSTRUMENTATION
The course content will include basic electricity, electronics and control instrumentation, fluid mechanics, pumps, power plant piping systems, air compressors and different types of power plants.
Credits: 4 Other: 8.4

APR 225 - TURBINE OPERATOR 3 - THERMODYNAMICS
The course content will include internal combustion engines, lubrication, thermodynamics, heat engines, steam engines and steam and gas turbines.
Credits: 4 Other: 8.4

APR 226 - TURBINE OPERATOR 4 - ELECTRICAL THEORY
The course content will include electrical theory, AC and DC electrical machines, transformers and rectifiers, steam turbine theory, construction of steam turbines, and steam turbine and condenser operation and maintenance.
Credits: 4 Other: 8.4
ART 101 - INTRODUCTION TO THE VISUAL ARTS
Introduction to the understanding and appreciation of the visual arts. Provides a foundation in the basic concepts, vocabulary of the elements and principles of design as well as materials, methods and processes. A wide variety of artworks are explored. May include some hands-on experience with various mediums.

Credits: 4 Lecture: 4

ART 110 - INTRODUCTION TO GRAPHIC DESIGN
This course introduces students to standard graphic design applications such as Adobe Illustrator and Photoshop for drawing and page layout purposes for art, design and the web.

Credits: 3 Other: 6

ART 115 - BASIC DESIGN: 2-D
Introduction to theory and studio practice using the elements of line, shape and texture with the principles of organization to articulate visual ideas in black and white.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 116 - BASIC DESIGN: COLOR
Introduction to color theory and studio practice using value, hue and intensity with the elements of line, shape, texture and the principles of organization to articulate visual ideas with two-dimensional color design problems.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 117 - BASIC DESIGN: 3-D
Explores elements and principles of design through hands-on experience to make three-dimensional constructions from inexpensive materials. A foundation course for students interested in ceramics, sculpture and other three-dimensional design fields.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 121 - CERAMICS: INTRODUCTORY HAND BUILDING
This course introduces basic hand building skills, simple glaze application and an understanding of fundamental ceramic processes, for students with little or no experience. Includes presentation of historical, cultural and contemporary trends in ceramics. Students should plan on at least one term of this course and one term of Introductory Wheel Throwing before advancing to Intermediate Ceramics and beyond. May be repeated up to 9 credits. Recommended preparation: ART 117 and ART 131.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 122 - CERAMICS: INTRODUCTORY WHEEL THROWING
This course introduces basic wheel throwing skills, simple glaze application and an understanding of fundamental ceramic processes, for students with little or no experience. Includes presentation of historical, cultural and contemporary trends in ceramics. Students should plan on at least one term of this course and one term of Introductory Hand Building before advancing to Intermediate Ceramics and beyond. May be repeated up to 9 credits. Recommended preparation: ART 117 and ART 131.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 131 - DRAWING I
Emphasis on observing and developing fundamental drawing and composition skills. Still life material used extensively. Recommended preparation: ART 117.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 132 - DRAWING II
Concepts and skills developed in ART 131 will be applied to introduction to drawing the figure and portraits. Recommended preparation: ART 131.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 133 - DRAWING III
Emphasis on landscape drawing and creative expression working with a broader range of media. Recommended preparation: ART 131.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 157 - METALCRAFT I
Basic skills necessary to work nonferrous metals plus hot and cold fabrication, forging, texturing and cabochon stone-setting are included in the metalwork sequence. Projects can be jewelry, hollowware or small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention is encouraged. Should be taken in sequence. Recommended preparation: MTH 060.

Credits: 3 Lecture: 1.5 Lab: 4.5

ART 157A1 - METALWORK & JEWELRY - HOT FABRICATION I
Introduction to the basic skills used to fabricate non-ferrous metals including silver, copper and copper alloys to make jewelry or other small metal objects. Projects will be joined using high temperature silver solder and natural gas/compressed air torches as the heat source. Additional instruction includes developing designs, annealing, drilling, sawing, filing, texturing, dapping and finishing techniques.

Credits: 2 Lecture: 1 Lab: 3

ART 157A2 - METALWORK & JEWELRY - HOT FABRICATION II
Builds the skills learned in ART 157A1. Students will develop soldering skill by designing more complex and dimensional projects. Bezel setting a cabochon stone, making hinges and more complex forming techniques.
<table>
<thead>
<tr>
<th>COURSE DESCRIPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 157A1 - METALWORK &amp; JEWELRY - COLD FABRICATION I</td>
</tr>
<tr>
<td>Introduction to the basic skills used to fabricate non-ferrous metals including</td>
</tr>
<tr>
<td>silver, copper and copper alloys to make jewelry or other small metal objects.</td>
</tr>
<tr>
<td>Projects will be joined using rivets, tabs, links and other methods of cold</td>
</tr>
<tr>
<td>connections. Additional instruction includes developing design, annealing,</td>
</tr>
<tr>
<td>drilling, sawing, filing, texturing, dapping and finishing techniques.</td>
</tr>
<tr>
<td>Credits: 2  Lecture: 1  Lab: 3</td>
</tr>
</tbody>
</table>

| ART 157B1 - METALWORK & JEWELRY - COLD FABRICATION II                           |
| Builds the skills learned in ART 157B1 with more challenging project             |
| assignments. Students will develop technical skills by designing projects,       |
| which include simple forming techniques, moving parts, incorporating found       |
| Credits: 2  Lecture: 1  Lab: 3                                                   |

| ART 157C1 - JEWELRY - PRECIOUS METAL CLAY & ENAMELING I                         |
| An introduction to working with Precious Metal Clay (PMC) to make fine           |
| silver jewelry. The course will include designing projects, making a texture    |
| stamp, manipulation and joining techniques for both soft and unfired PMC, kiln   |
| firing and finishing techniques.                                               |
| Credits: 1  Other: 2                                                            |

| ART 158B1 - JEWELRY - CASTING & CHAIN MAKING I                                 |
| An introduction to centrifugal lost wax casting process. Additive and           |
| subtractive methods will be used to sculpt small-scale wax models, which will   |
| be sprued, invested cast and cast. Fusing links to weave simple chains and      |
| finishing techniques will be included.                                         |
| Credits: 2  Lecture: 1  Lab: 3                                                   |

| ART 158B2 - JEWELRY - CASTING & CHAIN MAKING II                                |
| Builds on the skills learned in ART 158B1. It will include centrifugal,         |
| vacuum, cuttlebone casting and sand casting. The use of molds to duplicate      |
| textures to transfer onto wax, creating stone settings in wax, controlling the  |
| wax burn-out and weaving complex linked chains will be included. Recommended   |
| Credits: 2  Lecture: 1  Lab: 3                                                   |

| ART 158C1 - JEWELRY - ENAMELING I                                             |
| Basic introduction to enameling on copper and fine silver. Techniques for       |
| texturing, using stencils, sifting and wet-packaging enamel, adding foils,      |
| kiln firing, cold connecting and finishing techniques will be included.        |
| Credits: 1  Other: 2                                                            |

| ART 158C2 - JEWELRY - ENAMELING II                                            |
| Builds on the skills learned in ART 158C1. Techniques of champeule, cloisonne,  |
| image transfer and fusing the enamel with a torch will be included. Recommended |
| Credits: 1  Other: 2                                                            |

| ART 159A1 - METALWORK & JEWELRY - FORMING I                                   |
| Students will make non-ferrous metal projects which include a third            |
| dimension. The projects can be fabricated jewelry, containers, or small-        |
| scale sculpture made using folding, scoring, chasing and repousse, or other    |
| metalworking techniques used to form sheet metal. Projects may include the use  |
| of hot and/or cold connections and non-metal materials. Recommended preparation:|
| ART 157A1.                                                                  |
| Credits: 2  Lecture: 1  Lab: 3                                                 |

| ART 159A2 - METALWORK & JEWELRY - FORMING II                                  |
| Builds on the skills learned in ART 159A1. The projects can be fabricated     |
| from sheet metal using angle raising, shell forming, hydraulic-press forming   |
| and electro-forming. Projects may include the use of hot and/or cold           |
| connections and non-metal materials. Recommended preparation: ART 157A1 and ART|
| 159A1.                                                                      |
| Credits: 2  Lecture: 1  Lab: 3                                                 |

| ART 159B2 - METALWORK & JEWELRY - ETCHING & HYDRAULIC PRESS II                |
| Builds on the skills learned in ART 159B1. Etching resists will include        |
| markers, oil paint and asphaltum varnish as resists for copper. Non-            |
| conforming carved acrylic and liquid steel conforming dies will be made to      |
| form the etched metal using the hydraulic press. Recommended preparation: ART  |
| 159B1 and either ART 157A1 or ART 157B1.                                       |
| Credits: 2  Lecture: 1  Lab: 3                                                 |

| ART 159C1 - JEWELRY - PRECIOUS METAL CLAY & ENAMELING I                       |
| Focuses on improving designs for fine silver precious metal clay. The fired    |
| projects will be enhanced with enamel to add color and then fired again to      |
| fuse the enamel. Recommended preparation: ART 157C1.                           |
| Credits: 2  Lecture: 1  Lab: 3                                                 |

| ART 159C2 - JEWELRY - PRECIOUS METAL CLAY & ENAMELING II                      |
| Focuses on designing projects to create recesses in the precious metal clay.   |
| After firing the PMC, enamel is placed in the depressions. The project is       |
| fired again to fuse the enamel. Cold connections and adding gold will also be   |
| covered. Recommended preparation: ART 159C1.                                   |
| Credits: 2  Lecture: 1  Lab: 3                                                 |

| ART 161 - PHOTOGRAPHY I                                                      |
| Introduction to traditional black and white film photography including        |
| camera operation, composition, film processing, printing and presentation.    |
| Emphasis is on creative problem solving and understanding the basic           |
| photographic concepts used to create good visual communication.               |
| Weekly photo assignments will require shooting outside of class, as will       |
| text readings. In-class critiques of work are a major part of this course.    |
| Recommended preparation: ART 115.                                             |
| Credits: 3  Lecture: 1.5  Lab: 4.5                                            |

| ART 162 - PHOTOGRAPHY II                                                     |
| Introduction to black and white fine printing in the traditional wet dark      |
| room. Course includes a basic overview of the Zone System, with the goal of    |
| “pre-visualizing” a scene as a finished photograph being an expected         |
| outcome. Students work with fiber-base printing paper, print bleaching,       |
| toning, archival print finishing and other advanced techniques to create an   |
| expressive print statement. Creative problem solving and development of       |
| personal vision are a course emphasis. Weekly shooting and printing          |
| assignments, class critiques and a final project are part of the course.      |
| Recommended preparation: ART 161.                                             |
| Credits: 3  Lecture: 1.5  Lab: 4.5                                            |

| ART 163 - PHOTOGRAPHY III                                                    |
| An exploration of alternative darkroom processes including hand coloring,      |
| multiple image printing, selective/multiple toning, “solarization” (Sabattier |
| effect), negative prints and more. A course goal is to use a “post-visualization” |
| approach, allowing students to evolve visual communication beyond what was     |
| initially conceived in the field. Creative problem solving and development of  |
| personal vision are emphasized. Weekly printing assignments, class critiques  |
| and a final project are part of the course. Recommended preparation: ART 161.  |
| Credits: 3  Lecture: 1.5  Lab: 4.5                                            |

| ART 181 - PAINTING I                                                        |
| Introduction to materials and techniques using alkyd oil, acrylic and/or      |
| water-soluble oil paints, building canvas supports, stretching canvas and      |
| preparing printing grounds. Studio experience using Still life, self-portrait,  |
| landscape and the figure. Recommended preparation: ART 115, ART 131 or        |
| instructor approval.                                                         |
| Credits: 3  Lecture: 1.5  Lab: 4.5                                           |

| ART 182 - PAINTING II                                                       |
| Introduction to color theory and personal expression. Studio experience       |
| using still life, portrait, figure and landscape. Application of compositional |
| principles using the grid, sequential imagery and continuous field.          |
| Recommended preparation: ART 131 and ART 181 or instructor approval.          |
| Credits: 3  Lecture: 1.5  Lab: 4.5                                           |
ART 183 - PAINTING III
Exploration of personal iconography. Studio experience using still life, landscape, figure in context, abstract spatial and abstract geometric.
Recommended preparation: ART 131 and ART 182 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 184 - WATERCOLOR I
Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 185 - WATERCOLOR II
Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.
Recommended preparation: ART 131 and ART 184 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 186 - WATERCOLOR III
Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence.
Recommended preparation: ART 131 and ART 185 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 187 - SPECIAL STUDIES: ART
Explores topics of current interest in the discipline.
Credits: 1 to 4

ART 190 - FIGURATIVE CLAY SCULPTURE
Introduction to modeling the human form in clay from clothed and unclothed models using traditional additive and subtractive processes. Historical treatments of the figure and contemporary approaches will be referenced. Recommended preparation: ART 131 and ART 154.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 191 - SCULPTURE
Studio introduction to articulation of visual ideas in three dimensions using additive, subtractive and construction processes. Recommended preparation: ART 117.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 197 - ART PORTFOLIO CREATION
Art Portfolio Creation prepares students for the business and professional art world. Students will create both digital and hard-copy portfolios while learning about public relations, marketing, promoting, business guidelines, time management, contracts, presentations, goal setting, long-term inspiration and commitment to their craft, as well as exhibition hanging, timelines and reception set-ups. Students will review art school requirements and learn how to fill out applications for art schools, residencies, grants and art scholarships. This course also includes practical experience in art exhibitions in the Pence Gallery at Pinckney Center.
Credits: 2 Lecture: 2

ART 199 - SELECTED TOPICS: ART
This course is in development.
Credits: 1 to 3

ART 231 - DRAWING IV
Application of drawing skills with increased emphasis on individual direction and creative expression. Should be taken in sequence.
Recommended preparation: ART 131, ART 132, ART 133.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 232 - DRAWING V
Application of drawing skills with increased emphasis on individual direction and creative expression. Should be taken in sequence.
Recommended preparation: ART 231.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 233 - DRAWING VI
Application of drawing skills with increased emphasis on individual direction and creative expression. Should be taken in sequence.
Recommended preparation: ART 232.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 234 - FIGURE DRAWING I
Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media. Recommended preparation: ART 131 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 235 - FIGURE DRAWING II
Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media. Recommended preparation: ART 234 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 236 - FIGURE DRAWING III
Studio introduction to drawing the clothed and unclothed figure using a variety of techniques and media. Recommended preparation: ART 235 or instructor approval.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 252 - CERAMICS: INTERMEDIATE WHEEL THROWING
Enhances ceramic wheel throwing skills, with an emphasis on complex functional forms, as well as the understanding of glaze formulation, testing and kiln firing. Includes presentation of historical, cultural and contemporary trends in ceramics. May be repeated up to 9 credits. Recommended preparation: ART 121 and ART 122.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 253 - CERAMICS: INTERMEDIATE CERAMICS
Enhances ceramic hand building and wheel throwing skills. Continued focus on complex thrown and hand built forms with attention to design elements, as well as the understanding of glaze formulation, testing and kiln firing. Includes presentation of historical, cultural and contemporary trends in ceramics. Independent development of a unique body of work, for presentation/exhibition, is expected. May be repeated up to 9 credits. Recommended preparation: ART 121 and ART 122.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 257 - METALCRAFT IV
Skills to work nonferrous metals such as hydraulic press, enameling, granulation, reticulation, electro-forming, fold forming, chasing and repousse, angle-raising, and fabricated hollowware are included. Projects can be jewelry, hollowware or small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention are encouraged. Recommended preparation: ART 159 and ART 117.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 258 - METALCRAFT V
Skills to work nonferrous metals such as hydraulic press, enameling, granulation, reticulation, electro-forming, fold forming, chasing and repousse, angle-raising, and fabricated hollowware are included. Projects can be jewelry, hollowware or small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention are encouraged. Recommended preparation: ART 257 and ART 117.
Credits: 3 Lecture: 1.5 Lab: 4.5

ART 259 - METALCRAFT VI
Skills to work nonferrous metals such as hydraulic press, enameling, granulation, reticulation, electro-forming, fold forming, chasing and repousse, angle-raising, and fabricated hollowware are included. Projects can be jewelry, hollowware and small sculpture. Development of imaginative ideas and personal aesthetic direction is expected. Experimentation and invention are encouraged. Should be taken in sequence. Recommended preparation: ART 117 and ART 158.
Credits: 3 Lecture: 1.5 Lab: 4.5
ART 261 - DARKROOM PHOTOGRAPHY
This course is an application of darkroom photography. Students must have prior knowledge of traditional black and white film photography including: camera operation, film processing and darkroom printing. Emphasis is on creative problem solving and understanding the photographic concepts used to create good visual communication. Requirements include outside-of-class shooting, and independent in-lab processing and printing. In-class photo critiques of work and a hanging of work are a major part of this course. Recommended preparation: ART 161.
Credits: 3  Lecture: 2  Lab: 3

ART 265 - DIGITAL PHOTOGRAPHY
Introduces students to the basics of composition and camera settings and provides an understanding of digital photo-editing for the purpose of creating successful landscape, portrait, montage and other photographic forms. Students must own a digital camera.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 266 - RAKU-SPECIAL TOPICS
Short course focusing on the raku firing process. Recommended preparation: ART 154.
Credits: 2  Lecture: 1  Lab: 3

ART 267 - DIGITAL PHOTOGRAPHY II
This course is an intermediate continuation of digital photography including: the zone system technique for image exposure; advanced photo-editing techniques; lighting concepts; and presentation. Emphasis is on creative problem solving and mastering the basic photographic concepts used to create good visual communication. Requirements include outside-of-class shooting, as well as readings. In-class photo labs and critiques of work are a major part of this course. Recommended preparation: ART 265.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 270 - PRINTMAKING
Students will practice printmaking, including relief, intaglio process on an individual project basis. Processes and materials are presented for students to complete four to five hand-pulled prints. All projects serve as an introduction to various printmaking methods and reproduction printing techniques. Recommended preparation: ART 131 or ART 183 or instructor approval.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 281 - PAINTING IV
Introduction to materials and techniques using alkyd oil, oil and/or water-soluble oil paints and mediums. Studio emphasis on exploration, self-expression and nontraditional supports. Recommended preparation: ART 131 and ART 281 or instructor approval.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 282 - PAINTING V
Emphasis on individual exploration of color, visual concepts, critical doubling, the diptych and scale. Recommended preparation: ART 131 and ART 281 or instructor approval.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 283 - PAINTING VI
Emphasis on independent projects, the triptych, exploration of contemporary problems in painting, statement of a thesis, painting the proposition through a series of interrelated works and the professional documentation and exhibition of the paintings. Recommended preparation: ART 131 and ART 282 or instructor approval.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 284 - WATERCOLOR IV
Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence. Recommended preparation: ART 131 and ART 186.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 285 - WATERCOLOR V
Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence. Recommended preparation: ART 131 and ART 284 or instructor approval.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 286 - WATERCOLOR VI
Studio exploration of the unique qualities of watercolor as a painting medium. Emphasis on fundamental skills, color and composition while painting from a variety of subjects. Should be taken in sequence. Recommended preparation: ART 131 and ART 285 or instructor approval.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 291 - MOLD MAKING FOR CERAMICS AND SCULPTURE
Intermediate studio course with emphasis on developing skills and technical knowledge in mold making processes. Topics covered include plaster molds for ceramic slip casting, block molds, two part and complex molds. Lecture and research topics encompass Mold Making and Casting in Art and Industry, Historical Uses of Mold Making and Contemporary Materials/Processes. Recommended preparation: ART 191 or ART 121.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 292 - SITE SPECIFIC SCULPTURE
Acquaints students with the possibilities of using non-traditional means such as site, time, and interactivity to communicate ideas. Through a process of research and collaboration, students create interactive sculptural artworks on site. Culminates with a public exhibition of individual and group projects. Recommended preparation: ART 117 and/or ART 191.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 293 - OUTDOOR AND PUBLIC SCULPTURE
Explores the meaning and varieties of art created in and for public spaces, especially concentrating on work that contains environmental and social themes. Each student will generate several proposals, informed by research and readings, then create a work of public art as the primary goal. Recommended preparation: ART 117 and/or ART 191.
Credits: 3  Lecture: 1.5  Lab: 4.5

ART 298 - INDEPENDENT STUDY: ART
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: Instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

ART 299 - SELECTED TOPICS: ART
This course is in development.
Credits: 1 to 3

ART HISTORY

ARH 188 - SPECIAL STUDIES: ART HISTORY
Explores topics of current interest in the discipline.
Credits: 1 to 4

ARH 199 - SELECTED TOPICS: ART HISTORY
This course is in development.
Credits: 1 to 4

ARH 201 - ART HISTORY: WESTERN: PREHISTORY TO EARLY BYZANTINE
Surveys the major periods of visual arts in the West. Introduces students to the concepts of art and surveys the development of art in historical context from Prehistory through the early Byzantine Empire. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them. Recommended preparation: WR 065 or higher.
Credits: 4  Lecture: 4
ARH 202 - ART HISTORY: WESTERN: EARLY MEDIEVAL TO LATE RENAISSANCE
Surveys the major periods of visual arts in the West. Introduces students to the concepts of art and surveys the development of art in historical context from the Early Middle Ages through the Late Renaissance. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them. Recommended preparation: WR 065.
Credits: 4 Lecture: 4

ARH 203 - ART HISTORY: WESTERN: EARLY BAROQUE TO LATE 20TH CENTURY
Surveys the major periods of visual arts in the West. Introduces students to the concepts of art and surveys the development of art in historical context from the Baroque Age through the 20th Century. Emphasizes selected works of painting, sculpture, architecture, and other arts studied in relation to the cultures producing them. Recommended preparation: WR 065.
Credits: 4 Lecture: 4

ARH 206 - MODERN ART HISTORY
A specialized chronological survey of Modernism in the visual arts from the mid-19th Century to the present day. Explores the many eclectic developments in Modern art from its beginnings through the Postmodern contemporary era. Emphasizes major artists, movements, and critical concepts in modern art and theory, and relates those concepts to the art of the past as well as issues facing artists and society today.
Credits: 4 Lecture: 4

ARH 207 - NATIVE AMERICAN ART HISTORY
Survey of the arts indigenous to Mesoamerican and North American Indian cultures emphasizing architecture, pottery, painting and the fiber arts.
Credits: 4 Lecture: 4

ARH 208 - ART HISTORY: NON-WESTERN
A specialized survey of the art of Non-Western cultures around the world, from the Prehistoric past through the present day. This course will examine the artistic and cultural traditions of Islam, India, East Asia, the Pacific Islands, Sub-Saharan Africa and the Americas. The course will focus on understanding select works of art and architecture within their original cultural, religious, and historical contexts, and will contrast various Non-Western artistic philosophies and values with those of the Western world. Recommended preparation: WR 065.
Credits: 4 Lecture: 4

ARH 298 - INDEPENDENT STUDY: ART HISTORY
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Prerequisite: Instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

AUTOMOTIVE

AUT 101 - BASIC ELECTRICITY FOR AUTOMOTIVE
Provides understanding of fundamental principles of electricity. Covers basic electrical quantities, Ohm’s law, power, series, and parallel circuits, magnetism, electromagnetism and an introduction to DC-current troubleshooting. Introduces student to the use of a digital multimeter and oscilloscope. Student will also be introduced to electrical schematics. A self-paced course. Prerequisite with concurrency: AUT 106.
Credits: 2 Lab: 6

AUT 102 - AUTOMOTIVE ELECTRIC I
Covers Automotive Electrical Skills. Introduces the testing, disassembly, and rebuilding of various electrical equipment. Troubleshooting and using various test equipment common to the Automotive trade will be stressed. Introduces the use of automotive scan tools for basic diagnostics. Introduces the use of intrusive and non-intrusive testing methods. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.
Credits: 5 Lecture: 2 Lab: 9

AUT 103 - AUTOMOTIVE ELECTRIC II
Studies disassembly, testing and rebuilding of various electrical equipment. Stresses troubleshooting and using various test equipment common to the automotive trade. Prerequisites: AUT 102.
Credits: 2 Lecture: 1 Lab: 3

AUT 104 - AUTOMOTIVE ELECTRIC III
A hands-on study and familiarization of repair procedures for air bag, security entry and cruise control systems. Learn diagnostic and repair procedures using body control modules. Learn diagnostics and repair procedures for hybrid and new electrical systems. Prerequisites: AUT 103.
Credits: 2 Lecture: 1 Lab: 3

AUT 105 - DIESEL PERFORMANCE I
Introduces principles of diesel systems and basic diagnosis. Includes engine analysis, cooling and exhaust systems, fuel management systems and diesel engines. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.
Credits: 2 Lecture: 1 Lab: 3

AUT 106 - AUTOMOTIVE PROGRAM ORIENTATION
Introduction to the Automotive program. Provides an introduction of the fundamental principles of automotive shop safety and tool care. Guidance given on the self-paced course format. This course is required prior to taking any automotive course. This is a three-day, intensive course that is only taught at the beginning of each term. Permissible to be taken in a term along with other automotive courses. Recommended preparation: or to be taken with AUT 101, AUT 107, AUT 110, AUT 115 and MTH 020 or higher or minimum placement into MTH 060.
Credits: 1 Lecture: 1

AUT 107 - MECHANICAL SYSTEMS I
Provides an understanding of the fundamental principles of automotive shop safety and tool care. Develops mechanical knowledge and skills utilized throughout a career in the automotive field. Includes techniques of routine vehicle maintenance. Includes customer vehicle identification and handling, new vehicle pre-delivery inspection and preparation, safety inspection, lubrication tasks, and light line tasks. A self-paced course. Prerequisites with concurrency: AUT 106.
Credits: 3 Lab: 9

AUT 110 - SMALL GAS ENGINES
Designed to study and apply the theory, operation, diagnoses and repair of small gas engines and their use in the world today. A self-paced course. Prerequisites with concurrency: AUT 106.
Credits: 3 Lab: 9

AUT 111 - COMPUTERIZED ENGINE CONTROLS
Studies advanced electrical systems found on late-model vehicles. Provides solid understanding of computerized automotive engine control systems and how they operate and the ability to diagnose, troubleshoot and repair computerized engine control systems. Prerequisites: AUT 205.
Credits: 5 Lecture: 2 Lab: 9

AUT 112 - BASIC ENGINE PERFORMANCE I
This course is designed to study and apply the theory, operation, diagnoses and repair of the points-type ignition and carburetion systems as they were used in vehicles of the past. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.
Credits: 1 Lab: 2

AUT 113 - BASIC ENGINE PERFORMANCE II
Designed to continue the study and apply the theory presented in AUT 112 Basic Engine Performance I. Continues with the operation, diagnoses, and repair of the carburetion system as it was used in vehicles of the past. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115.
Credits: 1 Other: 2
AUT 114 - WELDING FOR THE AUTOMOTIVE TRADE
Provides a basic understanding of the fundamental principles of automotive fabrication, including safety topics. Topics include welding, fundamentals of welding equipment, welding processes, and procedures. Credits: 3

AUT 115 - COLLEGE SUCCESS FOR AUTOMOTIVE TECHNOLOGY
Prepares students for successful completion of the Automotive Technology degree at COCC and explores careers as an automotive technician and professional. Offers a condensed version of the College Success course geared toward the two Automotive Technology degrees and/or the multiple Automotive Certificates. Introduces the various automotive information systems, hand tool usage, Scan Tool introduction, and resume preparation. Prerequisites with concurrency: AUT 106. Recommended preparation: OR to be taken with MTH 020 or higher or minimum placement into MTH 060.

Credits: 2 Lecture: 2

AUT 199 - SELECTED TOPICS: AUTOMOTIVE
This course is in development.

Credits: 1 to 4

AUT 201 - AUTOMOTIVE ENGINES
Provides information on the construction, operation and design of the internal combustion engine. Teaches the concepts and procedures of engine work to cover the proper procedure in rebuilding a four-cycle internal combustion engine. Includes a combination of guided lecture and laboratory applications, stressing safety, accuracy of measurement, proper usage of tools, and application of repair manuals through actual overhaul of engines. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

Credits: 4 Lecture: 2 Lab: 6

AUT 202 - MANUAL DRIVE TRAINS I
A self-paced course that studies standard transmissions and transaxles. Students will learn on college-owned components. The students will learn operating principles, diagnosis, construction, approved repair procedures, and overhaul of current transmission types on manual transmissions and transaxles. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

Credits: 3 Lab: 9

AUT 203 - MANUAL DRIVE TRAINS II
Second part of a manual transmission sequence. A study of standard transmission and the relationship to clutches, driveshafts, rear axle assembly, transaxle, shift controls and four-wheel drive components. Students will learn on college-owned components. The student will learn operating principles, diagnosis and approved repair procedures on manual transmissions and related power train components. Includes emphasis on diagnosis, service, and procedure to conform to current service manuals. Prerequisites: AUT 202.

Credits: 3 Lecture: 1.2 Lab: 6

AUT 204 - STEERING AND SUSPENSION
Designed to study and apply the theory, operation, diagnoses and repair of the modern suspension and steering systems. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: AUT 208.

Credits: 3 Lecture: 1.2 Lab: 6

AUT 205 - ENGINE PERFORMANCE I
Studies the diagnosis of drivability problems. Covers engine analysis, cooling and exhaust systems, ignition and fuel management systems. Prerequisites: AUT 103.

Credits: 2 Lecture: 1 Lab: 3

AUT 206 - ENGINE PERFORMANCE II
Studies diagnosis of drivability problems. Includes further study of engine analysis, ignition and fuel management systems, and super performance diagnosis. Provides the technician with a look into the causes of automotive emissions in relation to vehicles that are four years old and newer. Looks at various methods of emissions inspection/maintenance testing, the diagnosis of failed vehicles, and enhanced on-board computer systems. Also covers the testing of alternative-fuel vehicles. Prerequisites: AUT 111.

Credits: 2 Lecture: 1 Lab: 3

AUT 208 - AUTOMOTIVE BRAKES
Studies the theory, operation, diagnosis and repair of the modern braking systems of both domestic and import vehicles. Includes an introduction to anti-lock brake systems. Prerequisites: AUT 101, AUT 106, AUT 107, AUT 110 and AUT 115. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

Credits: 3 Lecture: 1.2 Lab: 6

AUT 211 - ASE TEST PREP I
This self-paced, program-specific course allows the student to study in preparation for the ASE A1-AS areas. Recommended preparation: completion of two terms of Automotive Technology curriculum and WR 060.

Credits: 1 Lab: 3

AUT 212 - ASE TEST PREP II
This self-paced, program-specific course allows the student to study in preparation for the ASE A6-AB areas. Recommended preparation: completion of two terms of Automotive Technology curriculum and WR 060.

Credits: 1 Lab: 3

AUT 216 - CO-OP WORK EXPERIENCE AUTOMOTIVE
Provides an environment in which students can begin to recognize their strengths and limitations in their chosen career. The student is placed in an actual job environment where pressure, production, and personalities are experienced. Cooperative Work Experience is a program requirement for students in the Automotive Technology program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. Prerequisites: completion of two terms of Automotive Technology curriculum.

Credits: 1 to 4

AUT 216A - CWE AUTOMOTIVE A
The student is provided with the environment in which he/she can begin to recognize his/her strengths and limitations in their chosen career. The student is placed in an actual job environment where the experiences of pressure, production, and personalities are experienced. Cooperative Work Experience, is a program requirement for students in the Automotive Technology Program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. 4 credits per section (144 hours). Prerequisites: instructor approval. Recommended preparation: at least 24 credits of automotive courses.

Credits: 4

AUT 216B - CWE AUTOMOTIVE B
The student is provided with the environment in which he/she can begin to recognize his/her strengths and limitations in their chosen career. The student is placed in an actual job environment where the experiences of pressure, production, and personalities are experienced. Cooperative Work Experience, is a program requirement for students in the Automotive Technology Program. Two CWE sections are required for the student who will achieve the Master Automotive Technician Certificate. 4 credits per section (144 hours). Prerequisites: instructor approval. Recommended preparation: at least 24 credits of automotive courses.

Credits: 4

AUT 251 - AUTOMATIC TRANSMISSIONS I
Provides an understanding of the basic principles and theory of planetary gear sets, torque converters and hydraulic controls as applied to automatic transmissions. Includes construction, operation and overhaul
of current transmission types with emphasis on diagnosis, service and procedures to conform to current service manuals. A self-paced course.

Prerequisites: AUT 203.

Credits: 3  Lab: 9

AUT 253 - AUTOMOTIVE AIR CONDITIONING
A hands-on study of automotive air conditioning and heating systems, concurrent with EPA Recovery Requirements for R-12, R-134a systems, diagnosis and service. A study of advanced electrical systems found on late-model vehicles. Prerequisites: AUT 102. Recommended preparation: MTH 020 or higher or minimum placement into MTH 060.

Credits: 3  Lecture: 1.2  Lab: 6

AUT 256 - AUTOMATIC TRANSMISSIONS II
This is the second part of an automatic transmission sequence. This course will continue principles and theory of planetary gear sets, torque converters, and hydraulic controls as applied to automatic transmissions. Includes emphasis on diagnosis, service, and procedures to conform to current service manuals. The student will also be introduced to Constant Velocity Transmissions/Hybrid Electric Vehicles/Electric Vehicle type transmissions. Prerequisites: AUT 251.

Credits: 4  Lecture: 2  Lab: 6

AUT 260 - DIESEL PERFORMANCE II
This is the second part of a diesel performance sequence. This course will provide the operational principles and theory of: Hydraulically actuated Electronically controlled Unit Injection **(HEUI) systems, the Electronic Unit Injection *(EUUI) systems, and the Common Rail (CR) systems, as they are applied to Diesel Engine Performance. The course will include, in depth, Controller Area Networking (CAN),multiplexing, Controller Area Networking (CAN C) language (J1939 protocol), Software Updates, (J2534 re-flash), Vehicle Communication Interface (VCI), Selective Catalytic Reduction (SCR), Exhaust Gas Recirculation (EGR) systems, Variable Geometry Turbo-chargers (VGT), Constant Geometry Turbo-chargers (CGT) systems, Diesel Particulate Filter (DPF) variations, Diesel Oxidation Catalyst (DOC) systems, and diagnostic strategies, that will lead to accurate conclusions. The student will be exposed to multiple vehicle product lines during this course and will be introduced to the proper techniques and procedures to repair them. Prerequisites: AUT 206.

Credits: 4  Lecture: 2  Lab: 6

AUT 270 - AUTOMOTIVE CONTROLLER SYSTEMS I
Technological advancements in modern vehicles have changed how we perform diagnosis. This course examines various methods of those advancements of automotive drive systems, with major emphasis on electronic programming, and how to accurately repair them, using computers and scan tools. This course will require the student technician to build on current diagnostic routines into advanced applications.

Prerequisites: AUT 206.

Credits: 4  Lecture: 2  Lab: 6

AUT 271 - AUTOMOTIVE CONTROLLER SYSTEMS II
Vehicle performance is enhanced by a variety of methods. This course examines various methods of performance enhancements of automotive drive systems with major emphasis on electronic programming. Manufacturer scan tools will be included with vehicle testing. Prerequisites: AUT 206. Recommmended preparation: AUT 270.

Credits: 4  Lecture: 2  Lab: 6

AUT 280 - HYBRID ELECTRIC VEHICLES I
A study of HEV (hybrid electric vehicles) and EV (electric vehicles). Safety procedures will be strongly emphasized. Vehicle systems that will be covered: Hybrid safety and service procedures, introduction to hybrid batteries and service, introduction to hybrid electric motors, generators, and controls, regenerative braking systems, introduction to hybrid vehicle transmissions and transaxles, hybrid vehicle heating and air conditioning, first responder safety and procedures, introduction to manufacturer scan tools, hybrid vehicle diagnostic trouble codes. Prerequisites: AUT 206.

Credits: 4  Lecture: 2  Lab: 6

AUT 281 - HYBRID ELECTRIC VEHICLES II
A study of HEV (hybrid electric vehicles) and EV (electric vehicles) part 2. Safety procedures will be strongly emphasized. Vehicle systems that will be covered include: Hybrid safety and service procedures, advanced hybrid batteries testing and service, advanced testing of hybrid electric motors, generators, and controls along with extensive manufacturer scan tools use and vehicle testing. Prerequisites: AUT 206. Recommended preparation: AUT 280.

Credits: 4  Lecture: 2  Lab: 6

AVIATION

AV 101 - INTRODUCTION TO AVIATION
This course introduces the student to the Federal Aviation Regulations/ Aeronautical Information Manual (FAR/AIM). Designed to build an understanding of the pilot credentials required for a career in aviation and help students explore various career options. A variety of employment opportunities are investigated, including commercial, business, corporate, military and general aviation-related business. Emphasis will be given to careers in operations and flight technology. Airplane and helicopter pilot careers will be emphasized.

Credits: 3  Lecture: 3

AV 104 - INTRODUCTION TO AIRCRAFT SYSTEMS
Introduces the student to the training aircraft that are used in general aviation, and will look in detail at those aircraft used in this program. Aircraft in current use for training by industry will be studied and emphasis placed on basic aircraft systems operations, including emergencies. Applicable Federal Aviation Regulations, including the use of Minimum Equipment Lists, will be studied.

Credits: 4  Lecture: 4

AV 108 - METEOROLOGY I
A survey course in atmospheric science that covers weather basics and atmospheric circulations. Included is a systematic development of the following: the atmosphere, energy and temperature, wind, atmospheric moisture, horizontal and vertical pressure patterns, clouds, atmospheric circulation, stability, air masses, fronts, fog, icing, thunderstorms, jet streams and turbulence. Students will study surface weather observations, routine weather reports and forecasts, surface maps and constant pressure maps.

Credits: 4  Lecture: 4

AV 110 - PRIVATE PILOT - AIRPLANE
Provides initial ground instruction in aeronautical skills and knowledge for the FAA Private Pilot certificate. Involves an introduction to fundamentals of flight, aerodynamics, flight operations, airspace, weather and weather products, flight planning, decision-making, human factors, human factors in aviation, and crew resource management. Comprehensive course that prepares student for the FAA Private Pilot airman knowledge written exam. Recommended preparation: MTH 020 or higher.

Credits: 5  Lecture: 5

AV 112 - TECHNICALLY ADVANCED AIRCRAFT
The course covers the differences in design, handling characteristics, capability and operation of complex avionics packages in today’s modern aircraft. Course will concentrate on the Garmin 430, Garmin 500, Garmin 750 and Garmin 100 glass cockpit systems.

Credits: 1  Lecture: 1

AV 112A - TECHNICALLY ADVANCED AIRCRAFT LAB
The lab course provides one-on-one hands-on training in a simulator using the (FAA)-Industry Training Standards (FITS) program that emphasizes the importance of “real world” training exercises in the form of scenario training. Students will learn to program and utilize advance automated flight decks. P/NP grading.

Credits: 1  Lab: 3.2
AV 210 - INSTRUMENT - AIRPLANE
The Instrument Rating ground school prepares students for the FAA Instrument airman knowledge test and an FAA Instrument Rating. Includes an in-depth study of basic attitude instrument flying, IFR navigation systems and procedures, aircraft flight instruments, aviation weather, applicable FARs and the instrument charts required for IFR flight. Prerequisites: AV 110 (or Private Pilot Certificate).
Credits: 5 Lecture: 5

AV 215 - INSTRUMENT HELICOPTER
The instrument rating ground school for helicopter prepares students for the FAA Instrument knowledge test and an FAA Instrument Rating. Includes an in-depth study of aircraft flight instruments, basic attitude instrument flying, IFR navigation systems and procedures, aviation weather, applicable FARs, and the instrument charts required for IFR flight. Prerequisites: AV 115 (or Private Pilot Certificate).
Credits: 5 Lecture: 5

AV 220 - COMMERCIAL PILOT - AIRPLANE
Ground instruction of aeronautical skills and knowledge applicable to the FAA Commercial Pilot Certification portion of the Professional Pilot training syllabus. Covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, complex aircraft operations, advanced airplane systems, commercial operations and FAA Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management, and decision-making. Prerequisites: AV 110 (or Private Pilot Certificate).
Credits: 4 Lecture: 4

AV 222A - AIRPLANE FLIGHT LAB
AV 222A, AV222B, AV222C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 222B - AIRPLANE FLIGHT LAB
AV 222A, AV222B, AV222C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 222C - AIRPLANE FLIGHT LAB
AV 222A, AV222B, AV222C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 222D - AIRPLANE FLIGHT LAB
AV 222D, AV 222E, cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrency: AV 110 (or Private Pilot Certificate), AV 222A, AV 222B, AV 222C and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2
AV 222E - AIRPLANE FLIGHT LAB
AV 222E, AV 222F covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors and crew resource management. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrence: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222M and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 222D - AIRPLANE FLIGHT LAB
AV 222D, AV 222E, AV 222F, AV 222G, AV 222M covers night flight, aviation physiology, advanced aerodynamics, aircraft performance, weight and balance, complex aircraft operations, advanced airplane systems, commercial operations and FAA Regulations for commercial pilots and noncommercial flight operations, with emphasis on human factors, crew resource management and decision-making. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrence: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222M, AV 222I, AV 222J, AV 250 (or Certified Flight Instructor/Instrument Instructor Pilot Certificates) and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 222G - AIRPLANE FLIGHT LAB
AV 222G, AV 222H emphasize engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors and crew resource management. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrence: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222M, AV 222I, AV 222J, AV 250 (or Certified Flight Instructor/Instrument Instructor Pilot Certificates) and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 222H - AIRPLANE FLIGHT LAB
AV 222H, AV 222I, AV 222J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrence: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222M, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 222K - AIRPLANE FLIGHT LAB
AV 222K, AV 222H emphasize engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors and crew resource management. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrence: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222M, AV 222I, AV 222J, AV 250 (or Certified Flight Instructor/Instrument Instructor Pilot Certificates) and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 222M - AIRPLANE FLIGHT LAB
AV 222M, AV 222H, AV 222I, AV 222J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrence: AV 110 (or Private Pilot Certificate), AV 210 (or Instrument Certificate), AV 220 (or Commercial Pilot Certificate), AV 222A, AV 222B, AV 222C, AV 222D, AV 222E, AV 222F, AV 222G, AV 222M, and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 225 - COMMERCIAL PILOT - HELICOPTER
Reviews the principles of flight, aircraft systems, pertinent federal aviation regulations and airman publications and service in order to prepare the student for the FAA Commercial Helicopter Pilot airman knowledge exam. Prerequisites: AV 115 (or Private Pilot Certificate).
Credits: 4 Lecture: 4

AV 227A - HELICOPTER FLT LAB SERIES I
AV 227A, AV 227B, AV 227C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 227B - HELICOPTER FLT LAB SERIES I
AV 227A, AV 227B, AV 227C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.
Credits: 1 Lab: 3.2

AV 227C - HELICOPTER FLT LAB SERIES I
AV 227A, AV 227B, AV 227C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and
cocc.edu

AV 227D - HELICOPTER FLT LAB SERIES I
AV 227D, AV 227E, AV 227N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training. Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 227A, AV 227B, AV 227C and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1    Lab: 3.2

AV 227E - HELICOPTER FLT LAB SERIES I
AV 227D, AV 227E, AV 227N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training. Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 227A, AV 227B, AV 227C and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1    Lab: 3.2

AV 227F - HELICOPTER FLT LAB SERIES I
AV 227F, AV 227G, AV 227H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1    Lab: 3.2

AV 227G - HELICOPTER FLT LAB SERIES I
AV 227F, AV 227G, AV 227H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1    Lab: 3.2

AV 227H - HELICOPTER FLT LAB SERIES I
AV 227F, AV 227G, AV 227H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airman publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1    Lab: 3.2

AV 227I - HELICOPTER FLT LAB SERIES I
AV 227I, AV 227J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training. Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H, AV 227N and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1    Lab: 3.2

AV 227J - HELICOPTER FLT LAB SERIES I
AV 227J, AV 227I will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training. Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H, AV 227N and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1    Lab: 3.2

AV 227N - HELICOPTER FLT LAB SERIES I
AV 227D, AV 227E, AV 227N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training. Prerequisites with concurrency: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 227A, AV 227B, AV 227C, AV 227D, AV 227E, AV 227F, AV 227G, AV 227H, AV 227N and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1    Lab: 3.2

AV 228A - HELICOPTER FLT LAB SERIES II
AV 228A, AV 228B, AV 228C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1    Lab: 3.2

AV 228B - HELICOPTER FLT LAB SERIES II
AV 228A, AV 228B, AV 228C introduce the student to the fundamentals of flight, and the practical application of aviation weather, performance, navigation, FAA regulations, flight planning, radio procedures, and human factors. The completion of the associated flight labs will also
insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites: Instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1  Lab: 3.2

AV 228D - HELICOPTER FLT LAB SERIES II
AV 228D, AV 228E, AV 228N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training. Prerequisites with concurrence: AV 115 (or Private Pilot Certificate), AV 228A, AV 228B, AV 228C and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1  Lab: 3.2

AV 228E - HELICOPTER FLT LAB SERIES II
AV 228D, AV 228E, AV 228N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Additionally, students will earn the basic night vision goggle endorsement coincident to their instrument training. Prerequisites with concurrence: AV 115 (or Private Pilot Certificate), AV 228A, AV 228B, AV 228C and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1  Lab: 3.2

AV 228F - HELICOPTER FLT LAB SERIES II
AV 228E, AV 228G, AV 228H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airmen publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrence: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228N and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1  Lab: 3.2

AV 228G - HELICOPTER FLT LAB SERIES II
AV 228F, AV 228G, AV 228H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airmen publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrence: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228N and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1  Lab: 3.2

AV 228H - HELICOPTER FLT LAB SERIES II
AV 228F, AV 228G, AV 228H include review and refinement of the principles of flight, flight maneuvers, aircraft systems, pertinent federal aviation regulations, airmen publications and services, advanced aerodynamics, aircraft performance, and complex aircraft operations. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Prerequisites with concurrence: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228N and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1  Lab: 3.2

AV 228I - HELICOPTER FLT LAB SERIES II
AV 228I, AV 228J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training. Prerequisites with concurrence: AV 115 (or Private Pilot Certificate), AV 215 (or Instrument Pilot Certificate), AV 225 (or Commercial Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228F, AV 228G, AV 228H, AV 228N and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1  Lab: 3.2

AV 228J - HELICOPTER FLT LAB SERIES II
AV 228I, AV 228J will teach techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice ground and flight instructing will be required. The completion of the associated flight labs will also insure compliance with Federal Aviation Administration flight hour and certification requirements. Students will meet the eligibility requirement of 15 hours pilot-in-command (in the aircraft appropriate to the rating) during the instrument (R44) and commercial (R22) phases of training. Prerequisites with concurrence: AV 115 (or Private Pilot Certificate), AV 215, 225 (or Instrument Pilot Certificate and Commercial Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228F, AV 228G, AV 228H, AV 228N and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1  Lab: 3.2

AV 228N - HELICOPTER FLT LAB SERIES II
AV 228D, AV 228E, AV 228N cover practical training in aircraft instrument flight, basic attitude instrument flying, Instrument Flight Rules (IFR), navigation systems and procedures, applicable federal aviation regulations and the instrument charts required for IFR flight. Ensures compliance with Federal Aviation Administration flight hour and certification requirements. Students will earn the basic night vision goggle endorsement coincident to their instrument training. Prerequisites with concurrence: AV 115 (or Private Pilot Certificate), AV 215, 225 (or Instrument Pilot Certificate and Commercial Pilot Certificate), AV 228A, AV 228B, AV 228C, AV 228D, AV 228E, AV 228F, AV 228G, AV 228H, AV 228N and instructor approval based on proof of valid Second Class (or higher) Medical Certificate.

Credits: 1  Lab: 3.2

AV 230 - MULTIENGINE PILOT
Ground instruction of aeronautical skills and knowledge applicable to the commercial multi-engine pilot certification. Emphasis is on engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors, and crew resource management. Prerequisites: AV 220 (or Commercial Pilot Certificate) and AV 250 (or Certified Flight Instructor/Flight Instructo with Instrument).

Credits: 2  Lecture: 2

AV 235 - HUMAN FACTORS
An introduction to the field of human behavior and characteristics as critical factors in the design and operation of electronic/machine systems. Emphasis is on crew resource management and human factors, including the study of human performance in complex systems with an examination of personality, stress, anxiety, fatigue, communication skills, decision-making, situational awareness, analysis of aviation and accidents, and practical application of human factors and performance to modern aviation.

Credits: 4  Lecture: 4

AV 245 - ADVANCED HELICOPTER OPERATIONS
The course will address advanced helicopter operations in a ground school environment. Students will be introduced to operations of turbine helicopters. The mountain flying phase will provide students with a working knowledge of operations in and around mountainous terrain.
BAK 100 - WANT TO BE A PASTRY CHEF?
This course serves as an introduction to the field of baking and pastry arts. It is designed for students considering declaring Baking and Pastry Arts as a major; or those taking courses to enhance your placement scores to enter the next Cascade Culinary Institute cohort start. This course will enable students to experience an introduction to baking and pastry arts with a demonstration and hands on class that covers the basics of baking techniques and flavor profiling. Students will “get a taste” of the baking industry, while learning the secrets of being a successful pastry professional.
Credits: 2    Other: 4

BAK 101 - INTRODUCTION TO BAKING & PASTRY
This introductory level course covers the basic theory and skill sets used throughout the field of baking and pastry. Topics covered include the use of hand tools and equipment found in a bakeshop, as well as the exploration of baking and pastry ingredients and their functions. Students will gain a working knowledge of the major methods such as creaming, blending, foaming, merinques, pre-cooked, cut-in, lamination, straight dough, custards, frozen desserts, chocolates and sauces. Students will also taste and evaluate products they create in class to enhance their understanding of the course material.
Credits: 4    Other: 8

BAK 110 - BAKING AND PASTRY FOUNDATIONS I
Learn about the baking industry, nomenclature, equipment, kitchen operations, knife skills, baking techniques, science, ratios, and standardized recipes. Learn about and produce fruit desserts; cookies; merinques; pate a choux and basic custards. Prerequisites with concurrency: CUL 90; CUL 102; and choose either WR 121 or BA 214.
Credits: 4    Other: 8

BAK 140 - BAKING AND PASTRY FOUNDATIONS II
Learn production of breads and yeast doughs, laminate doughs, pies, and tarts. Topics include stages of yeast dough production, product identification, wheat based flours, baker’s percentage, gluten development, lean straight doughs, soft-crusted breads, basic laminate doughs. Prerequisites: BAK 110.
Credits: 4    Other: 8

BAK 170 - BAKING AND PASTRY FOUNDATIONS III
Produce quick breads and dessert foundation sauces, make and bake cake layers, and assemble classic cakes. Topics include menu planning and balancing flavors and textures in desserts. Prerequisites: BAK 110.
Credits: 4    Other: 8

BAK 180 - CUSTARDS AND FROZEN DESSERTS
Explore the development of custards and frozen dessert foundations, make and bake still-frozen, and churn-frozen desserts, ice creams, granitas, sorbets and sherbets. Prerequisites: CUL 110 or BAK 110.
Credits: 4    Other: 8

BAK 188 - SPECIAL STUDIES, BAKING AND PASTRY ARTS
Special Studies in Baking and Pastry Arts
Credits: 1 to 6

BAK 199 - SELECTED TOPICS: BAKING AND PASTRY ARTS
Provides opportunity for students with exceptional background or need to continue beyond normal Baking and Pastry Arts program content. Content and credit(s) earned are established by mutual agreement between instructor and student and detailed in written agreement at the start of the term.
Credits: 1 to 6

BAK 210 - MODERN SUGAR AND CHOCOLATE DECOR
Prepare a variety of chocolate and sugar decorations and develop sculpting techniques. Learn tempering chocolate, use of molds and transfer sheets. Practice various sugar techniques including pulled sugar,
BAK 215 - LAMINATED DOUGH AND VIENNOISERIE
Learn the basic principles of laminated dough and the art of viennoiserie.
Prepare European and American enriched yeast doughs including
classic and contemporary varieties of brioche, croissants, Danish, yeasted
coffee cakes, doughnuts and sweet rolls. Learn ingredient selection,
product identification, retail merchandising, formulation, shaping,
proofing, and baking quality laminated products. Prerequisites: BAK 140 or
CUL 140.
Credits: 4 Other: 8

BAK 220 - WEDDING CELEBRATION AND SPECIALTY CAKES
Learn the history of making celebration cakes including baking, assembly
and decorating. Bake sponge cakes, make buttercream, gum-paste
flowers, royal icing piped decorations and rolled fondant. Produce
wedding and celebration cakes incorporating all of these elements,
from design, baking, assembly, covering and decorating. Prerequisites:
BAK 110 or CUL 110.
Credits: 4 Other: 8

BAK 225 - ENTREMETS
Learn principles and techniques of creating entremets. Lecture and lab
topics include: the history of entremets, European design, technique and
assembly. Utilize a variety of techniques to create layers of flavor and
texture while incorporating multiple finishing and decorating styles. Apply
traditional and modern applications of glazing, and sugar and chocolate
decor. Prerequisites: BAK 140 or CUL 140. Recommended preparation:
BAK 180.
Credits: 4 Other: 8

BAK 230 - PLATED DESSERTS AND PRESENTATION
Learn the principles and techniques of plated, banquet, buffet, and
table-side desserts. Explore history, decor, purchasing, costing, flavor,
presentation, and design sweet and savory desserts. Review high-volume
production, portion control, and waste management. Create a final
dessert incorporating all topics, including individual design, flavor and
decor. Prerequisites: BAK 140 or CUL 140. Recommended preparation:
BAK 180.
Credits: 4 Other: 8

BAK 235S - CLASSICAL FRENCH PASTRIES
Produce a variety of classical and modern French cakes or "entremets." Decorate using printed logos, chocolate, and sugar. Utilize updated
methods of traditional French recipes using fresh ingredients. Prepare
classic French tarts, practicing different types of crusts, doughs and
fillings. Prerequisites: CUL 140 or BAK 140.
Credits: 4 Other: 8

BAK 240 - THE CRAFT OF ARTISAN BREADS
Learn the principles and techniques of preparing multigrain breads,
sourdoughs, bagels, pretzels, holiday or seasonal, and flat breads.
Emphasis placed on regional and international breads, handling grains
(such as sourdoughs) for specialty breads, mixing, shaping, finishing, and
innovative baking methods. Prerequisites: CUL 110 or BAK 110.
Credits: 4 Other: 8

BAK 245S - ADVANCED SUGAR DECOR AND
CHOCOLATE SCULPTING
Produce a variety of chocolate and sugar decorations using various
techniques. Learn to apply chocolate colors with a spray gun, use
molds, and make cutout decorations and silk screens. Explore various
sugar techniques as pastillage, saturated sugar, pulled sugar (ribbons
and flowers), blown, spun, piped, bubble, straw, and poured sugar
and airbrushing techniques used to create a variety of showpieces.
Prerequisites: BAK 210.
Credits: 4 Other: 8

BAK 250 - PETIT FOURS, CANDIES AND
CLASSICAL MIGNARDISE
Make individual mini French pastries and petit fours such as éclairs, fruit
tartelettes, macarons, and madeleines. Practice French pastry elements
such as pastry cream, buttercream, glazes, cream-based, fruit-based,
and chocolate-based fillings and doughs. Create petit fours displays;
make sugar confectioneries such as pâté de fruit, guimauve, praline,
caramels, nougats, lollipops and gummies. Learn how to package and
display candies. Prerequisites: CUL 110 or BAK 110.
Credits: 4 Other: 8

BAK 255S - ARTISAN BREADS WITH HEIRLOOM WHOLE GRAINS
Make a variety of specialty breads such as multigrain, rye, flax seed,
organic baguette, and organic spelt. Make products with multiple flours,
mixed fermentation techniques, and various production processes.
Analyze different flours and the health and nutritional benefits of the
breads made from them. Prerequisites: BAK 110 or CUL 110.
Credits: 4 Other: 8

BAK 260 - ADVANCED WEDDING, CELEBRATION AND
SPECIALTY CAKES
Practice advanced principles of baking, assembly, piping, and decorating
of specialty cakes and wedding cakes. Learn design theory; including
theme, color, texture, and flavor. Learn basic cake business practices
such as selection of ingredients, equipment, tools, retail pricing,
consumer trends, delivery, on site construction and client consultation.
Produce several single layer and tiered cakes, incorporating advanced
techniques; including buttercream, rolled fondant, pastillage, royal icing
piped decorations and gum paste flowers. Utilize other techniques such as
over-piping, bridgework, stringwork, smocking, painting, embossing,
airbrushing, applique and stenciling. Prerequisites: BAK 220.
Credits: 4 Other: 8

BAK 280 - BAKING AND PASTRY ARTS
INDUSTRY INTERNSHIP
Supervised work experience designed to expand career knowledge and
experiential confidence while increasing knowledge, speed, timing,
organization and the ability to execute industry skills on a repetitive basis.
Students will receive a diverse work experience designed on a systematic
rotation of different stations in the kitchen, dining room and general
operations positions. Prerequisites: BAK 140.
Credits: 6 Other: 20

BAK 298 - INDEPENDENT STUDY: BAKING
Individualized, advanced study to focus on outcomes not addressed
in existing courses or of special interest to a student. P/NP grading.
Prerequisites: instructor approval. Recommended preparation: prior
coursework in the discipline.
Credits: 1 to 4

BIOLOGY

BI 101 - GENERAL BIOLOGY: CELLS & GENES
Designed to fulfill general education requirements, this course is intended
for non-major students whose program requires biology courses. Centers
on concepts of unity of living organisms including evolution, biochemistry,
cell biology genetics and development. Need not be taken in sequence.
Lab meets first week of classes.
Credits: 4 Lecture: 3 Lab: 3

BI 102 - GENERAL BIOLOGY: EVOLUTION
Designed to fulfill general education requirements, this course is intended
for non-major students whose program requires biology courses. Focus
is on concepts of biological diversity including the evidence for and
mechanisms of evolution, sexual selection, and adaptations to local
environments. Need not be taken in sequence. Lab meets the first week
of classes. This course includes animal dissection.
Credits: 4 Lecture: 3 Lab: 3
BI 103 - GENERAL BIOLOGY: ECOLOGY
Designed to fulfill general education requirements, this course is intended for non-major students whose program requires biology courses. Focus is on ecological concepts including interactions between organisms and the abiotic environment, co-evolutionary adaptations, and Central Oregon flora and/or fauna. Scheduled labs may include outdoor field trips. Need not be taken in sequence. Lab meets the first week of classes.
Credits: 4  Lecture: 3  Lab: 3

BI 121 - ANATOMY AND FUNCTION I
Covers body organization, the cell, skin, blood, heart and circulation, immunity, respiration, bones and skeletal muscles. Designed for pharmacy technician, medical assisting and massage therapy programs. Lecture and lab are taken simultaneously; they are not offered as separate classes. Preserved animal tissues are used in some labs.
Credits: 4  Lecture: 3  Lab: 3

BI 122 - ANATOMY AND FUNCTION II
Covers the nervous system, eyes, ears, reproduction, genetics, digestion, urinary system, hormones and diabetes. Designed for pharmacy technician, medical assisting and massage therapy programs. Lecture and lab are taken simultaneously; they are not offered as separate classes. Preserved animal tissues are used in some labs. Recommended preparation: BI 121.
Credits: 4  Lecture: 3  Lab: 3

BI 188 - SPECIAL STUDIES: BIOLOGY
Explores topics of current interest in the discipline. P/NP grading.
Credits: 1 to 6

BI 202 - GENERAL BOTANY
Studies plant anatomy, human interactions with plants, and especially plant taxonomy within an evolutionary framework. Focuses on flowering plant families common in Central Oregon and identification using taxonomic keys. Recommended preparation: at least one previous biology course (BI 101, 102, 103, 211, 212, 213).
Credits: 4  Lecture: 3  Lab: 3

BI 205 - SCIENTIFIC TERMINOLOGY: LATIN AND GNOME ROOTS
Designed for majors in natural science and social science wishing to enhance their understanding of the basic Latin and Greek prefixes, suffixes, and language roots that are applicable to study and reading in science-related fields. Develops skill in how words are formed, the history, meaning, pronunciation and spelling of scientific terms.
Credits: 3  Lecture: 3

BI 211 - PRINCIPLES OF BIOLOGY I
Introduces basic principles common to all living organisms. Emphasizes chemistry and evolution of life, cellular morphology and genetics. Designed for majors in the life sciences and should be taken in sequence. Animals will be dissected in this class. Recommended preparation: CH 221.
Credits: 5  Lecture: 4  Lab: 3

BI 212 - BIOLOGY OF PLANTS II
Surveys bacteria, protists, fungi and plants; examines evolutionary and ecological interrelationships and emphasizes aspects of plant morphology and physiology. Designed for majors in life sciences as well as those pursuing botany. Field trips may be required. Prerequisites: BI 211.
Credits: 5  Lecture: 4  Lab: 3

BI 213 - BIOLOGY OF ANIMALS III
Examines evolution of animals along with their diversity, ecology, morphology and physiology. Designed for majors in life sciences. Field trips may be required. This course includes animal dissection. Prerequisites: BI 211.
Credits: 5  Lecture: 4  Lab: 3

BI 231 - HUMAN ANATOMY AND PHYSIOLOGY I
Examines the structure and function of the human body utilizing a systems approach. Emphasizes body organization, cells, tissues, as well as microscopic and gross anatomy along with the functional roles of the integumentary, skeletal and muscular systems, and concludes with nerve cells and tissue. Concurrent labs include hands-on dissections of a variety of tissues, organs, rats, fetal pigs and/or cats. First course of a sequence for students in pre-nursing and other pre-professional health programs. This course includes animal dissection and cadaver observation. Prerequisites: WR 065 or WR 095, or minimum placement into WR 121.
Credits: 4  Lecture: 3  Lab: 3

BI 232 - HUMAN ANATOMY AND PHYSIOLOGY II
Continuation of examination of the structure and function of the human body utilizing a systems approach with an emphasis on anatomical and physiological relationships between nervous, endocrine and cardiovascular systems. Concurrent labs include hands-on dissections of a variety of tissues, organs, fetal pigs and/or cats. For students in pre-nursing and other pre-professional health programs. This course includes animal dissection and cadaver observation. Prerequisites: BI 231.
Credits: 4  Lecture: 3  Lab: 3

BI 233 - HUMAN ANATOMY AND PHYSIOLOGY III
Continuation of examination of the structure and function of the human body utilizing a systems approach. BI 233 emphasizes the anatomical and physiological relationships between the lymphatic/immune, respiratory, digestive, urinary, and reproductive systems. Concurrent labs include hands-on dissections of a variety of tissues, organs, fetal pigs and/or cats. For students in pre-nursing and other pre-professional health programs. This course includes animal dissection and cadaver observation. Prerequisites: BI 232.
Credits: 4  Lecture: 3  Lab: 3

BI 234 - MICROBIOLOGY
This course is designed for students to learn the characteristics and disease-causing features of microorganisms, especially the bacteria and viruses that cause serious infectious diseases in humans. It covers defense mechanisms against infections and disease, and the development of immunity against future infections. The mechanisms of action of certain classes of anti-microbial drugs are discussed. The course also covers some of the historically-common human infections and diseases. This course is designed especially for students in nursing, pre-pharmacy and other pre-professional health programs. Prerequisites: WR 065 or higher or minimum placement into WR 095.
Credits: 4  Lecture: 3  Lab: 3

BI 280 - CO-OP WORK EXPERIENCE BIOLOGY
Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Prerequisites: instructor approval.
Credits: 1 to 4

BI 288 - SPECIAL STUDIES: BIOLOGY
Explores topics of current interest in the discipline.
Credits: 1 to 4

BI 299 - SELECTED TOPICS: BIOLOGY
This course is in development.
Credits: 1 to 5

BUSINESS

BA 101 - INTRODUCTION TO BUSINESS
In this course students will learn about the many exciting and challenging facets of business and its dynamic role in today’s environment. Students will gain a working knowledge of components of business including discussion of management, marketing, entrepreneurship and finance. During this course students will be introduced to topics which are covered in greater depth in higher level business courses. Students are encouraged to use this course to explore the breadth of business topics offered in the Business Administration degrees and identify specific areas of interest or specialization.
Credits: 4  Lecture: 4
BA 104 - BUSINESS MATH  
Designed to equip students with skills to handle everyday arithmetic problems relative to a business environment and lay the foundation for other business courses including computer classes that use basic business math as examples and assignments. Topics include ratio, proportion, percent, interest, time value of money, markup and discounts, payroll, stocks and bonds, and depreciation. Prerequisites with concurrency: MTH 060 (or higher) or minimum placement into MTH 065.  
Credits: 3    Lecture: 3

BA 111 - APPLIED ACCOUNTING I  
Designed to acquaint students with the basic functions of the bookkeeping and accounting process-journalizing transactions into the journal, posting to the general ledger, analyzing and adjusting the ledger, preparing simple financial statements for a service business and gaining an understanding and working knowledge of the overall payroll function. No previous accounting is required. Prerequisites with concurrency: MTH 060 (or higher) or minimum placement into MTH 065.  
Credits: 3    Lecture: 3

BA 112 - APPLIED ACCOUNTING II  
Continuation of Applied Accounting I. Provides a detailed study of the mechanical and theoretical aspects of the bookkeeping and accounting process as it relates to a merchandising business. Prerequisites: BA 111.  
Credits: 3    Lecture: 3

BA 113 - APPLIED ACCOUNTING III  
Continuation of Applied Accounting II. Provides an in-depth, more detailed background of specific areas of accounting to effectively deal with most accounting situations as they relate to all business forms. Prerequisites: BA 112.  
Credits: 3    Lecture: 3

BA 120 - INTRODUCTION TO SUPPLY CHAIN MANAGEMENT  
This course introduces the student to supply chain management which encompasses all activities associated with the flow and transformation of goods and services from beginning to the end user. Recommended preparation: BA 101.  
Credits: 4    Lecture: 4

BA 121 - LOGISTICS MANAGEMENT  
This course introduces the student to logistics management processes. Attention is given to such issues as transportation management, warehouse and facility location management, inventory management, and customer service strategies. Recommended preparation: BA 101.  
Credits: 4    Lecture: 4

BA 123 - INTRODUCTION TO TRANSPORTATION LOGISTICS  
This course provides a working knowledge of the processes involved in dispatching trucks, trip assembly and transportation terminology. Recommended preparation: BA 101.  
Credits: 4    Lecture: 4

BA 124 - TRUCKING OPERATIONS MANAGEMENT  
This course provides a working knowledge of the basic regulations governing the movement of domestic cargo. Additionally, the student will understand how the various modalities of domestic and international cargo combine to move freight in the global supply chain. Prerequisites: BA 123.  
Credits: 4    Lecture: 4

BA 177 - PAYROLL ACCOUNTING  
Provides the fundamental accounting skills to calculate payroll for any business organization. Topics include calculating payroll based on current laws and regulations, recording payroll transactions in the general journal and general ledger, and completing required federal payroll tax forms and reports. Recommended preparation: or to be taken with BA 112 or BA 212.  
Credits: 3    Lecture: 3

BA 178 - CUSTOMER SERVICE  
This course introduces principles of effective customer service. Students will learn to develop and implement customer service strategies using systems, technologies, and communication skills to serve diverse customer needs. By evaluating elements of customer service culture and delivery, students will understand standards of service excellence, causes of service breakdowns and service recovery techniques.  
Credits: 3    Lecture: 3

BA 188 - SPECIAL STUDIES: BUSINESS  
Engages students with projects from local businesses in the areas of accounting, marketing, management and operations. Prerequisites: instructor approval. Recommended preparation: completion of most Level I and Level II classes from the AAS degree.  
Credits: 1 to 4

BA 199 - SELECTED TOPICS: BUSINESS  
Offers selected topics of study through workshop and independent study formats. Provides opportunities for students to investigate topics of interest beyond what is covered in current degrees. Prerequisites: instructor approval.  
Credits: 1 to 5

BA 206 - MANAGEMENT FUNDAMENTALS I  
Introduces students to the theory and vocabulary of management in a business setting. All of the major theoretical foundations for understanding individual and group behavior and leadership are reviewed in a lecture and discussion instructional format. Recommended preparation: BA 101.  
Credits: 4    Lecture: 4

BA 207 - MANAGEMENT FUNDAMENTALS II  
Covers the scope of activities and roles required to be an effective manager. Applying individual and group behavior and leadership theories, and exploring the critical skills of self-management, communication, logical thinking and team building, the major functional areas of management are examined in depth through the exploration of practical applications. Case study analysis and discussion are used extensively as the instructional methods. Recommended preparation: BA 206.  
Credits: 4    Lecture: 4

BA 211 - FINANCIAL ACCOUNTING I  
Introduces financial accounting theory, including the accounting cycle, recording transactions, financial analysis, and reporting corporate financial information in accordance with generally accepted accounting principles. BA 111, 112 and 113 are required for AAS accounting specialization. Recommended preparation: MTH 060.  
Credits: 4    Lecture: 4

BA 212 - FINANCIAL ACCOUNTING II  
Continues the presentation of fundamental accounting issues begun in BA 211, with emphasis on corporate investing and financing activities and preparation of the statement of cash flows. Recommended preparation: BA 211.  
Credits: 4    Lecture: 4

BA 213 - MANAGERIAL ACCOUNTING  
Introduces managerial accounting theory, including cost-volume-profit analysis, product costing, budgeting, capital investing, and cost management in manufacturing and service organizations. Recommended preparation: BA 212.  
Credits: 4    Lecture: 4

BA 214 - BUSINESS COMMUNICATIONS  
Introduces students to prevailing practices of written and oral communication in business organizations, with special attention to audience-adaptation strategies and developing a modern communication style. Includes instruction in formatting techniques, document design, graphics, research strategies and documentation. Recommended preparation: WR 065.  
Credits: 3    Lecture: 3
BA 217 - ACCOUNTING FUNDAMENTALS
Introduces non-business majors to the accounting process and the informational reports it generates. Topics include the analyzing, recording, summarizing, and reporting of business transactions, with a special focus on using accounting reports to make informed business decisions. This course is for non-business majors and no previous accounting is required. Recommended preparation: MTH 060.
Credits: 4    Lecture: 4

BA 218 - PERSONAL FINANCE
Gives students skills in basic money management. Investigates spending habits and develops personal and family financial budgets. Also focuses on dealing with financial institutions, applying for loans and establishing personal credit. Develops understanding of managing major household expenses. Develops skill in renting, buying and selling residential property. Also focuses on buying and leasing transportation, personal income taxes and different types of insurance. Covers scope and planning of investments and retirement planning. Students develop understanding of different investments including mutual funds, stock market, real estate as an investment and Social Security. Also covers wills and trusts.
Credits: 3    Lecture: 3

BA 220 - BUSINESS ANALYSIS AND BUDGETING
This course is designed to develop mathematical analytical skills in performing the daily tasks of a manager or salesperson. The course has a threefold focus: strengthening understanding and use of business terminology in regards to financial information; development of spreadsheet skills in evaluating the costing, pricing and financing strategies of products and services; and development of skills in evaluating and making budgeting, financial and investment decisions. This is a hands-on, skills-oriented course. Prerequisites: BA 104, BA 112 and CIS 131. Recommended preparation: CIS 125E.
Credits: 4    Lecture: 3 Other: 2

BA 222 - BUSINESS FINANCE
Targets role of financial management in business and provides understanding of the effect of finance on business decisions. The course covers financial forecasting, capital budgeting and risk, financial institutions, securities markets, the investment process and working capital management. Prerequisites: BA 104 and choose BA 113 or BA 212.
Credits: 4    Lecture: 4

BA 223 - MARKETING PRINCIPLES I
Develops skills in understanding and developing strategies in the marketing environment. Covers principles and techniques of market research, consumer behavior, product development, pricing, distribution and promotion. Establishes basis for creating a marketing plan. Recommended preparation: BA 101.
Credits: 4    Lecture: 4

BA 224 - HUMAN RESOURCES MANAGEMENT
Covers principles and techniques of human resources management. Includes the following topics: hiring practices, orientation, training, job enrichment, motivation, and performance and review. Covers wage policies, benefits programs and how to comply with a myriad of legal requirements. Recommended preparation: BA 206.
Credits: 4    Lecture: 4

BA 226 - BUSINESS LAW I
Introduces general concepts, principles and individual conduct of business. The overview of law presented by this course introduces the general concepts of contract law which forms the foundation for the general conduct of business. Covers contract formation, dispute resolution, warranties, legal forms of business and credit and collections. Emphasizes managing risk in the business environment. Recommended preparation: sophomore standing, WR 121 and BA 101.
Credits: 4    Lecture: 4

BA 228 - COMPUTER ACCOUNTING APPLICATIONS
Introduces double-entry, fully-integrated computerized accounting software on the microcomputer. Students will get hands-on experience recording a variety of business transactions and preparing financial statements using the software. Recommended preparation: CIS 131 and either BA 111 or BA 211.
Credits: 3    Lecture: 2 Other: 2

BA 229 - QUICKBOOKS
Introduces students to QuickBooks accounting software. It is designed to give students the basic skills to effectively use QuickBooks and to reinforce the concepts students learned in their first accounting course. Students will get hands-on experience using the software, including recording a variety of accounting transactions and creating financial statements and other financial reports useful in making business decisions. Recommended preparation: CIS 131 and either BA 111 or BA 211.
Credits: 3    Lecture: 2 Lab: 2

BA 232 - BRANDING
Branding is a fundamental element of a competitive marketing strategy. Students will develop skills to conduct the necessary research for a firm to develop a brand identity and brand strategy. This will include the writing of a brand brief, the use of typography and color theory as well as creating compelling content for various touch points that reinforce the brand. Recommended preparation: BA 223
Credits: 4    Lecture: 4

BA 233 - INTERNET MARKETING
Building on the marketing concepts from BA 223, this course develops marketing skills in pricing, promotion and distribution strategies while using the internet. Design and content development for email, website and social media marketing based on an understanding of consumer behavior will also be covered. Additional topics include site optimization along with how to use analytic tools that will determine effectiveness of Internet marketing efforts. Note: this course does not cover HTML programming. Recommended preparation: BA 223.
Credits: 4    Lecture: 4

BA 237 - MARKETING RESEARCH
Effective marketing research is essential to modern business development. The marketing concept is, by definition, customer driven. Without an accurate and complete assessment of customer needs and wants, business risk is increased. Marketing research has become the driving force of business excellence in the 21st century. This course will explore the best methodologies for confirming strategic initiatives before committing tactical assets. Marketing research provides the critical and essential input for crafting a strategy and developing a business model. Recommended preparation: BA 223.
Credits: 4    Lecture: 4

BA 239 - ADVERTISING
This course develops understanding of the principles and techniques necessary to create an advertising campaign for a business with a focus on the promotion component of the marketing mix. Examines the ways in which advertising fits into the scheme of business marketing. Also discusses advertising and its relationships with other promotional activities. Includes a thorough look into the use of different media choices and the planning of advertising campaigns. Also covers some of the basics regarding the design of commercials and printed copy. Includes work on real-life advertising campaigns. Recommended preparation: BA 223.
Credits: 4    Lecture: 4

BA 249 - RETAILING
Develops skills in understanding and developing strategies in the retail environment. Examines the retail industry including store location, layout, display, merchandise selection, inventory and operational controls and promotion. Includes tours of local retail stores. Recommended preparation: BA 223.
Credits: 4    Lecture: 4

BA 250 - ENTREPRENEURSHIP
This course provides a solid foundation in entrepreneurship and small business management. Students will learn about the challenges facing entrepreneurship today, business management strategies, guerrilla
marketing for success, the importance of financial planning and how to effectively present an elevator pitch. Additionally, students will learn about the various legal forms of business ownership, sources of financing a business and E-Commerce. A balance between the practical learning and “real life” situations will be followed throughout the course.

**BA 253 - BUSINESS PLAN ELEMENTS**
This course focuses on the elements of a business plan- the feasibility analysis, marketing plan, management plan, operations, pro forma financials and how to present the plan.

**Credits:** 4  **Lecture:** 4

**BA 254 - BUSINESS STRATEGIES**
This course is an in depth look at business strategies covering management, financials, operations and selling with a focus on application.

**Credits:** 4  **Lecture:** 4

**BA 261 - CONSUMER BEHAVIOR**
This course explores the determinants of consumer buying behavior and the process consumers use to make buying decisions. Study includes psychological and sociological principles and their impact on purchasing behaviors. Understanding of these behaviors and the purchase process are used to help design marketing strategies. Recommended preparation: BA 223.

**Credits:** 4  **Lecture:** 4

**BA 271 - PRODUCT DEVELOPMENT PROCESS**
This course covers the product development process from cradle to grave.

**Credits:** 4  **Lecture:** 4

**BA 272 - PRODUCT DEVELOPMENT STRATEGIES**
This course is an in depth look at each of the phases of the product development process with a focus on application.

**Credits:** 4  **Lecture:** 4

**BA 280 - CO-OP WORK EXPERIENCE BUSINESS**
Provides work learning credit for student employment in fields pertaining to the business curriculum. Credit is given based upon a total workload of 100 hours per term and completion of learning objectives. Learning experience coordinated with student’s supervisor. P/NP grading. Prerequisites: instructor approval.

**Credits:** 1 to 3

**BA 285 - BUSINESS HUMAN RELATIONS**
Examines the sociological and psychological aspects of the workplace with practical applications. Based on the premise that the practice of sound human relations is essential to success in any context. Group exercises, discussion and lecture are the pedagogies used, in that order of importance. Recommended preparation: WR 121.

**Credits:** 3  **Lecture:** 3

**BA 286 - MANAGING BUSINESS PROCESSES**
Introductory course in understanding and managing business processes. Develops understanding of general concepts and principles of process management. Includes implementation procedures and specific tools used in analyzing processes, uncovering problems and finding solutions to those problems. Recommended preparation: BA 101 and BA 206.

**Credits:** 4  **Lecture:** 4

**BA 290 - BUSINESS SEMINAR**
BA 290 is the capstone course for all specializations in the Associate of Applied Science degree in Business. It is an opportunity for students to demonstrate all they have learned in the areas of accounting, management, finance, marketing and operations. It also allows for the opportunity to demonstrate communication and technology skills. The end result will be a great sample of work for the portfolio that students can use in seeking employment or advancement. This is a hands-on, skills-oriented course. Prerequisites: BA 206, BA 113, BA 220 and BA 223.

**Credits:** 3  **Lecture:** 3

---

## CHEMISTRY

**CH 104 - INTRODUCTION TO CHEMISTRY I**
Introduces basic principles of general chemistry, including atomic theory, chemical formulas and equations, bonding, stoichiometry, acid/base chemistry and solutions. Supporting laboratory work included. Not designed for science majors. Prerequisites: MTH 095 or MTH 105 (or higher) or minimum placement into MTH 105.

**Credits:** 5  **Lecture:** 4  **Lab:** 3

**CH 105 - INTRODUCTION TO CHEMISTRY II**
Builds on concepts from CH 104 introducing basic principles of general and organic chemistry, including bonding in carbon compounds, equilibrium, stereochemistry and functional group chemistry. Supporting laboratory work included. Not designed for science majors. Prerequisites: CH 104.

**Credits:** 5  **Lecture:** 4  **Lab:** 3

**CH 106 - INTRODUCTION TO CHEMISTRY III**
Builds on concepts from CH 105 introducing basic principles of general and biochemistry, including consideration of protein, carbohydrate and lipid structure and metabolism, bioenergetics, enzymes and nucleic acid chemistry. Prerequisites: CH 105.

**Credits:** 5  **Lecture:** 4  **Lab:** 3

**CH 188 - SPECIAL STUDIES: CHEMISTRY**
Explores topics of current interest in the discipline.

**Credits:** 1 to 4

**CH 221 - GENERAL CHEMISTRY I**
Explores experimental and theoretical principles of chemistry including matter, measurement, atomic structure, periodicity, stoichiometry, solutions, molecular structure, bonding, oxidation/reduction and thermochemistry. The course is algebra-based and includes supporting laboratory work. This course is appropriate for science and engineering majors. High school chemistry is recommended. Prerequisites: MTH 111, 112, 113, or 251 or higher, or minimum placement into MTH 112.

**Credits:** 5  **Lecture:** 4  **Lab:** 3

**CH 222 - GENERAL CHEMISTRY II**
This course builds on concepts from CH 221, by exploring experimental and theoretical principles of chemistry including gases, liquids, solids, solutions, kinetics, equilibrium, acids and bases. The course is algebra-based and includes supporting laboratory work. This course is appropriate for science and engineering majors. Prerequisites: CH 221.

**Credits:** 5  **Lecture:** 4  **Lab:** 3

**CH 223 - GENERAL CHEMISTRY III**
This course builds on concepts from CH 222 by exploring experimental and theoretical principles of chemistry including solubility equilibria, acid-base equilibria, electrochemistry, nuclear chemistry, metals and organic compounds. The course is algebra-based and includes supporting laboratory work. This course is appropriate for science and engineering majors. Prerequisites: CH 222.

**Credits:** 5  **Lecture:** 4  **Lab:** 3

**CH 288 - SPECIAL STUDIES: CHEMISTRY**
Explores topics of current interest in the discipline.

**Credits:** 1 to 4

---

## CHINESE

**CHN 101 - MANDARIN CHINESE I**
Introduces Mandarin Chinese language presented within the context of Chinese culture. First course of a three-course sequence. Introduces students to the sound system of Mandarin Chinese and moves on to basic skills in listening, speaking, reading and copying a limited number of Chinese characters.

**Credits:** 4  **Lecture:** 4
CHN 102 - MANDARIN CHINESE II
Introduces Mandarin Chinese language presented within the context of Chinese culture. Second course of a three-course sequence. Develops fundamental language skills (listening, speaking, reading and writing) in communicative context. Prerequisites: CHN 101.
Credits: 4 Lecture: 4

CHN 103 - MANDARIN CHINESE III
Introduces Mandarin Chinese language presented within the context of Chinese culture. Third course of a three-course sequence. Expands on effective communicative skills in both the written and spoken language with particular attention to handling uncomplicated social situations and developing writing and reading to meet a number of practical everyday needs. Prerequisites: CHN 102.
Credits: 4 Lecture: 4

CHN 110 - CHINESE CHARACTERS
An introductory course on Chinese Simplified Characters, with an emphasis on the recognition, writing, and etymology of said characters. This course will help the beginning student of Chinese, or those who have an interest in studying Chinese characters, learn to recognize many of the most common characters, write those characters using correct stroke order and learn the etymology of many of those characters. Students will also gain an understanding of the importance of Chinese characters in Chinese culture, and Chinese character’s influence in Asia in general.
Note: This is not a calligraphy course. Recommended preparation: CHN 101.
Credits: 4 Lecture: 4

CHN 140 - CONTEMPORARY CHINESE CULTURES
Provides overviews of the dynamic ideologies, political policies, economics, geography, social structures, mass media presentations, and arts and literature, since the formation of the People’s Republic of China in 1949 to the present. No background in Chinese languages is required.
Credits: 4 Lecture: 4

CHN 141 - CHINESE CULTURE THROUGH FILM
Introduction to the history, politics, society and economy of China through viewing and analyzing cinema. Examines how traditional Asian visual arts and centuries-old cultural tradition influenced filmmakers. No background in Chinese languages is required.
Credits: 4 Lecture: 4

CHN 201 - SECOND YEAR MANDARIN CHINESE I
The first course of a three-course sequence in intermediate Mandarin Chinese language and culture. This course will focus on effective communication in the Mandarin Chinese language, emphasizing both the written and spoken language, as well as an understanding of the practices and products of Chinese culture. Particular attention will be given to exploring the relationship between Chinese language, literature, philosophy and culture. Prerequisites: CHN 103.
Credits: 4 Lecture: 4

CHN 202 - SECOND YEAR MANDARIN CHINESE II
The second course of a three-course sequence in intermediate Mandarin Chinese language and culture. This course will focus on effective communication in the Mandarin Chinese language, emphasizing both the written and spoken language, as well as an understanding of the practices and products of Chinese culture. Particular attention will be given to exploring the relationship between Chinese language, literature, philosophy and culture. Prerequisites: CHN 201.
Credits: 4 Lecture: 4

CHN 203 - SECOND YEAR MANDARIN CHINESE III
The third course of a three-course sequence in intermediate Mandarin Chinese language and culture. This course will focus on effective communication in the Mandarin Chinese language, emphasizing both the written and spoken language, as well as an understanding of the practices and products of Chinese culture. Particular attention will be given to exploring the relationship between Chinese language, literature, philosophy and culture. Prerequisites: CHN 202.
Credits: 4 Lecture: 4

CHN 298 - INDEPENDENT STUDY: CHINESE
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

COMPUTER & INFORMATION SYSTEMS

CIS 010 - COMPUTER KEYBOARDING
Develops touch keystroking skills for persons who will be using computer terminals for information processing. Emphasis on proper techniques, speed and accuracy development on alphabetic keyboard and numeric keypad. For non-office administration majors. P/NP grading.
Credits: 1 Other: 2

CIS 070 - INTRODUCTION TO COMPUTERS: WINDOWS
Students will gain confidence in the use of personal computers and the Windows operating system. Topics include fundamental computer terminology, introductory use of a graphic user interface including mouse usage, windows, menus, icons and dialog boxes. Also included are file management and an introduction to word processing, web browsing and email. P/NP grading.
Credits: 2 Lecture: 1 Other: 2

CIS 099 - SELECTED TOPICS: COMPUTER AND INFORMATION SYSTEMS
This course is in development.
Credits: 1 to 4

CIS 101 - INFORMATION TECHNOLOGY ORIENTATION
Provides an understanding of the computer-related programs available to students and their pathways to further education and employment. Students will explore the training and productivity habits essential for work in IT-related fields. Students will research, plan and document knowledge and skills used in both academic and professional IT work.
Credits: 3 Lecture: 2 Other: 2

CIS 120 - COMPUTER CONCEPTS
Follows the Internet and Computing Core Certificate (IC3) national standard for digital literacy used at numerous colleges and universities across the country as well as industry. The course objectives are broken down into three modules: Computer Fundamentals, Key Applications, and Living Online. This class provides students with the knowledge and skills needed to use computers successfully at the college level. Recommended preparation: CIS 010 and CIS 070 or equivalent computer skills.
Credits: 4 Lecture: 3 Other: 2

CIS 122 - INTRODUCTION TO PROGRAMMING
Introduction to computer programming for those with little or no programming experience. Provides a strong, fundamental understanding of Visual Basic.Net. Introduces students to elementary programming concepts of algorithm design, control structures, and user interface. Students will use the basic constructs of programming including constants, variables, expressions and control structures for sequential, iterative and decision processing to solve a variety of problems. Recommended preparation: CIS 120 and CIS 131.
Credits: 4 Lecture: 3 Other: 2

CIS 125A - ACCESS
Introduction to the most popular desktop database software, Microsoft Access. This course will help students prepare for the latest Microsoft Office certification for Access (#77-885) which helps students validate the skills industries require. The course teaches users how to create and modify database tables, forms, queries and reports. The focus is on optimizing the databases for efficient data entry and generating comprehensive reports. Database design issues are discussed but not emphasized in this course. Recommended preparation: CIS 131.
Credits: 4 Lecture: 3 Other: 2
CIS 125A2 - AUTOCAD 2
Second course in a two-term sequence covering intermediate AutoCAD commands including dimension styles, templates, CAD standards, attribute blocks, attribute extraction, external references, object linking/embedding, advanced drawing set-up and plotting, and the program parameter file. Work will be completed with AutoCAD. Recommended preparation: CIS 125A1.
Credits: 4  Lecture: 3 Other: 2

CIS 125E - EXCEL
Covers intermediate and advanced features of Excel 2010 such as lists, pivot tables, working with multiple worksheets, templates, what-if-analysis, data tables, advanced formulas and functions, goal seek, solver, consolidating and importing data. Students will apply these Excel features to create and revise business worksheets. Recommended preparation: CIS 120 and CIS 131.
Credits: 4  Lecture: 3 Other: 2

CIS 125S2 - SOLIDWORKS 2
Continues the study of engineering graphics used in design and manufacturing. Includes practical applications using solid modeling software to create assemblies using these parts. Adheres to industrial standards and formats.
Credits: 4  Lecture: 3 Other: 2

CIS 131 - SOFTWARE APPLICATIONS
Outcomes focus on learning Word and Excel competencies as defined by the Industry standard Microsoft Office Specialist (MOS) certification. Prerequisites: CIS 120 or COCC Computer Competency. Recommended preparation: MTH 060, MTH 085 or BA 104.
Credits: 4  Lecture: 3 Other: 2

CIS 133JS - INTRODUCTION TO JAVASCRIPT
Explores on existing Web development skills by introducing JavaScript for client-side scripting. Students will learn JavaScript language/syntax, functions, objects, arrays and event handling as they are used for dynamic page content form validation, user interaction and navigation menus. Prerequisites: CIS 122. Recommended preparation: CIS 195.
Credits: 4  Lecture: 3 Other: 2

CIS 133P - INTRODUCTION TO PHP
Covers programming PHP with MySQL. Examines basic techniques of problem-solving, PHP language syntax, using PHP with MySQL, and designing dynamic web pages. Students learn basic program design and construction techniques. Prerequisites: CIS 122. Recommended preparation: CIS 195 and CIS 35DB.
Credits: 4  Lecture: 3 Other: 2

CIS 135A1 - AUTODESK REVIT 1
Credits: 4  Lecture: 3 Other: 2

CIS 135A2 - AUTODESK REVIT 2
Continues with AutoDESK Revit, covering construction drawing sets, commercial planning, residential remodeling, drawing details and drawing production. Term culminates with targeted project covering aspects studied in Revit. Recommended preparation: CIS 135A1.
Credits: 4  Lecture: 3 Other: 2

CIS 135C1 - AUTOCAD CIVIL 3D
Students will learn basic civil drafting theory along with developing drawings that include plats, related civil infrastructure, public utilities, contours and roads. Work will be completed with AutoCAD Civil 3D. Recommended preparation: CIS 120.
Credits: 4  Lecture: 3 Other: 2

CIS 135DB - DATABASE THEORY/SQL
An introductory course of database concepts. This course includes discussion of the parts of a database and database management systems. Other topics include database design theory, the concept of normalization, and understanding data models. Introduces SQL. Students will be introduced to several of the most popular database management systems such as Access, Microsoft SQL Server and MySQL. Recommended preparation: CIS 120 (or IC3 certification) and CIS 131.
Credits: 4  Lecture: 3 Other: 2

CIS 135S1 - SOLIDWORKS 1
Introduces engineering graphics used in design and manufacturing. Includes practical applications using solid modeling software to capture design intent through part development and to create assemblies using these parts. Adheres to industrial standards and formats.
Credits: 4  Lecture: 3 Other: 2

CIS 135S2 - SOLIDWORKS 2
Continues the study of engineering graphics used in design and manufacturing. Includes practical applications using solid modeling software for detailed drawings, working drawing sets, sheet metal modeling, content reuse and functional design. Adheres to industrial standards and formats.
Credits: 4  Lecture: 3 Other: 2

CIS 140 - A+ ESSENTIALS 1
A+ Essentials is the starting point for a career in IT. The course outcomes cover the fundamentals of computer technology, installation and
configuration of PCs, laptops and related hardware, and basic networking concepts. The course also prepares students to pass the vendor neutral CompTIA A+ Essentials certification exam (220-901). CIS 140 and 145 utilize one textbook. To become A+ certified requires you to pass both certification exams. Recommended preparation: CIS 120. Corequisites: CIS 145.

Credits: 4 Lecture: 3 Other: 2

CIS 145 - A+ ESSENTIALS II
The course prepares students with the skills and knowledge associated with the CompTIA A+ 220-902 outcomes. The curriculum covers the skills required to install and configure PC operating systems, as well as configuring common features (e.g. network connectivity and email) for mobile operating systems Android and Apple iOS. CIS 140 and CIS 145 utilize one textbook. To become A+ certified requires you to pass both certification exams. Recommended preparation: CIS 120. Corequisites: CIS 140.

Credits: 4 Lecture: 3 Other: 2

CIS 151C - CISCO INTERNETWORKING
First of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. The class uses the Cisco Academy online curriculum, CCNA 5.0, Introduction to Networks. Students explore the TCP/IP and Open Systems Interconnect (OSI) models, local area networks (LANs), Ethernet, cabling, topologies, configuring routers and switches, IPv4 and IPv6 addressing, subnetting, network standards and protocols. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term. Prerequisites: CIS 179 or CompTia Network + certification.

Credits: 4 Lecture: 3 Other: 2

CIS 152C - CISCO ROUTER CONFIGURATION
Second of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. Cisco Routing and Switching implements the Cisco Academy online curriculum, CCNA 5.0, Routing and Switching Essentials, developed by Cisco Systems experts. Explores switch VLANs, trunks and Inter-VLAN routing, IPv4 and IPv6 static and dynamic routing, OSPFv2 and OSPFv3, DHCP and DNS for IPv4 and IPv6, NAT, and access-lists for IPv4 and IPv6. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term. Prerequisites: CIS 151C.

Credits: 4 Lecture: 3 Other: 2

CIS 154C - CISCO VLAN AND WAN TECHNOLOGIES
Third of a three-course sequence to prepare the student to take the Cisco Certified Network Associate (CCNA) certification exam. Cisco Scaling and Connecting Networks implements the Cisco Academy online curriculum, CCNA 5.0, Scaling Networks and Connecting Networks. Students explore WAN technologies such as FrameRelay, PPP, and PPPoE, enhanced switching technologies, Etherchannel, multi-area OSPF and EIGRP, and network monitoring with Syslog, SNMP and NetFlow. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term. Prerequisites: CIS 152C.

Credits: 4 Lecture: 3 Other: 2

CIS 178 - INTERNET IN DEPTH
Introduces the concepts and technologies of the Internet. The course explores a wide variety of Internet protocols and examines the history and infrastructure of the Internet. Students will learn about web applications, E-commerce, social media and how to create and publish a website with common design tools. Topics include World Wide Web, secure use of the Internet, web browser and email basics, searching the web, e-learning resources, mass communication and real-time communication on the Internet. Recommended preparation: CIS 120.

Credits: 4 Lecture: 3 Other: 2

CIS 179 - NETWORKING ESSENTIALS
The course covers network technologies, installation and configuration, media and topologies, management, and security. The outcomes prepare students for job roles, which include network administrator, network technician, network installer, help desk technician and IT cable installer and the CompTIA N10-005 certification exam. Prerequisites: CIS 140 and CIS 145.

Credits: 4 Lecture: 3 Other: 2

CIS 188 - SPECIAL STUDIES I
Explores topics of current interest in the discipline. P/NP grading. Credits: 1 to 4

CIS 195 - WEB DEVELOPMENT I
Explores the use of development tools, HTML and CSS to create valid websites for a variety of topics. Students will practice site planning, design, navigation, usability and publishing. Recommended preparation: CIS 120.

Credits: 4 Lecture: 3 Other: 2

CIS 197 - CMS WEB DEVELOPMENT: WORDPRESS
Examines the basics of database-driven websites created using WordPress content management system (CMS), an extremely flexible and scalable technology used for making websites that need database functionality and regular content updates. Students learn through hands-on projects how to install, configure and manage websites connected to a database. Students will learn how to create rich content for websites that offer both functionality and scalability using WordPress. Other content management systems will be explored. Recommended preparation: CIS 195 Web Development I.

Credits: 4 Lecture: 3 Other: 2

CIS 198 - COMPUTER AND INFORMATION SYSTEMS PROJECTS
Students are placed in local businesses working on small projects that a local business might need. Student is responsible for project, documentation and users’ manuals, if necessary. Student is sponsored by a CIS instructor. Recommended preparation: CIS 120 and CIS 131.

Credits: 3 Other: 9

CIS 199 - SELECTED TOPICS: COMPUTER AND INFORMATION SYSTEMS
Reserved for courses that cover topics of general interest, projects in computer science and experimental courses. Prerequisites: instructor approval.

Credits: 1 to 7

CIS 233P - WEB PROGRAMMING
Introduces students to techniques used to create interactive, dynamic content. Students will design interactive user interfaces (using JavaScript and XML) which will interact with custom databases residing on a server (using PHP and MySQL). The course will explore the concepts of event-driven programming to create interactive interfaces using dynamic content. Students will write server-side scripts, design custom databases to both store and provide access to content. The course will conclude with a final project where students will design their own dynamic websites. Prerequisites: CIS 133P. Recommended preparation: CIS 133JS.

Credits: 4 Lecture: 3 Other: 2

CIS 235 - IT IN BUSINESS

Credits: 4 Lecture: 3 Other: 2

CIS 244 - INFORMATION SYSTEMS ANALYSIS
Provides broad overview of the skills necessary for a systems analyst, consultant or project manager to work as an independent contractor or as part of an IT department. Topics include information systems concepts and tools, goal setting, project management, working in teams, documentation and communication. Recommended preparation: CIS 120 and CIS 131.

Credits: 4 Lecture: 3 Other: 2

CIS 276 - ADVANCED SQL
Focuses on design, development and implementation of SQL programming for all types of relational database applications including client/server and internet databases. The course introduces students to
the procedural language used to extend SQL in a programmatic manner. Students will learn to write complicated interactive and embedded SQL statements. Emphasis will be on using Microsoft SQL server. Recommended preparation: CIS 122 and CIS 135DB.

Credits: 4  Lecture: 3  Other: 2

CIS 279CL - CLOUD ESSENTIALS
Covers cloud services from a business perspective. Topics include the business value of cloud computing, cloud types, steps to a successful adoption of the cloud, impact and changes on IT service management, as well as risks and consequences.

Credits: 4  Lecture: 3  Other: 2

CIS 279L - LINUX+
This course introduces the Unix operating system using Linux. It follows the CompTIA Linux + exam outcomes and competencies and is therefore ‘vendor neutral’. It is designed as an introductory course to the Linux operating system but previous experience with other PC operating systems is expected. The class teaches the basics of the Unix operating system from a command-line perspective including installation, management, configuration, security, documentation and hardware. Recommended preparation: CIS 120.

Credits: 4  Lecture: 3  Other: 2

CIS 279OP - CCNA CYBER OPS
Prepares students for the work and requirements of creating and managing a security operations center. Prepares students for the Cisco 210-250 exam - Understanding Cisco Cybersecurity Fundamentals and includes responsibilities in establishing teams to monitor and respond to information security incidents.

Credits: 4  Lecture: 3  Other: 2

CIS 279SC - WINDOWS SERVER CONFIGURATION
Prepares the student to plan and begin implementing the Microsoft server operating system in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification. Prerequisites: CIS 179 or Comptia Network+ certification.

Credits: 4  Lecture: 3  Other: 2

CIS 279SE - SECURITY+
The course outcomes cover: network security; compliance and operational security; threats and vulnerabilities; application, data and host security; access control and identity management and cryptography. The material prepares students to pass the CompTIA Security+ certification. Security+ is an international, vendor-neutral certification. Prerequisites: CIS 179. Recommended preparation: CIS 279L.

Credits: 4  Lecture: 3  Other: 2

CIS 279SM - WINDOWS SERVER MANAGEMENT
Prepares the student to manage, maintain, and troubleshoot the Microsoft server operating system in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification. Prerequisites: CIS 279L.

Credits: 4  Lecture: 3  Other: 2

CIS 279SS - WINDOWS SERVER SERVICES
Prepares the student to plan, implement, maintain, and troubleshoot Microsoft server operating system advanced services in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification. Prerequisites: CIS 279SM.

Credits: 4  Lecture: 3  Other: 2

CIS 279WC - WINDOWS CLIENT
This course prepares the student to plan, implement and manage the Microsoft Windows operating system in an enterprise environment. It includes the outcomes and hands-on experience required to build the knowledge and skills needed to pass the associated Microsoft IT professional certification. Recommended preparation: CIS 179.

Credits: 4  Lecture: 3  Other: 2

CIS 280 - CO-OP WORK EXPERIENCE CIS
A learning strategy designed to enhance students’ knowledge, personal development, professional development and professional preparation by integrating academic study with practical experience. Students complete on-the-job training in a computer environment (requires a minimum of 33 clock hours of work for each credit hour earned). P/NP grading. Prerequisites: instructor approval.

Credits: 1 to 3

CIS 284 - CISCO CCNA SECURITY
Introduces security related issues and provides essential skills network administrators need in order to provide security for a computer network. Covers protective security technologies including TCP packet analysis, network device hardening, advanced firewall techniques, cryptography, intrusion prevention systems, LAN security, virtual private networks, network attacks and mitigation techniques, and security policy planning. Prerequisites: CIS 154C or CCNA certification.

Credits: 4  Lecture: 3  Other: 2

CIS 284EH - ETHICAL HACKING
Preparation in network penetration testing methodologies in order to help businesses discover and mitigate security weaknesses, using the Linux and Windows operating systems. Learn security related topics such as: firewalls, intrusion detection systems, vulnerability scanners, packet sniffing, port scanning, cryptography, log analysis, web application attacks, exploitation tools, scripting languages, the Metasploit framework, VPNs, SSL, port redirection, security policies, compliance regulations and professional code of conduct. Prerequisites: CIS 279L. Recommended preparation: CIS 151C, CIS 152C.

Credits: 4  Lecture: 3  Other: 2

CIS 288 - SPECIAL STUDIES II
Explores topics of current interest in the discipline. P/NP grading.

Credits: 1 to 4

CIS 295 - WEB DEVELOPMENT II
Expands on existing HTML/CSS skills and explores the process of making websites, particularly e-commerce sites for clients. Students will practice site planning, development, content management and client relations as they create, document and present a website project and portfolio. Topics include website design, search engine optimization, webpage usability, and responsive mobile web design. Recommended preparation: CIS 195.

Credits: 4  Lecture: 3  Other: 2

CIS 297 - CIS PROFESSIONAL CAPSTONE
This course addresses knowledge, skills and outcomes useful to IT professionals in a variety of disciplines. Students will explore and acquire job exploration skills, including interview skills, search skills, and resume-building skills to optimize job market opportunities. An integrated approach is used to combine project design components relative to job goals and capstone activities to assist in entering the job market with an array of job and technical analysis and design skills. The CIS capstone course is expected to be taken in a degree-seeking student’s last term. Prerequisite with concurrency: CIS 244.

Credits: 4  Lecture: 3  Other: 2

CIS 298 - INDEPENDENT STUDY: CIS
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.

Credits: 1 to 4

CIS 299 - SELECTED TOPICS: CIS
This course is in development.

Credits: 1 to 7
COURSE DESCRIPTIONS

COMPUTER SCIENCE

CS 160 - COMPUTER SCIENCE ORIENTATION
Gives a broad overview of the discipline of computer science. Students learn about the foundations of computer science such as problem solving and algorithms, programming concepts and computer hardware. Students also research careers available in computer science, research pathways to computer careers and reflect on some of the influences computers have had and continue to have on society. Students also write programs in a variety of programming languages. Recommended preparation: CIS 120 or instructor approval.
Credits: 4    Lecture: 3 Other: 2

CS 161 - COMPUTER SCIENCE I
Examines the nature of computer programming; includes discussion of a computer model, methods of problem solving and programming structures; information representation; algorithm construction; object-oriented design using Java. Prerequisites: MTH 112 or MTH 251. Recommended preparation: CS 160.
Credits: 4    Lecture: 3 Other: 2

CS 162 - COMPUTER SCIENCE II
CS 162 emphasizes the development of data structures, algorithm analysis, recursion and sorting. However we will also explore several basic programming concepts, Inheritance, Interfaces, Exceptions and Files/Streams. A strict emphasis will be placed on software engineering methods; proper program development and attention to program planning and documentation. Prerequisites: CS 161. Prerequisites with concurrency: MTH231.
Credits: 4    Lecture: 3 Other: 2

CS 260 - DATA STRUCTURES
Covers general-purpose data structures and algorithms, software engineering of these structures, and the application of these engineering concepts to real world problems. Topics covered include managing complexity, complexity analysis, stacks, queues, lists, trees, heaps, hash tables, sets, maps and graphs. Prerequisites: CS 162 and MTH 231.
Credits: 4    Lecture: 3 Other: 2

CRIMINAL JUSTICE

CJ 100 - SURVEY OF THE CRIMINAL JUSTICE SYSTEM
Introductory survey of the functional components of the U.S. criminal justice system. Includes law enforcement, the courts and corrections.
Credits: 3    Lecture: 3

CJ 101 - INTRODUCTION TO CRIMINOLOGY
Interdisciplinary approach to theoretical perspectives on the causes, treatment and prevention of crime.
Credits: 4    Lecture: 4

CJ 110 - LAW ENFORCEMENT
Surveys the roles and responsibilities of local, state and federal law enforcement agencies in American society. Looks at historical development, role concept and conflicts, professionalization, current enforcement practices and career opportunities.
Credits: 3    Lecture: 3

CJ 120 - JUDICIAL PROCESS
Examines the history and development of court systems and processes in the American justice system. Organization, administration and roles of the federal and state courts are examined, as well as distinctions between civil, criminal and appellate courts.
Credits: 3    Lecture: 3

CJ 123 - SPANISH FOR LAW ENFORCEMENT PERSONNEL
Designed for students who are interested or are currently enrolled in the Criminal Justice program as well as current criminal justice employees. Emphasizes important daily phrases that someone in the criminal justice fields may encounter. Students’ basic skills in listening, reading, writing and speaking are developed as well as exposure to the culture of Spanish-speaking citizens and their customs that directly affect interaction with criminal justice professionals. Recommended preparation: SPAN 101.
Credits: 2    Lecture: 2

CJ 152 - RAPE AGGRESSION DEFENSE (RAD) FOR WOMEN
Introduces women to the program of realistic self-defense tactics and techniques called the Rape Aggression Defense (RAD) System. Topics include: awareness, prevention, risk reduction and avoidance, and basic hands-on defense training. P/NP grading. Prerequisites: instructor approval.
Credits: 1    Lecture: 1

CJ 153 - ETHICAL ISSUES IN CRIMINAL JUSTICE
This course outlines various ethical systems and applies them to the individual’s analysis and evaluation of ethical dilemmas, duties and responsibilities in the field of criminal justice. The students will explore his/her own ethical framework and decision making while learning to integrate the obligations to society and the codes of conduct prescribed by professional criminal justice organizations and agencies. An emphasis will be placed on the ethical and responsible use of discretion, authority and power as endowed by society.
Credits: 3    Lecture: 3

CJ 188 - SPECIAL STUDIES: CRIMINAL JUSTICE
Explores topics of current interest in the discipline. Prerequisites: instructor approval.
Credits: 1 to 4

CJ 199 - SPECIAL TOPICS: CRIMINAL JUSTICE
Presents selected topics of study in criminal justice offered on a temporary or experimental basis.
Credits: 1 to 4

CJ 201 - INTRODUCTION TO JUVENILE JUSTICE
Introduces the historical reason for establishment of juvenile courts in the United States, current juvenile justice process, and functions of various components within the system. Prevention, intervention and rehabilitation aspects are covered in terms of Oregon’s juvenile court law, as well as potential alternatives for change.
Credits: 3    Lecture: 3

CJ 204 - CONTROVERSIES IN CRIMINAL JUSTICE
This course defines, describes and evaluates the crises and conflicts which face law enforcement agencies today. Topics include: use of force, police pursuits, recruitment and the death penalty.
Credits: 3    Lecture: 3

CJ 207 - SEMINAR IN CRIMINAL JUSTICE
Examines current controversial issues, questions and procedures within the criminal justice system.
Credits: 3    Lecture: 3

CJ 210 - CRIMINAL INVESTIGATION I
Examines history, fundamentals and scientific resources involved in criminal investigation. Emphasizes practical aspects of the investigator’s approach to criminal acts, crime scene, gathering facts and information, seizing evidence, reporting the total investigation and presenting evidence within court.
Credits: 3    Lecture: 3

CJ 211 - CRIMINAL INVESTIGATION II
Reviews fundamental and scientific resources involved in criminal investigations. Examines in depth criminal investigation techniques and skills necessary to conduct investigations into the more serious and complex crimes.
Credits: 3    Lecture: 3

CJ 214 - CRIME, JUSTICE AND DIVERSITY
Takes an in-depth look at current research and theories of racial and ethnic discrimination within the United States’ criminal justice system. This course examines the best and most recent research on patterns of
COURSE DESCRIPTIONS  Central Oregon Community College 2018–2019

CJ 220 - INTRODUCTION TO SUBSTANTIVE LAW
Examines basic concepts of substantive law and criminal procedural law. Explores effects of substantive laws upon the lives of American citizens through topics such as crimes involving property, fraud and deception, or against persons, state and public order.
Credits: 3  Lecture: 3

CJ 222 - SEARCH AND SEIZURE
Study of procedural aspects of criminal law, i.e., how criminal law is enforced and administered by agents of the criminal justice system. Emphasis on examining the law of arrest, searches and seizures, and interrogation of suspects.
Credits: 3  Lecture: 3

CJ 230 - JUVENILE CORRECTIONS
Studies historical and contemporary perspectives on juvenile offenders, juvenile code and juvenile court procedures. Describes treatment programs and differences between adult and juvenile court procedures.
Credits: 3  Lecture: 3

CJ 234 - THE WORLD OF VIOLENT CRIMINALS
The World of Violent Criminals takes a scholarly, comprehensive and empirical examination of serial murder in the United States. This course is intended for students interested in understanding multiple homicide, the nature of serial killing, the offenders and their victims. Students will be exposed to concepts and information that will help prepare them to understand society’s most dangerous criminals.
Credits: 3  Lecture: 3

CJ 243 - DRUGS AND CRIME IN SOCIETY
Introduction to problems of substance abuse, including alcohol, in our society. Equip criminal justice, social service and other human service workers with increased awareness of today’s drug technology and options for dealing with substance abusers.
Credits: 3  Lecture: 3

CJ 250 - DOMESTIC TERRORISM AND EMERGENCY MANAGEMENT
Defines domestic terrorism, considers the motivations of terrorists, considers policy proposals, emergency management and law enforcement techniques in response to terrorism and terrorist threats while investigating tensions inherent in democracies between civil liberties and national security. Partners with the Department of Homeland Security’s Emergency Management Institute to offer students basic FEMA certifications relevant to law enforcement. Recommended preparation: WR 121.
Credits: 4  Lecture: 4

CJ 253 - CORRECTIONS
Focuses on historical background, current practices and contemporary issues within correctional processes, institutions and policies pertaining to offenders. Emphasizes the goals of corrections, including deterrence and rehabilitation and the role of local, state and federal corrections in the criminal justice system, including community corrections.
Credits: 4  Lecture: 4

CJ 280 - CO-OP WORK EXPERIENCE CRIMINAL JUSTICE
Provides an opportunity to work for a local agency in a field of criminal justice applying classroom theory with on-the-job experience. Learning experience will be coordinated with student’s supervisor. Students must pass a criminal history check. P/NP grading. Prerequisites: instructor approval. Recommended preparation: sophomore standing and a minimum of 12 credit hours completed in criminal justice courses.
Credits: 1 to 3

CJ 281 - CWE CRIMINAL JUSTICE II
CJ 281 provides a continuing opportunity to work for a local agency in a field of criminal justice with on the job experience (see CJ 280). P/NP grading. Prerequisites: CJ 280 and instructor approval.
Credits: 2

CJ 282 - CWE CRIMINAL JUSTICE III
Provides a continuing opportunity to work for a local agency in a field of criminal justice with on the job experience (see CJ 280). P/NP grading. Prerequisites: CJ 281 and instructor approval.
Credits: 2

CJ 298 - INDEPENDENT STUDY: CRIMINAL JUSTICE
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

CULINARY ARTS

CUL 090 - APPLIED MATH FOR CULINARY ARTS
Learn culinary mathematics including customary and metric units of measurement, decimals and fractions, unit conversions, yield percent, food and beverage costing and markup methods, kitchen ratios, baker’s percent and butcher’s yield percent. Prerequisites: MTH 020 or minimum placement into MTH 060.
Credits: 4  Lecture: 4

CUL 100 - WANT TO BE A CHEF?
This course serves as an introduction to the field of culinary arts. Students considering declaring either Culinary Arts or Baking and Pastry Arts as a major or students taking courses to enhance their placement scores to enter the next Cascade Culinary Institute cohort start, will find that this course will enable them to experience an introduction to cooking with a demonstration-based class that covers the basics of cooking technique and flavor profiling. Students will “get a taste” of the restaurant industry, while learning the secrets of being a successful culinary professional.
Credits: 2  Other: 4

CUL 101 - INTRODUCTION TO CULINARY ARTS
Experience the basic theory and skill sets used throughout the field of culinary arts. Topics covered include the use of hand tools and equipment found in the professional kitchen, as well as the exploration of ingredients and their functions. Students will gain a working knowledge of the fundamentals of kitchen operations, basic knife skills; an overview of stock, sauce and soup preparation; and coverage of the primary dry heat, moist heat and combination heat cooking methods. Students will also taste and evaluate products they create in class to enhance their understanding of the course material.
Credits: 4  Other: 8

CUL 102 - FOOD SAFETY AND SANITATION
Learn causes and prevention of foodborne illnesses, how to handle foodborne illness outbreaks and emergencies, good personal hygiene, time and temperature control, preventing cross-contamination, safe food preparation, receiving and storing food, methods of thawing, cooking, cooling, and reheating food and Hazard Analysis and Critical Control Points (HACCP). Take the National Restaurant Association Educational Foundation (NRAEF) ServSafe™ examination and earn a certificate with a passing grade.
Credits: 2  Lecture: 2

CUL 105 - INTERNATIONAL EXCHANGE PREPARATION
Explore the social and cultural aspects of various countries including their cuisine, language, music, art, celebrations and rituals. This serves primarily as a preparatory course for the Cascade Culinary Institute’s Exchange Program. P/NP grading. Prerequisites: Instructor approval.
Credits: 2  Lecture: 2
CUL 110 - CULINARY FOUNDATIONS I  
Learn the history of the culinary industry, nomenclature, equipment, kitchen operations, basic knife skills, cooking methods, and ratios and techniques in contrast to recipe usage. Learn about and produce stocks and soups. Prerequisites with concurrency: CUL 090, CUL 102 and either WR 121 or BA 214.  
Credits: 4  Other: 8

CUL 140 - CULINARY FOUNDATIONS II  
Learn about and prepare classical mother sauces, contemporary sauces, small sauces, vegetables, grains, starchy, pasta, and eggs. Use food science principles related to primary cooking techniques, show station organization, workflow and overall time management. Practice proper use of commercial equipment and reinforcement of understanding of ingredients, measurement, formulas and techniques. Prerequisites: CUL 110.  
Credits: 4  Other: 8

CUL 170 - CULINARY FOUNDATIONS III  
Identify, butcher, fabricate, and cook a variety of meat, poultry and seafood products emphasizing proper technique. Practice small sauce production and the preparation of vegetables, grains, legumes and pastas as accompaniments. Apply modern composition and presentation techniques utilized in the restaurant industry. Prerequisites: CUL 140.  
Credits: 4  Other: 8

CUL 180 - MODERN GARDE MANGER  
Learn about and prepare cold foods such as canapés, hors d’oeuvres, salads, sandwiches, cold soups, cheeses, forcemeat, condiments, crockers and pickles. Learn about the role of garnishes, food preservation and contemporary buffet presentation. Prerequisite with concurrency: CUL 140.  
Credits: 4  Other: 8

CUL 188 - SPECIAL STUDIES CULINARY ARTS  
Explores topics of current interest in the discipline.  
Credits: 1 to 6

CUL 199 - SELECTED TOPICS: CULINARY ARTS  
Provides opportunity for students with exceptional background or need to continue beyond normal Culinary Arts program content. Content and credit(s) earned are established by mutual agreement between instructor and student and detailed in written agreement at the start of the term.  
Credits: 1 to 6

CUL 200 - COMPREHENSIVE KITCHEN OPERATIONS FOR THE RESTAURANT INDUSTRY  
Learn to prepare modern and seasonal dishes in a restaurant setting putting previously learned skills into practice in the college’s dining room. Emphasis on cooking techniques and ingredients used in contemporary and classical cuisines and cover planning and ordering for production, station organization, preparation and plating, timing, palate development and other production realities of a restaurant. Prerequisites: CUL 140 or BAK 140.  
Credits: 5  Lecture: 2  Lab: 9

CUL 220 - INTERNATIONAL CUISINE AND GLOBAL FLAVOR PROFILING  
Trace common global ingredients used in many regional dishes. Explore other cultures through the understanding of global culinary heritages. Examine food in the context of culture, geography, history and the influences cuisines have had on each other. Learn how the attitudes and tastes of more global and knowledgeable customers creates the expectation of diversity in a professional culinarian’s repertoire. Prerequisites: CUL 140.  
Credits: 4  Other: 8

CUL 225 - APPLIED HARVESTING AND FOOD PRESERVATION PRINCIPLES  
Learn about the importance of sourcing seasonal foods relating to pricing, flavor and quality. Conduct harvesting techniques of plant based foods, and participate in slaughtering process of animal based foods. Process the harvested items and apply a diversity of preservation techniques including canning, smoking, pickling, freeze-drying, dehydrating, etc. Execute a final harvest event for regional farmers and ranchers to celebrate the partnership with them and the Cascade Culinary Institute.  
Credits: 4  Other: 8

CUL 230 - CULINARY NUTRITION AND APPLIED TECHNIQUES OF HEALTHY COOKING  
Prepare flavorful food and study its impact upon the body. Learn about current dietary guidelines, along with the function of nutrients within the body. Execute modern, healthy cooking techniques in the lab portion of this course exposing students to meeting nutritional needs and requests of health conscious diners. Learn about healthful menu and recipe design and reengineer classical recipes, producing healthful and flavorful alternatives. Prerequisites: CUL 140 or BAK 140.  
Credits: 4  Other: 8

CUL 235S - FARM-TO-TABLE AND SUSTAINABLE CUISINE PRACTICES  
Serves as an overview of sustainable harvesting techniques for plants and animals and the application of preservation techniques. Students will learn about the importance of sourcing seasonal foods as it relates to pricing, flavor and quality. Students will conduct harvesting techniques of plant based foods, and participate in the slaughtering process of animal based foods. Students will process the harvested items and conduct a diversity of preservation techniques to include canning, smoking, pickling, freezing, freeze-drying, dehydrating, etc. Students will execute a final harvest event for regional farmers and ranchers to celebrate the partnership with Cascade Culinary Institute and local sustainable agricultural partners. Prerequisites: CUL 200.  
Credits: 4  Other: 8

CUL 240 - BUCHERY  
Learn about the muscle and bone structure of beef, veal, pork, lamb, game, poultry and specialty meats; fabricate sub-primal and foodservice cuts; and apply tying and trussing methods. Introduction to meat inspection processes, quality and yield grading, costing and yield testing, purchasing specifications, and basic information concerning the farm-to-table trail. Discuss preferred cooking methods for all meats, proper knife selection, and butchery equipment. Sanitation and safety standards are emphasized throughout. Prerequisites: CUL 170.  
Credits: 4  Other: 8

CUL 242 - CHARCUTERIE  
Learn professional skills in variations of hors d’oeuvres and savories, seasonings, condiments, stuffed meats and curing, pickling and smoking of meat, fish and poultry. Develop proficiency in sausage-making, pâtés, terrines, galantines and stuffed meats. Prepare a variety of charcuterie products from fresh sausage to dry cured salamis. Prerequisites: CUL 240.  
Credits: 4  Other: 8

CUL 245S - MODERNIST CUISINE AND THE EVOLUTION OF COOKING  
Learn about and apply techniques of spherification, thermal immersion, liquid nitrogen for flash freezing, hydrocolloids for thickening and gelling in the kitchen to a variety of foods. Review food pairing methods with the goal of inspiring new food combinations which are theoretically sound on a basis of their flavor. Prerequisites: CUL 170.  
Credits: 4  Other: 8

CUL 255S - EVENT PLANNING AND EXECUTION WITH MODERN BANQUET COOKERY  
This course examines the varied ways in which banquets and catering events may be executed. Terms relating to equipment, food preparation, service and presentation will be discussed. Students will prepare a menu each day, following the principles and techniques associated with preparing and serving food to large groups, as well as concentrating on principles of modern batch cookery. An emphasis will be placed on maintaining quality and foundational cooking methodology. Students will
also learn how to organize, plan and operate a banquet kitchen. Cooking applications are at an advanced level in preparation for later work in the public restaurants. Prerequisites: CUL 170.
Credits: 4 Other: 8

CUL 265S - ADVANCED SKILL DEVELOPMENT AND CULINARY COMPETITION MASTERY
Competitions play a vital role in culinary arts as they continually raise the standards of culinary excellence. There is no better way for culinarians to hone their craft than by putting their skills and knowledge to the test in a competitive format. Continually raises the standards of culinary excellence and professionalism. Nurtures the creativity of individual chefs. Provides a showcase for individual skills, techniques and styles. Prerequisites: CUL 170.
Credits: 4 Other: 8

CUL 270 - CULINARY ARTS CAPSTONE INTERNSHIP - ELEVATION RESTAURANT DINNER
Students are evaluated on the skills needed operate a fine dining, a la carte restaurant: food safety and sanitation, knife cuts, dry heat cooking methods, moist heat cooking methods, combination cooking methods, vegetable cookery, starch cookery, sauce cookery and final plate presentation as a representation of their learning experience within the Culinary Arts Program curriculum. This final capstone course is a commutation of all the competencies learned within the program including guest interaction and dining room service, and to provide a last opportunity for assessment and instructor evaluation of student skill sets prior to graduation. Prerequisites: CUL 170 or BAK 170 and CUL 200.
Credits: 6 Other: 18

CUL 276A - REGIONAL WORLD CUISINES: AFRICA
This course utilizes ingredients and techniques used in a specific regional cuisine-Africa. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history and the influence a region’s cuisine has worldwide.
Credits: 4 Other: 8

CUL 276C - REGIONAL WORLD CUISINES: CARIBBEAN
This course utilizes ingredients and techniques used in a specific regional cuisine-Caribbean. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history and the influence a region’s cuisine has worldwide.
Credits: 4 Other: 8

CUL 276F - REGIONAL WORLD CUISINES: FRANCE
This course utilizes ingredients and techniques used in a specific regional cuisine-France. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history and the influence a region’s cuisine has worldwide.
Credits: 4 Other: 8

CUL 276G - REGIONAL WORLD CUISINES: GERMANY
This course utilizes ingredients and techniques used in a specific regional cuisine-Germany. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history and the influence a region’s cuisine has worldwide.
Credits: 4 Other: 8

CUL 276I - REGIONAL WORLD CUISINES: ITALY
This course utilizes ingredients and techniques used in a specific regional cuisine-Italy. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history and the influence a region’s cuisine has worldwide.
Credits: 4 Other: 8

CUL 276J - REGIONAL WORLD CUISINES: ASIA
This course utilizes ingredients and techniques used in a specific regional cuisine-Asia. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history and the influence a region’s cuisine has worldwide.
Credits: 4 Other: 8

CUL 276S - REGIONAL WORLD CUISINES: SPAIN
This course utilizes ingredients and techniques used in a specific regional cuisine-Spain. It combines lecture, demonstration, application, and presentation as a means to explore a culture through the understanding of its food. Students examine food in the context of culture, geography, history and the influence a region’s cuisine has worldwide.
Credits: 4 Other: 8

CUL 280 - CULINARY ARTS INDUSTRY INTERNSHIP
Serves as a supervised work experience within the culinary arts industry designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and ability to execute industry skills on a repetitive basis. Students will receive a diverse work experience that is designed on a systematic rotation of different stations in the kitchen, dining room and general operations positions. Students can complete 100% of the experience in competencies that are relevant to the program curriculum, as it is outlined in the course syllabus and internship agreement. The internship is concluded by a final supervisor evaluation. Prerequisites: CUL 140.
Credits: 1 to 6

CUL 298 - INDEPENDENT STUDY: CULINARY
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

DENTAL ASSISTING

DA 110 - BASIC DENTAL ASSISTING
General overview of the Dental Assisting profession through lecture, discussions, demonstrations, laboratory activities and on-site clinic visitation. Includes examining dentistry as a profession, charting and data collection, taking and recording vital signs, four-handed dentistry and equipment use and maintenance. Laboratory portion gives students initial skills for the clinical experience in the areas of instrument identification and transfer, oral-evacuation and use of the air-water syringe. Infection control protocols established by OSHA, the Oregon Board of Dentistry and the Centers for Disease Control and Prevention will be implemented. See DA 115 for Dental Assisting program prerequisites. Corequisites: DA 115, DA 125, DA 134, DA 145.
Credits: 4 Lecture: 2 Other: 4

DA 115 - DENTAL SCIENCE
Explores the following areas of study: basic anatomy and physiology, head and neck anatomy, dental embryology, oral histology, anatomy of the face and oral cavity and tooth morphology. Prerequisites: CIS 010, CIS 120 or Computer Competency Test, HHP 252, MTH 095 or higher; Choose one of the following Psychology Courses: PSY 101, PSY 201, PSY 215 or PSY 216; SP 218 and WR 121. Corequisites: DA 110, DA 125, DA 134, DA 145.
Credits: 5 Lecture: 5

DA 120 - ADVANCED DENTAL ASSISTING
Continuation of DA 110 and further student’s knowledge of the dental assisting profession. Includes lecture, power point presentations, videos, discussions, demonstrations and lab participation. Covers the advanced dental assisting skills of dental dam placement and procedures involved with the dental specialties of endodontics, periodontics and oral surgery. Also covers expanded functions such as coronal polishing, suture removal
and pit and fissure sealants in accordance with the Oregon Board of Dentistry. Prerequisites: DA 110. Corequisites: DA 130, DA 135, DA 151, DA 181, DA 190.
Credits: 4 Lecture: 2 Lab: 4

DA 125 - DENTAL INFECTION CONTROL
Covers the principles of infection control related to the dental office, including an introduction to microbiology, along with cross-contamination and hazard control. The course covers OSHA Standards of Hazard Communication and Blood-borne Pathogens. Aseptic techniques and infection control procedures will be applied in the laboratory setting and assessed through competencies. The management of Safety Data Sheets and labeling of hazardous material will be addressed. See DA 115 for Dental Assisting program prerequisites. Corequisites: DA 110, DA 115, DA 134, DA 145.
Credits: 3 Other: 6

DA 130 - DENTAL MATERIALS I
Examines the properties of amalgam and composite materials. Provides skills in chairside assisting during the placement of Tofflemire matrices, amalgam restorations, and composite restorations on a dexter. Offers lecture and laboratory experiences manipulating materials such as alginate impression materials to take impressions, and gypsum products to pour casts. Includes the fabrication of custom methylmethacrylate impression trays, light cured trays and vacuum formed bleach trays. Covers pouring models, trimming for diagnostic casts and taking bite registrations. See DA 120 for second term Dental Assisting program prerequisites. Corequisites: DA 120, DA 135, DA 151, DA 181, DA 190.
Credits: 4 Lecture: 2 Other: 4

DA 131 - DENTAL MATERIALS II
Provides a fundamental knowledge of the materials commonly used in dental practice, including the physical, chemical, and manipulative characteristics of cements, bases, cavity liners, cavity varnishes, composites and resins. The laboratory component offers experience in the correct manipulation of these materials. Covers the skills of cleaning and polishing removable prostheses, and the fabrication of several types of provisional restorations. The didactic portion examines restorative options such as crowns, bridges, inlays, onlays, full dentures and partial dentures. Prerequisites: DA 130. Corequisites: DA 150, DA 160, DA 182, DA 191.
Credits: 4 Lecture: 2 Other: 4

DA 134 - DENTAL RADIOLOGY I
Explores the basic principles of radiography, the history of radiation and an introduction to the physics of radiation. Also covers the biological effects of radiation for both the safety and comfort of the patient and the operator. Introduces the radiographic unit and dental x-ray film. See DA 115 for Dental Assisting program prerequisites. Corequisites: DA 110, DA 115, DA 125, DA 145.
Credits: 3 Lecture: 3

DA 135 - DENTAL RADIOLOGY II
Focuses on the integration of knowledge and skills acquired during DA 134 – Dental Radiology I as the student transitions from the didactic study of radiography to the lab and clinical application. Performance of diagnostic exposure techniques using a variety of image receptors to a predetermined level of competency on both lab manikins and clinical patients. Interpretation of radiographic images for exposure and technique errors, anatomic landmarks, restorations, dental materials and diseases. Focuses on clinical patient management, using interpersonal skills and patient education, while adhering to appropriate infection control protocols. Prerequisites: DA 134. Corequisites: DA 120, DA 130, DA 151, DA 181, DA 190.
Credits: 4 Lecture: 2 Other: 4

DA 145 - PREVENTIVE DENTISTRY
Covers the components of preventive dentistry including oral hygiene instruction, plaque control, fluoride therapy, dental sealants and dietary considerations for the dental patient. Clinical skills include the completion of a coronal polish sequence and fluoride tray therapy on both a manikin and a fellow student patient. Identifies the pros and cons of Fluoride Varnish and Silver Nitrate therapies used in dental practices. Includes a discussion of the operation and procedures associated with Pediatric Dentistry. A capstone Service Learning project, related to the topic of Preventive Dentistry, will be selected, completed and presented to the class. See DA 115 for Dental Assisting program prerequisites. Corequisites: DA 110, DA 115, DA 125, DA 134.
Credits: 3 Other: 6

DA 150 - INTRO TO DENTAL OFFICE MANAGEMENT
Credits: 3 Lecture: 3

DA 151 - DENTAL COMPUTING
Computers are an integral part of today’s dental offices. They have become the method of choice for managing patient dental records, appointment scheduling, charting, processing insurance claims and establishing financial arrangements. Computer systems allow for the generation of reports, patient statements, professional and patient correspondence, treatment plans, and fees for service. This course is designed to give students the training necessary to successfully complete these front-office tasks. See DA 120 for second term Dental Assisting program prerequisites. Corequisites: DA 120, DA 130, DA 135, DA 181, DA 190.
Credits: 2 Lecture: 2

DA 160 - ORAL MEDICINE
Part one is an introduction to the study of Oral Pathology and Dental Pharmacology. Part two focuses on the role of the dental assistant when caring for compromised patients and in dealing with dental/medical emergencies in the dental office. See DA 131 for third term Dental Assisting program prerequisites. Corequisites: DA 131, DA 150, DA 182, DA 191.
Credits: 3 Lecture: 3

DA 181 - DENTAL SEMINAR I
Discusses the various aspect of practicum I. Guest speakers representing dental specialties and alternative dental employment possibilities will be scheduled. Students will share work-related experiences with the instructor and their peers. Addresses employment opportunities, completing job applications, and interviewing skills. See DA 120 for second term Dental Assisting program prerequisites. P/NP grading. Corequisites: DA 120, DA 130, DA 135, DA 151, DA 190.
Credits: 1 Lecture: 1

DA 182 - DENTAL SEMINAR II
Seminars discussions on various aspects of spring term practicums in local dental offices. Guest speakers representing dental specialties and alternative dental employment possibilities will be scheduled. Students will share work-related experiences with the instructor and their peers. Covers employment opportunities, resume writing, completing job applications, and interviewing skills. Students will also prepare for the Dental Assisting National Board (DANB) General Chaired Exam. See DA 131 for third term Dental Assisting program prerequisites. P/NP grading. Corequisites: DA 131, DA 150, DA 160, DA 191.
Credits: 1 Lecture: 1

DA 190 - DENTAL ASSISTING PRACTICUM I
A supervised, unpaid learning experience which takes place on-site at the COCC Dental and Radiology Clinics and at various community outreach facilities. Provides students with the opportunity to perform clearly identified competencies within the clinical setting. Each credit is equivalent to 30 hours in the clinical setting. See DA 120 for second term Dental Assisting program prerequisites. P/NP grading. Corequisites: DA 120, DA 130, DA 135, DA 151, DA 181.
Credits: 1 to 5
DA 191 - DENTAL ASSISTING PRACTICUM II
A supervised, unpaid learning experience which takes place on site at a minimum of two prearranged clinical facilities. Provides students with the opportunity to perform clearly identified competencies within the clinical setting. Each credit is equivalent to 30 hours in the clinical setting. P/NP grading. Prerequisites: DA 190. Corequisites: DA 131, DA 150, DA 160, DA 182.
Credits: 1 to 8

DA 199 - SELECTED TOPICS: DENTAL ASSISTING
This course is in development.
Credits: 1 to 4

ECONOMICS

EC 101 - CONTEMPORARY ECONOMIC ISSUES
Introduction to contemporary public policy using basic economic principles. Topics may include poverty, income distribution, environmental policy, anti-trust, government budget, unemployment, international trade and economic development.
Credits: 4 Lecture: 4

EC 188 - SPECIAL STUDIES: ECONOMICS
Explores topics of current interest in the discipline.
Credits: 1 to 4

EC 199 - SELECTED TOPICS: ECONOMICS
This course is in development.
Credits: 4

EC 201 - MICROECONOMICS
Microeconomics is the study of how individuals and firms make choices in the face of scarcity. This course will build economic intuition about the consequences of our consumption and production decisions. We consider how goods and services are allocated and how market forces such as technology, market power and government intervention shape the setting in which these decisions are made. Recommended preparation: or to be taken with WR 121 and MTH 065.
Credits: 4 Lecture: 4

EC 202 - MACROECONOMICS
Macroeconomics is the study of how economic health is measured and the fiscal and monetary policies used by government to maintain it. This class examines money, banking and the story of the Federal Reserve; how the government uses taxes and spending to achieve economic growth and stability; and the role of international monetary policies including trade deficits, surpluses and exchange rates. The course uncovers the theory of business cycles and teaches students how to model economic growth and the effects of inflation. Recommended preparation: or to be taken with MTH 065 and WR 121.
Credits: 4 Lecture: 4

EC 230 - CONTEMPORARY WORLD ECONOMIC ISSUES: INTERNATIONAL ECONOMICS
Provides an introductory survey of economic, political, social, and cultural dimensions of globalization. Covers issues and problems related to international economics and international economic institutions. Includes trade and the balance of payments; trade competition between the U.S. and other nations; reform and restructuring of global economies; economic development and problems of developing nations. Prerequisites: EC 201 or EC 202. Recommended preparation: MTH 095 and WR 121.
Credits: 4 Lecture: 4

EC 285 - INTRODUCTION TO POLITICAL ECONOMY
Covers specific topics related to the United States economy from a systems/institutional perspective. Includes key institutions that make up the U.S. economy such as, corporations, government, the market system, labor unions, monetary and financial institutions, and others. Examines three problem areas: environmental degradation and resource depletion; social and political inequality; and economic instability. Introduces possible solutions based on institutional change and develops viable economic alternatives based on principles of environmental sustainability, equity and economic stability. Prerequisites: EC 201 or EC 202. Recommended preparation: MTH 095 and WR 121.
Credits: 4 Lecture: 4

EC 298 - INDEPENDENT STUDY: ECONOMICS
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

EDUCATION

ED 112 - CHILDREN'S LIT & CURRICULUM
This course provides an overview of children's literature across the early childhood curriculum (preschool-primary grades) from a curricular perspective. Different genres of children's literature will be examined as it relates to curricular areas: literacy, math, science, history, health, movement, music, and the arts. This course is recommended for early childhood and education majors. This course will address the importance of literacy acquisition of young children (preschool through the primary grades) and how children’s literature can support co-curricular standards, goals and objectives.
Credits: 3 Lecture: 3

ED 140 - INTRODUCTION TO EARLY CHILDHOOD EDUCATION
Beginning course in early childhood education which focuses on the teacher as a professional (advocacy, ethical practices, work-force issues, associations); provides strategies to manage an effective program operation; how to plan a safe, healthy learning environment; and gives an overview of the philosophy and history of ECE. Three hours of supervised weekly field placement required.
Credits: 4 Lecture: 3 Other: 3

ED 141 - YOUTH MENTORING AND ADVOCACY
Provides the opportunity to develop leadership, supervisory, and mentoring skills by participating in youth advocacy civic engagement through community service projects and volunteer roles (field placement). Topics include creating safe, engaging, and developmentally appropriate activities, team work, communication techniques, group dynamics, project management, organization and evaluation. Appropriate for those interested in supporting youth both in and out school settings, including after-school programs and specialized areas of focus, including: creative arts, recreation, academic support and enrichment. Recommended preparation: Prior experience volunteering or working with youth.
Credits: 3 Lecture: 2 Other: 3

ED 150 - ENVIRONMENTS & CURRICULUM IN EARLY CHILDHOOD EDUCATION
Utilizes knowledge in child development to design, implement and evaluate activities in the major domains of development for children ages birth to 8 years. Three hours of supervised weekly field placement required. Recommended preparation: ED 140.
Credits: 4 Lecture: 3 Other: 3

ED 151 - OBSERVATION & GUIDANCE IN EARLY CHILDHOOD EDUCATION LEARNING
Introduces observation and guidance in early childhood education. Introduces observation techniques and tools to accurately collect data on children and how to use assessments to make appropriate decisions about the child’s needs regarding programming and the early childhood education environment. Three hours of supervised weekly field placement required. Recommended preparation: ED 140.
Credits: 4 Lecture: 3 Other: 3

ED 152 - FAMILY, SCHOOL AND COMMUNITY RELATIONSHIPS IN ECE
Introduces communication skills needed to enhance partnerships between families, schools and communities in early childhood education.
ED 173 - MOVEMENT, MUSIC AND THE ARTS IN EARLY CHILDHOOD EDUCATION
Introduces physical education, rhythmic activities, visual arts and performing arts in the early childhood years. Covers basic motor skills and artistic processes, from a developmental perspective. Three hours of supervised weekly field placement required. Recommended preparation: ED 140.
Credits: 3    Lecture: 2 Other: 3

ED 174 - MATH, SCIENCE AND TECHNOLOGY IN EARLY CHILDHOOD EDUCATION
Introduces program and curricular activities that enhance a child’s development of math, science and technology understanding and skills. Processes explored are constructivist in nature, with a focus on interdisciplinary approaches. Three hours of supervised weekly field placement required. Recommended preparation: ED 140.
Credits: 3    Lecture: 2 Other: 3

ED 176 - SUPPORTING SOCIAL, EMOTIONAL AND MENTAL HEALTH IN EARLY CHILDHOOD
This course provides the student with knowledge about common social, emotional and mental health concerns in early childhood and explores developmentally appropriate classroom guidance strategies for supporting children’s social and emotional skills.
Credits: 3    Lecture: 2 Other: 3

ED 188 - SPECIAL STUDIES: PRACTICUM
Explores topics of current interest in the discipline.
Credits: 1 to 4

ED 199 - SELECTED TOPICS: EARLY CHILDHOOD EDUCATION
This course is in development.
Credits: 1 to 4

ED 200 - INTRODUCTION TO EDUCATION
Survey of the field and foundations of education, especially the teaching profession and the role of education in society. Explores philosophical, economic, legal, ethical, historical, psychological and social foundations of teaching and learning, and includes an overview of educational methods and approaches. Specializations within the field and training requirements for prospective teachers will also be addressed. Recommended preparation: WR 121.
Credits: 3    Lecture: 3

ED 210 - PRACTICUM IN TEACHING
Acquaints potential educators with roles and responsibilities of teachers at elementary and secondary levels. The student will observe and work as an instructional assistant in a local classroom to assess interests and potential for making teaching a career. ED 210 includes six hours field placement per week. Recommended preparation: WR 121 and ED 200 or instructor approval.
Credits: 3    Lecture: 1 Other: 6

ED 216 - PURPOSE, STRUCTURE AND FUNCTION OF EDUCATION IN A DEMOCRACY
Analyzes the system of education in a democratic society. This course introduces the historical, social, philosophical, political, legal and economic foundations of education to provide a framework from which to analyze contemporary educational issues. Recommended preparation: WR 121.
Credits: 3    Lecture: 3

ED 219 - MULTICULTURAL ISSUES IN EDUCATION SETTINGS
Examines the context of working with students, school, communities and workplaces. Explores the diversity of learners, learning cultures (urban, suburban, and rural) and the diversity among learners within those different cultures. Considers the influence of culture on one’s learning. Recommended preparation: WR 121.
Credits: 3    Lecture: 3

ED 224 - ANTI-BIAS CURRICULUM IN EDUCATION
Credits: 4    Lecture: 3 Other: 3

ED 235 - TEACHING AND LEARNING IN A DIGITAL AGE
This course will explore the integration and application of technology into the early childhood and primary elementary years curricula. Students will investigate, discuss and apply the theories and practices of educational technology specifically within the context of early childhood education. Additionally, students will develop skills and knowledge that will enable them to use responsibly various technologies to create and assess technology-enriched learning environments that reflect developmentally appropriate practices while being engaging and safe.
Credits: 3    Lecture: 3

ED 240 - PURPOSEFUL LEARNING AND ACTIVE EXPLORATION THROUGH PLAY
Explores why open-exploration, discovery, and play are fundamentally important parts of children’s development, the role of play in learning, and ways that adults can support and promote play. Considers current research and implications of play, as an important vehicle for developing self-regulation as well as for promoting language, cognition, and social competence, in an era of standards-driven curriculum. Prospective early childhood and elementary educators will grow in their understanding of their role in facilitating children’s learning. Focuses on the role of purposeful learning and active exploration through play through the elementary grades. Recommended preparation: ED 140.
Credits: 4    Lecture: 3 Other: 3

ED 245 - TRAUMA SENSITIVE CLASSROOMS
Addresses the role of the education environment in supporting lifelong coping mechanisms. Addresses the impact of stress on children’s overall development. Explores Adverse Childhood Experiences (ACEs) and the role of mindfulness and resiliency-based programs to address and mitigate the effects of early trauma. Addresses the impact of stressors on children’s participation, relationships and overall success in learning environments. Explores strategies and resources for designing and leading Trauma Sensitive Classrooms. Recommended preparation: ED 140, ED 200, or ED 265.
Credits: 3    Lecture: 2 Other: 3

ED 250 - ADVANCED CURRICULUM DEVELOPMENT & TEACHING METHODS IN EARLY CHILDHOOD EDUCATION
Compares and contrasts various teaching methods for children ages 3 to 8 years. Focuses on constructivist teaching methodology and strategies, based on best practices in early childhood education. Three hours of supervised weekly field placement required. Recommended preparation: WR 121, ED 140, ED 150 and ED 151.
Credits: 4    Lecture: 3 Other: 3
ED 253 - LEARNING ACROSS THE LIFESPAN
Explores how learning occurs at all ages from early childhood through adulthood, major and emerging learning theories, individual learning styles including one’s own learning styles, self-reflection on implications of how learning occurs and the impact of these issues on the development and delivery of instruction. Recommended preparation: WR 121.
Credits: 3    Lecture: 3

ED 261 - EARLY CHILDHOOD EDUCATION PRACTICUM I
Students participate in weekly online discussions and six hours of practicum work in an ECE setting. Students select, with their COCC practicum supervisor, an appropriate early learning practicum placement. All ECE courses required for an Early Childhood Education AAS degree need to be successfully completed before taking ED 261. P/NP grading.
Credits: 3   Other: 9

ED 262 - EARLY CHILDHOOD EDUCATION PRACTICUM II
Students participate in weekly online discussions and six hours of practicum work in an ECE setting. Students select, with their COCC practicum supervisor, an appropriate early learning practicum placement. P/NP grading. Recommended preparation: ED 261.
Credits: 3   Other: 9

ED 265 - CHILDREN AT RISK
Issues of child abuse are presented from the multidisciplinary perspectives of definition, criminal justice and psychology. Topics covered include documentation and prevalence of child abuse, lifelong effects, prevention, identification and intervention. The course will focus on biopsychosocial outcomes and education concerns, as well as legal processes and implications from criminal justice.
Credits: 3    Lecture: 3

ED 269 - EXCEPTIONAL CHILDREN IN EARLY CHILDHOOD EDUCATION
Acquaints students with the exceptional child and his/her family. Local resources are explored to understand the referral process for children, birth to 5 years of age. Explores typical and atypical development and common delays and disabilities in all domains of child development. Includes discussion about teaching methods and strategies that are adopted or modified to meet individual child needs. Three hours of supervised weekly field placement required. Recommended preparation: ED 140, ED 151.
Credits: 3    Lecture: 2 Other: 3

ED 290 - ENGLISH LANGUAGE DEVELOPMENT IN THE PRIMARY CLASSROOM
This is an introductory course that will explore how to best meet the needs of English Language Learners in early childhood and elementary classrooms. We will examine how language skills are acquired and how to assess what stage of language acquisition students are in. We will also explore a variety of effective teaching strategies and materials that can be used in the classroom to help students develop both social and academic language proficiency. Three hours of field placement is required.
Credits: 4    Lecture: 3 Other: 3

ED 298 - INDEPENDENT STUDY: EDUCATION
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

ED 299 - SELECTED TOPICS: EDUCATION
This course is in development. Credits: 1 to 4

EMERGENCY MEDICINE

EMT 151 - EMERGENCY MEDICAL TECHNICIAN PART A
Develops skills in pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Part 1 of 2-part National EMS Standards Curriculum course. Students must complete an eight (8) hour “shift” hospital field experience. Required prior to first class: documentation of cleared criminal background check, current immunizations, current American Heart Association BLS for the Healthcare Provider (CPR) certification. Prerequisites: department approval, WR 065 or higher or placement into WR 121, MTH 020 or higher or placement into MTH 060.
Credits: 5    Lecture: 2 Other: 6

EMT 152 - EMERGENCY MEDICAL TECHNICIAN PART B
Develops skills in pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Part 2 of 2-part National EMS Standards Curriculum course. Students must complete an eight (8) hour “shift” EMS agency ride-a-long. Prerequisites: Department approval and EMT 151 (completed at COCC within one academic year).
Credits: 5    Lecture: 2 Other: 6

EMT 163 - ADVANCED EMT PART I
This is part 1 of a 2-part course. The Advanced Emergency Medical Technician course prepares the AEMT student to provide prehospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of AEMT’s, anatomy and physiology, medical emergencies, trauma, special considerations for working in the prehospital setting and providing patient transportation. Prerequisites: students must have a valid Oregon EMT license, HealthCare provider CPR card, pass a criminal history check and complete clinical site required immunizations to attend this course.
Credits: 5    Other: 10

EMT 164 - ADVANCED EMT PART II
This is part 2 of a 2-part course. The Advanced Emergency Medical Technician course prepares the AEMT student to provide prehospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of AEMT’s, anatomy and physiology, medical emergencies, trauma, special considerations for working in the prehospital setting and providing patient transportation. Prerequisites: EMT163 (within the current or previous academic year at COCC); students must have a valid Oregon EMT license, HealthCare provider CPR card, pass a criminal history check and complete clinical site required immunizations to attend this course.
Credits: 5    Other: 10

EMT 170 - EMERGENCY RESPONSE COMMUNICATION/DOCUMENTATION
Covers principles of therapeutic communication, verbal, written, and electronic communications in the provision of EMS, documentation of elements of patient assessment, care and transport, communication systems, radio types, reports, codes and correct techniques.
Credits: 2    Lecture: 2

EMT 171 - EMERGENCY RESPONSE PATIENT TRANSPORT
Covers ambulance operations, laws, maintenance, safety, emergency response driving, and route planning. Includes mandatory ten-hour field-driving course. Required prior to first class: valid Oregon driver’s license.
Credits: 2    Lecture: 1 Other: 2

EMT 188 - SPECIAL STUDIES: EMERGENCY MEDICAL TECHNICIAN
Explores topics of current interest in the discipline.
Credits: 1 to 5
EMT 195 - CRISIS INTERVENTION
Prepares the student to deal with situations facing both the patient and caregiver. Included are all facets of crisis intervention techniques and recent advances in critical incident stress debriefing intervention.
Credits: 3  Lecture: 3

EMT 199 - SELECTED TOPICS: EMERGENCY MEDICAL TECHNICIAN
This course is in development.
Credits: 1 to 5

EMT 280 - PARAMEDIC CO-OP WORK EXPERIENCE
Provides the educational field internship experience on an Advanced Life Support (ALS) transporting ambulance required to prepare the student to achieve licensure as a Paramedic. The field internship allows the paramedic student to apply previously learned theory and skills while under the direct observation and guidance of a preceptor. Student must have successfully completed all paramedic Lecture/Lab clinical requirements in order to register for this course. Student must pass a terminal competency exam at the completion of all CWE requirements. This course will meet the 4 credits of CWE required for completion of the paramedic program. Prerequisites: students will have needed to pass all didactic and clinical requirements EMT 290, EMT 291, EMT 292, EMT 293, EMT 294, EMT 295, EMT 296, EMT 297 and EMT 298; department approval.
Credits: 4

EMT 280A - PARAMEDIC CO-OP WORK EXPERIENCE
This is a 1 credit elective CWE offering available only to students affiliated with an agency that is a 911 Advanced Life Support (ALS) transporting agency. Provides the educational field internship experience required to prepare the student to achieve licensure as a Paramedic. The filed internship allows the paramedic student to apply previously learned theory and skills while under the direct observation and guidance of a preceptor. Prerequisites: EMT 290, EMT 291, EMT 296 and department approval.
Credits: 1

EMT 280B - PARAMEDIC CO-OP WORK EXPERIENCE
If a student has taken two 1-credit CWEs during the academic year, this 2-credit CWE must be taken in order to reach 4 credits of CWE required by the program. The CWE will provide the educational field internship experience on an Advanced Life Support Ambulance, required to prepare the student to achieve licensure as a Paramedic. The field internship allows the paramedic student to apply learned theory and skills in the internship setting while under the direct observation and guidance of a preceptor. Students must pass a terminal competency exam at the completion of all CWE requirements. Students will need 4 credits of CWE for completion of the Paramedic degree. This course is meant to be taken during the Summer term, if the student completed two 1-credit EMT 280A courses in the Winter and Spring terms. Prerequisites: EMT 294, EMT 295 and department approval.
Credits: 2

EMT 280C - PARAMEDIC CO-OP WORK EXPERIENCE
If a student has taken a 1-credit CWE during the academic year, this 3-credit CWE must be taken in order to reach 4 credits of CWE required by the program. The CWE will provide the educational field internship experience on an Advanced Life Support Ambulance, required to prepare the student to achieve licensure as a Paramedic. The field internship allows the paramedic student to apply learned theory and skills in the internship setting while under the direct observation and guidance of a preceptor. Students must pass a terminal competency exam at the completion of all CWE requirements. Students will need 4 credits of CWE for completion of the Paramedic degree. This course is meant to be taken if the student completed one 1-credit EMT 280A courses during either the Winter or Spring terms. Prerequisites: EMT 294, EMT 295 and department approval.
Credits: 3

EMT 288 - SPECIAL STUDIES: EMERGENCY MEDICAL TECHNICIAN
Explores topics of current interest in the discipline.
Credits: 1 to 5

EMT 290 - PARAMEDIC PART I
First term of a three-term Didactic Series, including EMT 292 and EMT 294. Focuses on patient assessment; airway/ventilation; pathophysiology of shock; general pharmacology; and respiratory, cardiovascular, neurological, behavioral and acute abdominal emergencies. Lab setting will begin the process of students’ learning of required skills needed of a paramedic, such as IV establishment, medication administration and patient assessments for a variety of patient presentations. Corequisites: EMT 291.
Credits: 8  Lecture: 7.2  Lab: 7.2

EMT 291 - PARAMEDIC PART I CLINICAL
This is a competency-based clinical experience, which emphasizes patient assessment, formulation of presumptive diagnoses and treatment plans. The clinical experiences are performed at local hospitals. This is the first of three courses in the clinical setting for a paramedic student. Student must have been accepted into the second year paramedic program.
Corequisites: EMT 290.
Credits: 3  Other: 10.8

EMT 292 - PARAMEDIC PART II
Offers second term of a three-term course, which includes EMT 290 and EMT 294. Focuses on anaphylactic, toxicological, environmental, geriatric, pediatric, neonatal and endocrine emergencies; infectious diseases; capnography; special patient populations; hematology; psychiatric care; crime scene preservation; genitourinary care and trauma care. Applies didactic knowledge to campus-based laboratory skills practice. Prerequisites: EMT 290 and EMT 291. Corequisites: EMT 293.
Credits: 8  Lecture: 7.2  Lab: 7.2

EMT 293 - PARAMEDIC CLINICAL PART II
This is a competency-based clinical experience, which emphasizes patient assessment, formulation of presumptive diagnoses and treatment plans. The clinical experiences are performed at local hospitals. This is the second of three courses in the clinical setting for a paramedic student. Student must have been accepted into the second year paramedic program. Prerequisites: EMT 290 and EMT 291. Corequisites: EMT 292.
Credits: 3  Other: 10.8

EMT 294 - PARAMEDIC PART III
Offers third term of a three-term course, which includes EMT 290 and EMT 292. Continues on anaphylactic, toxicological, environmental, geriatric, pediatric, neonatal and endocrine emergencies; infectious diseases; capnography; special patient populations; hematology; psychiatric care; crime scene preservation; genitourinary care and trauma care. Applies didactic knowledge to campus-based laboratory skills practice. Prerequisites: EMT 292 and EMT 293. Corequisites: EMT 295.
Credits: 8  Lecture: 7.2  Lab: 7.2

EMT 295 - PARAMEDIC CLINICAL PART III
This is a competency-based clinical experience, which emphasizes patient assessment, formulation of presumptive diagnoses and treatment plans. The clinical experiences are performed at local hospitals. This is the third of three courses in the clinical setting for a paramedic student. Student must have been accepted into the second year paramedic program. Prerequisites: EMT 292 and EMT 293. Corequisites: EMT 294.
Credits: 3  Other: 10.8

EMT 296 - ADVANCED CARDIAC LIFE SUPPORT (ACLS)
The Advanced Cardiovascular Life Support (ACLS) Provider course is designed for healthcare providers who either direct or participate in the management of cardiopulmonary arrest or other cardiovascular emergencies. Through didactic instruction and active participation in simulated cases, the students will enhance their skills and clinical decision-making abilities for the diagnosis and treatment of...
cardiopulmonary arrest, acute arrhythmia, stroke and acute coronary syndromes. At successful completion, students will receive an AHA ACLS card. Department approval is required.

Credits: 1 Other: 2

EMGR 297 - PEDIATRIC ADVANCED LIFE SUPPORT (PALS)
In the Pediatric Advanced Life Support (PALS) course, you will reinforce and enhance your skills in the treatment of pediatric arrest and periarrest through active participation in a series of simulated pediatric emergencies. These simulations are designed to reinforce the important concepts of systematic approach to pediatric assessment, basic life support, PALS treatment algorithms and effective resuscitation team dynamics. After successful completion of course, students will receive an AHA PALS card. The goal of the PALS course is to improve the quality of care provided to seriously ill or injured children, resulting in improved outcomes. Prerequisites: department approval.

Credits: 1 Other: 2

EMGR 298 - PREHOSPITAL TRAUMA LIFE SUPPORT (PHTLS)
In the Prehospital Trauma Life Support (PHTLS) course, you will reinforce and enhance your skills in the treatment of trauma-associated patients through active participation in a series of simulated traumatic emergencies. These simulations are designed to reinforce the important concepts of systematic approach to recognition, assessment and treatment of a multitude of multisystem trauma patients. After successful completion, students will receive an NAEMT PHTLS card. Prerequisites: department approval.

Credits: 1 Other: 2

EMGR 299 - SELECTED TOPICS: EMERGENCY MEDICAL TECHNICIAN
This course is in development.

Credits: 1 to 5

ENGINEERING

ENGR 188 - SPECIAL STUDIES: ENGINEERING
Provides an opportunity to explore an area of engineering by doing a special project or to gain practical experience by working with a professional engineer.

Credits: 1 to 6

ENGR 199 - SELECTED TOPICS: ENGINEERING
This course is in development.

Credits: 1 to 6

ENGR 201 - ELECTRICAL FUNDAMENTALS
Topics covered in this course include: DC and 1st order transient analysis, Ohm’s Law, Kirchhoff’s Law (KCL and KVL), nodal analysis, branch analysis, source transformations, Thévenin and Norton equivalent circuits, maximum power transfer, operational amplifiers, inductance, capacitance and transient response of RL and RC. Recommended preparation: PH 202/212 and MTH 251/252.

Credits: 4 Lecture: 3 Lab: 3

ENGR 202 - ELECTRICAL FUNDAMENTALS II
Topics covered in this course include: AC and 2nd order transient analysis, sinusoids and phasors, sinusoidal steady-state analysis, nodal analysis, branch analysis, source transformations, Thévenin’s and Norton’s equivalent circuits, sinusoidal steady-state power calculation and balanced three-phase circuits. Recommended preparation: ENGR 201 and MTH 251/252.

Credits: 4 Lecture: 3 Lab: 3

ENGR 211 - STATICS
Analyzes forces induced in structures and machines by various types of loading. Recommended preparation: MTH 251 and PH 201/211.

Credits: 4 Lecture: 3 Lab: 3

ENGR 212 - DYNAMICS
Studies kinematics, Newton’s law of motion, and work-energy and impulse-momentum relationships as applied to engineering systems. Recommended preparation: ENGR 211 and MTH 252.

Credits: 4 Lecture: 3 Lab: 3

ENGR 213 - STRENGTH OF MATERIAL
Studies properties of structure materials. Analyzes stress and deformation in axially-loaded members, in circular shafts and beams and in statically indeterminate systems containing these components. Recommended preparation: ENGR 211 and MTH 252.

Credits: 4 Lecture: 3 Lab: 3

ENGINEERING--GENERAL

GE 101 - ENGINEERING ORIENTATION
Introduces students to many different engineering fields through guest lectures, field trips, and hands-on engineering projects and problem-solving exercises. Develops understanding of similarities and differences between the engineering fields. Discusses professional engineering testing and licensing requirements.

Credits: 3 Lecture: 2 Lab: 3

GE 102 - ENGINEERING PROBLEM SOLVING AND TECHNOLOGY
Introduces the use of Microsoft Excel for the solution of engineering problems and familiarizes students with the decision making and report preparation process in engineering design. Development of spreadsheets for analyzing engineering problems and preparation of final design reports that outline in detail design evaluation, recommendation and implementation. Recommended preparation: MTH 112.

Credits: 3 Lecture: 2 Lab: 3

ENGLISH & LITERATURE

ENG 104 - INTRODUCTION TO LITERATURE: FICTION
Explores human purpose, literary structures and cultural values within a variety of short stories and/or novels. Features close reading, interpretation and evaluation of selected works of fiction, with attention to authors’ contexts and their creative processes, narrative elements and reader responses. Explores topics and literatures from diverse viewpoints, backgrounds and perspectives. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 105 - INTRODUCTION TO LITERATURE: DRAMA
Examines drama as literature, through its traditions, imaginative purposes and organizing visions, such as tragedy, comedy and realism. Close reading and interpretation of selected plays with attention to the cultural contexts of their creation and to the literary dimensions of character, dialogue, plot, setting, language and theme. Need not be taken in sequence. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 106 - INTRODUCTION TO LITERATURE: POETRY
Explores critical and personal pleasures of poetry as a powerful and compact means to express feelings and ideas and respond to the varieties of human experience. Close reading of a wide range of poetry with attention to poets’ roles, literary traditions and poetic strategies expressed through tone, speaker, situation and event, theme, irony, language, images, sounds, rhythms, symbols, open and closed poetic forms. Need not be taken in sequence. Recommended preparation: WR 121.

Credits: 4 Lecture: 4

ENG 107 - WESTERN WORLD LITERATURE: ANCIENT
Explores origins of Western culture through a study of representative Greek, Roman and other literary philosophical and historical texts. Mythology and the hero’s quest as incorporated in Homer and Virgil may form the core of the readings. Need not be taken in sequence. Recommended preparation: WR 121.

Credits: 4 Lecture: 4
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Lecture</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 108</td>
<td>WESTERN WORLD LITERATURE: MIDDLE AGES</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Survey of representative texts explores Middle Ages, Renaissance, up to the 18th century Enlightenment, including rise of Christianity, chivalry and the vision quest. Need not be taken in sequence. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 109</td>
<td>WESTERN WORLD LITERATURE: MODERN</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surveys representative texts, authors, and genres from the late 18th century to the present; explores modern Western world literary movements and their historical-intellectual contexts, from romanticism and realism to post-colonialism and contemporary global trends. Need not be taken in sequence. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 188</td>
<td>SPECIAL STUDIES: LITERATURE</td>
<td>1 to 4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explores topics of current interest in the discipline.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 199</td>
<td>SELECTED TOPICS: LITERATURE</td>
<td>1 to 4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is in development.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 201</td>
<td>SHAKESPEARE</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The major plays of Shakespeare’s early and middle periods. May also include selected study of his sonnets. Need not be taken in sequence. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 202</td>
<td>SHAKESPEARE</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The major plays of Shakespeare’s middle and later periods. May also include selected study of his sonnets. Need not be taken in sequence. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 204</td>
<td>SURVEY BRITISH LITERATURE I</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examines representative texts from the heroic age (Medieval) through the Enlightenment (18th century). Literary forms such as the epic, chivalric romance, morality play and folk ballad, lyric and narrative poetry, drama, the speculative essay, prose non-fiction and the novel are studied. Explores relations between texts and their cultural and historic contexts. Need not be taken in sequence. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 205</td>
<td>SURVEY BRITISH LITERATURE II</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examines representative texts from the Romantic period through Contemporary literature. The romance of nature, industrial growth, urban experience, the rise of new class identities and alienation of the individual are themes in this period. Literary forms such as lyric and narrative poetry, short stories, the novel and the drama of social realism and literature of the absurd are studied. Explores relations between texts and their cultural and historical contexts. Need not be taken in sequence. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 212</td>
<td>AUTOBIOGRAPHY</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Examines diverse modes of autobiographical writing as texts that represent the self in society and where writers construct and represent memories. Explores the ways in which writers construct and represent memory and the impact these narratives have on our understanding of the political and cultural context in which they are produced. Explores autobiography from various places and periods. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 221</td>
<td>INTRODUCTION TO CHILDREN’S LITERATURE</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provides an overview of children’s literature for toddlers through teens by examining the different genres of children’s literature, including picture books, myths and folklore, poetry, nonfiction, historical fiction, and fantasy, as well as the criteria for evaluation of each genre. This course is recommended for education majors as well as parents (present and future) who are interested in children’s literature and issues related to children’s literature. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 223C</td>
<td>TOPICS IN AMERICAN LITERATURE: CONTEMPORARY FICTION</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In-depth study of several works of contemporary (late 20th/21st century) American fiction. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 232M</td>
<td>TOPICS IN AMERICAN LITERATURE: LITERATURE &amp; MEDICINE</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course examines fiction, poetry, drama and creative nonfiction by and about members of the health professions. The goal is to understand multiple perspectives on illness, health, and healing as presented in the course material. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 234C</td>
<td>TOPICS IN AMERICAN LITERATURE: CONTEMPORARY FICTION</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In-depth study of several works of contemporary (late 20th/21st century) American fiction. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 250</td>
<td>INTRODUCTION TO FOLKLORE AND MYTHOLOGY</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Study of the systematic ways to explain how and why so many of the world’s great religions, past and present, share similar stories, heroes and ways of attempting to understand and explain the unknowable. Analyzes tales from, among other locales, India, China, Africa, and North and South America. Some of the key myths include those of the Aztecs and Mayans, Native North Americans, the Sumerians and the Gnostics. The first few weeks of the course will provide an introduction to folklore. It will then provide insight into the social, psychological and aesthetic nature of mythology and an introduction to the theoretical approaches to understanding mythology. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 253</td>
<td>SURVEY AMERICAN LITERATURE I</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reading and interpretation of writings from the diverse cultures which inhabited, colonized or developed this country through material from the Civil War period. Includes the Native American oral tradition, the journals of Columbus and other explorers, the diaries of settlers in the British colonies and more traditional forms of literature through the mid-19th century. Need not be taken in sequence. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 254</td>
<td>SURVEY AMERICAN LITERATURE II</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Covers selected works of American literature written during the late 19th century and the 20th century. Covers the transition from Realism and Naturalism to Modernism, the Jazz Age, the Harlem Renaissance, the Confessional and “Beat” poets and writers and late 20th century short fiction. Need not be taken in sequence. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 256</td>
<td>FOLKLORE AND US POPULAR CULTURE</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explores the relationship between folklore and popular culture, with special emphasis on the analysis of legends, myths, icons, stereotypes, heroes, rituals and celebrations. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 260</td>
<td>INTRODUCTION TO WOMEN WRITERS</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Focuses on the achievements and perspectives of women writers through critical analysis of their literary works and literary strategies. Uses a chronological, stylistic or thematic approach. Recommended preparation: WR 121.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 288</td>
<td>SPECIAL STUDIES: LITERATURE</td>
<td>1 to 4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is in development.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG 299</td>
<td>SELECTED TOPICS: LITERATURE</td>
<td>1 to 4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Explores topics of current interest in the discipline.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ETHNIC STUDIES

ES 101 - INTRODUCTION TO ETHNIC STUDIES
Introduction to the multidisciplinary field of Ethnic Studies. Explores the ways that ethnicity, race and racism shape the historical and contemporary experiences of people of color in the United States. Introduces students to a broad range of cultural and political contexts, social problems and histories to understand how racial formation and ethnic identity constructions emerged through and maintain systems of social inequality, while also providing insight into the various modes of resistance and struggles for a just society.
Credits: 4    Lecture: 4

ES 199 - SELECTED TOPICS: ETHNIC STUDIES
Selected topics in Ethnic Studies.
Credits: 1 to 4

ES 211 - INTRODUCTION TO NATIVE AMERICAN STUDIES
Provides an introduction to the history, social organization, political experience, and artistic expression of indigenous peoples of the western hemisphere, focusing primarily on American Indians. Explores the various historical and contemporary struggles, concerns and achievements of American Indians using an interdisciplinary approach. Prioritizes the voices of those within Indian communities in describing their own lives and experiences. Recommended preparation: ES 101.
Credits: 4    Lecture: 4

ES 212 - INTRODUCTION TO AFRICAN AMERICAN STUDIES
This course examines the historical, political, social and cultural issues that shape the experiences of African Americans both in the past and present. The course will cover many of the historical and contemporary concerns and issues facing African American communities with particular attention to the voices within these communities. Recommended preparation: ES 101.
Credits: 4    Lecture: 4

ES 213 - INTRODUCTION TO CHICAN@/LATIN@ STUDIES
This course examines historical, political, social and cultural issues in Chicano and Latino communities and surveys scholarship in Chicano and Latino studies. This course also explores the historical construction of race, ethnicity and identity with attention to how U.S. foreign policy in Latin America has influenced perceptions within and outside of the Chicano/Latino communities. Recommended preparation: WR 121.
Credits: 4    Lecture: 4

ES 214 - INTRODUCTION TO ASIAN/PACIFIC ISLANDER AMERICAN STUDIES
Explores interdisciplinary research on Americans of Chinese, Filipino, Japanese, Korean, Southeast Asian, South Asian and Pacific Island ancestry. Surveys the diversity of histories, cultures and experiences that contribute to the broad category of Asian American. Focuses particular attention to the multiplicity of voices and experiences of that shape the lives of Asians in the United States. Recommended preparation: ES 101.
Credits: 4    Lecture: 4

ES 298 - INDEPENDENT STUDY: ETHNIC STUDIES
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

ES 299 - SELECTED TOPICS: ETHNIC STUDIES
Selected topics in Ethnic Studies.
Credits: 1 to 4

FILM ARTS

FA 101 - INTRODUCTION TO FILM
Focuses on audio-visual narratives, with an emphasis on how the collaborative process of combining cinematography, editing, sound, mise-en-scene and acting constructs meaning and communicates ideas. Recommended preparation: WR 121.
Credits: 4    Lecture: 4

FA 125 - WORLD CINEMA
Introduction to comparative study of compelling feature films and their directors from around the globe, analyzing subject matter, theme, genre, narrative structure, character, film style and technique as expressions of diverse cultural worldviews and distinctive artistic visions. Recommended preparation: WR 121.
Credits: 4    Lecture: 4

FA 257 - LITERATURE INTO FILM
Implements analysis of the structure of motion pictures to teach about structure of literature, allowing students to see the comparative strengths of each form. Aspects of narrative to be compared include plot and structure, character development, point of view, figurative discourse, symbol and allegory and means of controlling and expressing passage of time. Recommended preparation: WR 121.
Credits: 4    Lecture: 4

FA 288 - SPECIAL STUDIES: FILM ARTS
Explores topics of current interest in the discipline.
Credits: 1 to 4

FA 298 - INDEPENDENT STUDY: FILM ARTS
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Prerequisites: instructor approval. Recommended preparation: Prior coursework in the discipline.
Credits: 1 to 4

FA 299 - SELECTED TOPICS: FILM ARTS
This course is in development.
Credits: 1 to 4

FISH & WILDLIFE

FW 135 - MUSEUM TECHNIQUES
Hands on technique course focusing on preparing and preserving mammal and bird specimens for use in education and research. Students will complete a minimum of three projects which requires skinning and preserving wildlife specimens suitable for study and display.
Credits: 1    Lab: 3

FW 199 - SELECTED TOPICS: FISH/WILDLIFE
Provides students with hands-on field experience and aids students in acquiring experience which may meet basic qualification standards required by federal agencies. Content and credit earned by mutual agreement between instructor and student in detailed written agreement. Prerequisites: instructor approval.
Credits: 1 to 4

FW 212 - SURVEY OF NORTHWEST BIRDS
This course is an introduction to bird systematics, and surveys ecologically, economically and socially important bird species in the Pacific Northwest with an emphasis on field identification and basic life history. Recommended preparation: BI 102 or BI 213 or FOR 241A.
Credits: 2    Lab: 6

FW 218 - SURVEY OF NORTHWEST MAMMALS
This course is an introduction to mammal systematics, and surveys ecologically, economically and socially important mammal species in the Pacific Northwest with an emphasis on identification and basic life history. Recommended preparation: BI 102 or BI 213 or FOR 241A.
Credits: 2    Other: 4
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credits</th>
<th>Lecture</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR 110</td>
<td>WILDLAND FIRE SCIENCE I</td>
<td>Focuses on the effects of Wildland Fire Policy, current fire suppression strategies and tactics; weather, topography, fuel models and how each interact to effect fire behavior. Additional topics include the wildland fire environment as it relates to situational awareness and personal safety. An overview of modern wildland firefighting with an emphasis on understanding and applying fireline safety. Course cannot be challenged, but will be waived for those with proof of wildland fire single resource status.</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>FOR 111</td>
<td>FORESTRY PERSPECTIVES</td>
<td>Introduction to the entire discipline of forestry, including the history of forest use and management, North American forest regions, forest ecology, mensuration and management, forest products and the importance of forest resources other than wood fiber. Also provides overview of state, regional and local employment opportunities.</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>FOR 126</td>
<td>FIELD STUDIES PACIFIC NW FORESTS</td>
<td>This course examines the ecology, management and human uses of Pacific Northwest forests. Field experience takes place during a 4-day field trip to the Oregon coast and Northern California and includes visiting forest environments, forest product manufacturing facilities, field lectures and guided tours, as well as individual and small-group exercises.</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FOR 127</td>
<td>PLANTS OF THE PACIFIC NORTHWEST</td>
<td>Identification, classification and distribution of shrubs, forbs and grasses found in low-, mid-, and high-elevation Oregon habitat types. Emphasis is placed upon proper field identification through use of terminology and taxonomic keys. Also discusses sensitive plants and noxious weeds.</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FOR 130</td>
<td>CHAINSAW USE AND MAINTENANCE</td>
<td>Covers basic tree falling, bucking and limbing techniques. Equipment safety, use, maintenance and repairs of saws is covered. Designed for inexperienced or novice chainsaw operators or can be used as refresher course for experienced saw operators.</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>FOR 180</td>
<td>CO-OP WORK EXPERIENCE FORESTRY</td>
<td>Provides opportunity for on-the-job training in forestry field operations, forest products manufacturing or work related to these areas. Normally undertaken during summer months on a full-time basis but can occur any term.</td>
<td>1 to 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOR 188</td>
<td>SPECIAL STUDIES: FORESTRY</td>
<td>Explores topics of current interest in the discipline.</td>
<td>1 to 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOR 195</td>
<td>WILDERNESS CONCEPTS</td>
<td>Introduction to concepts of wilderness and wilderness management principles. Introduction to the history of wilderness and the National Wilderness Preservation System.</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>FOR 199</td>
<td>SELECTED TOPICS: FORESTRY</td>
<td>Provides opportunity for students with exceptional background or need to continue beyond normal program content. Content and credit earned by mutual agreement between instructor and student and detailed in written agreement. Maximum of three credits may be applied to degree. Prerequisites: instructor approval.</td>
<td></td>
<td>3 Lab:</td>
<td></td>
</tr>
<tr>
<td>FOR 208</td>
<td>SOILS: SUSTAINABLE ECOSYSTEMS</td>
<td>Focuses on the basics of Soil Science, ranging from physical properties to use and management. Soils with respect to traditional agricultural, wildlands and rangelands, watersheds and modern environmental perspectives will be discussed. New and current events of soils applications and the science of soils in the world around us will be reviewed to better understand the role soil has in our everyday lives. Lab component will include in and out of classroom lab work and field trips.</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>FOR 209</td>
<td>FIRE ECOLOGY AND EFFECTS</td>
<td>Discusses the role of fire in Pacific Northwest ecosystems. Identifies effects on flora, fauna, soils, water; fire and cultural/visual resource management; fire and insect interactions. Covers the effects of fire on different forest and range ecosystems.</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>FOR 210</td>
<td>WILDLAND FIRE SCIENCE II</td>
<td>A study of hazardous fuel management and treatment practices. Incorporates current fuel measurement and analysis techniques, fire behavior prediction models and hazardous wildland fuel mitigation methods.</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>FOR 211</td>
<td>SUPERVISION AND LEADERSHIP</td>
<td>Covers basic human relations and management skills as applied to first-line supervision in forestry, fire science and EMS. Defines work environment. Identifies and discusses subordinate, peer, and supervisory relationships. Case studies, including students’ own work experiences will be used.</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>FOR 215</td>
<td>FOREST RESOURCE CAPSTONE</td>
<td>Students conduct a sample survey of a large area and present their findings, along with recommendations for management of the area, in a written report. Oral presentation also made to department staff. Limited to second year students or those who have fulfilled majority of Forest Resources Technology degree requirements. Prerequisites: instructor approval.</td>
<td>3</td>
<td>1.5 Lab:</td>
<td>4.5</td>
</tr>
<tr>
<td>FOR 230A</td>
<td>MAP, COMPASS AND GPS</td>
<td>Teaches the basic skills of field and forest navigation with compass and GPS. Competency obtained in pacing, paper and computer map use, compass and basic GPS use.</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
FOR 230B - FOREST SURVEYING
Studies basic surveying techniques and equipment emphasizing traversing, differential leveling, profiling, GPS mapping and basic coordinate geometry. Recommended preparation: FOR 230A or instructor approval.
Credits: 3  Lecture: 2  Lab: 3

FOR 231 - GPS MAPPING
Introduces the basic techniques of mapping grade GPS data collection for GIS. Includes data dictionary creation, field data collection, differential correction and file transfer. Recommended preparation: FOR 230A.
Credits: 1  Lecture: .6  Lab: 1.2

FOR 235 - RESOURCE MEASUREMENTS
Students will learn the fundamentals of measuring and quantifying natural resources, including cruising and scaling timber to determine merchantable volume, quantifying wildlife and fisheries habitat, measuring and estimating forage production for wildlife and livestock, and sampling wildlife populations. Course will also introduce basic statistical concepts and their applications in resource management. First course in the sequence of FOR 235, FOR 236 and FOR 237. Recommended preparation: MTH 085 or higher.
Credits: 4  Lecture: 3  Lab: 3

FOR 236 - AERIAL PHOTO
Covers practical use of aerial photographs including photo interpretation, navigation, scale, area and distance determination, corner search, basic type-mapping and GPS application. Second course in the sequence of FOR 235, FOR 236 and FOR 237. Recommended preparation: MTH 086 or higher; FOR 230B or FOR 231.
Credits: 3  Lecture: 2  Lab: 3

FOR 237 - RESOURCE SAMPLING
Includes instruction in log scaling, tree measurement techniques, sampling statistics, tree volume and tree taper equations, sampling and field procedures for equal probability (sample tree and fixed area) and variable probability (3P and point sampling) sampling systems. Final course in the sequence of FOR 235, FOR 236 and FOR 237. Recommended preparation: MTH 086 or higher; FOR 230B or FOR 231.
Credits: 4  Lecture: 2.5  Lab: 4.5

FOR 240A - FOREST ECOLOGY
Provides students with an overview of basic plant structure and function and introduces students to functioning of forest ecosystems. Class will examine the physical environment and how it affects growth and distribution of organisms and ecological processes. Course concludes with an examination of communities, disturbance and succession.
Credits: 3  Lecture: 2  Lab: 3

FOR 240B - WILDLIFE ECOLOGY
Explores wildlife ecology and biodiversity in context of forest and range management. Focuses on relationship between wildlife and forest and range ecosystems, and examines the role of forest and range management in wildlife habitat management. Recommended preparation: FOR 240A.
Credits: 3  Lecture: 2  Lab: 3

FOR 241A - FIELD DENDROLOGY
Identification, classification, and distribution of common trees and shrubs found in the Western United States and major tree species of North America. The course emphasizes botanical nomenclature and proper identification using plant keys and field characteristics.
Credits: 3  Lecture: 1  Lab: 6

FOR 241B - DENDROLOGY
Covers identification, classification and distribution of plant communities (tree, shrub, forb and grass) found within Oregon and major North American plan communities. This class covers in lecture format the structure and function of the primary organs and tissues that comprise woody plants. This course is the classroom portion of FOR 241A. Course does not need to follow FOR 241A.
Credits: 3  Lecture: 3

FOR 251 - RECREATIONAL RESOURCE MANAGEMENT
Overview of recreational resource management including study of land and water resources used for outdoor recreation. Includes planning and management of natural and cultural resources for long-term resource productivity.
Credits: 3  Lecture: 2  Lab: 3

FOR 255 - RESOURCE INTERPRETATION
Introduces fundamental theories of interpretation and active and passive techniques of interpretation including: activities, presentations, signage, brochures and information kiosks. Course allows optional certification as an interpreter.
Credits: 3  Lecture: 2  Lab: 3

FOR 260 - CONSERVATION OF NATURAL RESOURCES
Examines current utilization and issues surrounding natural resources availability and management, as well as the effect of human population on resource use and the environment. Includes critical analysis of sustainable development and resource use concepts, including principles of conservation and management. Emphasis placed on current issues. Two-day field trip required. Recommended preparation: WR 121.
Credits: 3  Lecture: 2  Lab: 3

FOR 271 - APPLIED FOREST ECOLOGY
Applies principles of forest ecology to develop a basic understanding of forest stand dynamics and silvicultural principles. Emphasis is placed on stand development, regeneration and stand analysis. Students will develop a practical understanding of stand establishment, maintenance and stand data collection. First course in sequence of FOR 271, FOR 272 and FOR 273. Recommended preparation: FOR 240A and FOR 241A.
Credits: 3  Lecture: 2  Lab: 3

FOR 272 - FOREST ENTOMOLOGY/PATHOLOGY
Emphasizes the recognition and effects of diseases, insects and mammals affecting forest ecosystems in the Pacific Northwest. Course will examine the role of insects, diseases and animals in forest functioning, health and management, as well as control measures and integrated pest management. Lab work is largely field-based and emphasizes identification of damaging forest insects and diseases common in Oregon. Second course in the sequence of FOR 271, FOR 272 and FOR 273. Recommended preparation: FOR 240A and FOR 241A.
Credits: 3  Lecture: 2  Lab: 3

FOR 273 - SILVICULTURE AND HARVESTING SYSTEMS
Applies principles of forest silviculture and harvesting systems. Emphasizes interrelated systems of silviculture and harvesting. Discussions provide an understanding of the various treatments and harvesting systems applied to forest stands to meet various management objectives for forest ecosystems. Topics include forest regeneration processes and intermediate operations (thinning, pruning, etc.) and different methods of timber harvest. Observation and data collection will be performed in lab sections. Written reports interpreting prescriptions and harvest systems will be required. Last course in sequence of FOR 271, FOR 272 and FOR 273. Recommended preparation: FOR 271, FOR 272, and FOR 273.
Credits: 5  Lecture: 3  Lab: 6

FOR 299 - SELECTED TOPICS: FORESTRY
This course is in development.
Credits: 1 to 5

FRENCH

FR 101 - FIRST YEAR FRENCH I
The first course of a three-course sequence in French. Emphasizes active communication in French. Develops students' basic skills in listening, reading, writing and speaking.
Credits: 4  Lecture: 4

FR 102 - FIRST YEAR FRENCH II
The second course of a three-course sequence in French. Continues the development of reading, writing, listening and speaking skills. Particular
emphasize short interactions regarding everyday life. Prerequisites: FR 101.
Credits: 4  Lecture: 4

**FR 103 - FIRST YEAR FRENCH III**
The third course of a three-course sequence in French. Continues the development of reading, writing, listening and speaking skills. Prepares students for entry into second-year level at COCC or any other university. Prerequisites: FR 102.
Credits: 4  Lecture: 4

**FR 199 - SELECTED TOPICS: FRENCH**
This course is in development.
Credits: 1 to 4

**FR 201 - SECOND YEAR FRENCH I**
Continues the work of First Year French, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Emphasis on writing and reading skills. Incorporates culture in all aspects of the course; class taught mostly in French. Course should be taken in sequence. Recommended preparation: FR 103 or three years of high school French.
Credits: 4  Lecture: 4

**FR 202 - SECOND YEAR FRENCH II**
Continues the work of FR 201, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Incorporates culture in all aspects of the course; class taught mostly in French. Course should be taken in sequence. Recommended preparation: FR 202, or one year of IB, AP French in high school, or four years of middle/high school French.
Credits: 4  Lecture: 4

**FR 203 - SECOND YEAR FRENCH III**
Continues the work of French 202, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Incorporates culture in all aspects of the course; class taught mostly in French. Course should be taken in sequence. Recommended preparation: FR 201 or four years of high school French.
Credits: 4  Lecture: 4

**FR 211 - FRENCH CONVERSATION AND CULTURE I**
Intended for students who wish to maintain and continue mastering fluency in the acquisition of French. Also an excellent option for the non-degree-seeking student. Recommended preparation: FR 103, or two years of high school French.
Credits: 3  Lecture: 3

**FR 212 - FRENCH CONVERSATION AND CULTURE II**
Intended for students who wish to maintain and continue mastering fluency in the acquisition of French. Also an excellent option for the non-degree-seeking student. Recommended preparation: FR 211, or FR 201, or three years of high school French.
Credits: 3  Lecture: 3

**FR 213 - FRENCH CONVERSATION AND CULTURE III**
Intended for students who wish to maintain and continue mastering fluency in the acquisition of French. Also an excellent option for the non-degree-seeking student. Recommended preparation: FR 212, or 202, or four years of middle/high school French.
Credits: 3  Lecture: 3

**FR 298 - INDEPENDENT STUDY: FRENCH**
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

**GS 104 - PHYSICAL SCIENCE: PHYSICS**
Energy is used as the theme to develop basic understanding of introductory principles of physics. Energy topics include mechanical, acoustic, heat, electric, radiant and nuclear. Emphasis placed on practical application of various energy forms. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 060.
Credits: 4  Lecture: 3 Lab: 3

**GS 105 - PHYSICAL SCIENCE: CHEMISTRY**
Provides an introduction to properties and structures of matter, chemical bonding, solutions, equilibrium, electrolytes, and acids and bases. Also includes quantitative discussions of the mole, stoichiometry and solution concentration. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 060.
Credits: 4  Lecture: 3 Lab: 3

**GS 106 - PHYSICAL SCIENCE: GEOLOGY**
Study of physical characteristics of, and processes within, solid earth. Principal topics include minerals, earthquakes, plate tectonics, igneous, sedimentary and metamorphic processes, glaciation and geologic time. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 060.
Credits: 4  Lecture: 3 Lab: 3

**GS 107 - PHYSICAL SCIENCE: ASTRONOMY**
Introduction to astronomy including solar system, stellar systems and cosmology. Some individual observing may be required. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 060.
Credits: 4  Lecture: 3 Lab: 3

**GS 108 - PHYSICAL SCIENCE: OCEANOGRAPHY**
Survey course that includes topics from four main areas of oceanography: geology of ocean basins and coasts; waves and currents; sea water chemistry and marine biology. Recommended preparation: one year of high school algebra or equivalent or concurrent enrollment in MTH 060.
Credits: 4  Lecture: 3 Lab: 3

**GS 199 - SPECIAL TOPICS: GENERAL SCIENCE**
This course is in development.
Credits: 1 to 6

**GEOGRAPHY / GEOG INFO SYSTEMS**

**GEOG 100 - INTRODUCTION TO GEOGRAPHY**
Designed to examine the key themes, concepts and ideas in geography and to develop a geographical perspective of the contemporary world. A basic foundation of the fundamental themes in geographic education will be extended to the study of places and regions. Emphasis will be placed on the development of cartographic and map interpretation skills.
Credits: 4  Lecture: 4

**GEOG 106 - ECONOMIC GEOGRAPHY**
Introduces the distribution of economic activities across the nation and the world. Explores core issues such as economic development, resource distribution and use, global agriculture, changes in manufacturing and the growth of the service sector. Urban patterns are explained in the context of our interrelated, globalized world. Useful course for business majors or any student wanting to understand criteria for business location. Recommended preparation: minimum placement into WR 065.
Credits: 4  Lecture: 4

**GEOG 107 - CULTURAL GEOGRAPHY**
Examination of different cultural traits in the world. Special emphasis on perception of space and landscape, language, world religion and folk and popular culture issues. Recommended preparation: minimum placement into WR 065.
Credits: 4  Lecture: 4
GEOG 190 - ENVIRONMENTAL GEOGRAPHY
Introductory view of the environment and how it is shaped by and shapes human activity. Units include famine, water resources, deforestation, energy use, biodiversity and sustainable land-use practices. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

GEOG 198 - FIELD GEOGRAPHY OF CENTRAL OREGON
Field course that examines natural and cultural landscapes of Central Oregon sub-regions such as the Bend Core, Sisters Country, High Desert, and Upper and Lower Deschutes Basins. Recommended preparation: WR 121.
Credits: 3 Lecture: 3

GEOG 199 - SELECTED TOPICS: GEOGRAPHY
Series of mini-courses focusing on selected geographical topics including the following: an invitation to geography and natural regions of the world (deserts, mountains, humid tropics) and thematic topics.
Credits: 1 to 4

GEOG 201 - WORLD REGIONAL GEOGRAPHY I
Introductory Geography course that explores the following regions: Europe, the former Soviet Union, Anglo-America, Australia and Japan. Evaluate how culture, politics, economics, history and the physical environment help create differences across regions. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

GEOG 202 - WORLD REGIONAL GEOGRAPHY II
Introductory Geography course that explores the following regions: Latin America, Middle East/North Africa, Sub-Saharan Africa, East, South and Southeast Asia. Evaluate how culture, politics, economics, history and the physical environment help create differences across regions.
Recommended preparation: WR 121.
Credits: 4 Lecture: 4

GEOG 207 - GEOGRAPHY OF OREGON
Survey of the state of Oregon focusing on natural environment, economic developments and human geography. Special emphasis on historical geography and demographic changes. Includes studies of major regions of Oregon. Recommended preparation: WR 065.
Credits: 3 Lecture: 3

GEOG 211 - COMPUTER CARTOGRAPHY
Develops skills needed to produce maps using ArcGIS Desktop software. Outlines cartographic principles and map use. Emphasis on mapping techniques within a GIS. Intended for students enrolled in GIS or UAS programs.
Credits: 4 Lecture: 3 Other: 2

GEOG 212 - TOURISM AND RECREATION
Includes a study of various components of the tourist industry and an analysis of the economic and environmental impacts of tourism and recreation upon communities. Examines tourism and recreation in Central Oregon and in other selected parts of the world.
Recommended preparation: WR 065.
Credits: 3 Lecture: 3

GEOG 213 - GEOGRAPHY OF PACIFIC NORTHWEST
General introduction to geographical characteristics of the Pacific Northwest and, through this regional emphasis, to some of the basic principles and concepts of geography as a discipline. Comprises three broad sections dealing in turn with historical geography, physical geography and economic geography. Recommended preparation: WR 065.
Credits: 3 Lecture: 3

GEOG 256 - GEOGRAPHIC INFORMATION SYSTEMS
Introduces students to principles and practice of GIS, while providing experience using ArcGIS Desktop and Spatial Analyst software. Develops both theoretical understanding of GIS and experience in accessing GIS datasets. Students exposed to raster and vector GIS.
Credits: 4 Lecture: 3 Lab: 3

GEOG 265 - GEOGRAPHIC INFORMATION SYSTEMS
Covers fundamentals of creating, using, editing, and managing spatial and attribute data stored in a geodatabase in ArcGIS. Topics include data migration; data loading; topology rules; use of subtypes, attribute domains and relationship classes. Also covered are creation, editing and analysis of geometric networks. Recommended preparation: GEOG 266.
Credits: 5 Lecture: 4 Other: 2

GEOG 267 - GEOGRAPHY FOR TEACHERS
Designed for public and private school teachers in Geography and for all teachers wishing to include geographic content and concepts in their social studies classes. Emphasizes how to teach Geography at any grade level and incorporates the benchmarks and curriculum goals of the state of Oregon Department of Education as well as National Geography standards. Recommended preparation: WR 121.
Credits: 3 Lecture: 3

GEOG 268 - SPATIAL DATA COLLECTION
Provides working knowledge of ArcGIS Desktop software. In addition, students undertake designing and developing a GIS database, performing spatial analysis, creating maps and generating a report using the desktop products. Recommended preparation: or to be taken with GEOG 265.
Credits: 5 Lecture: 4 Other: 2

GEOG 269 - SPATIAL DATA COLLECTION
Provides opportunity for on-the-job experience in the GIS field. Normally taken summer term, but may occur during any term. See instructor for details. Prerequisites: instructor approval.
Credits: 1 to 3
GEOG 284 - GIS CUSTOMIZATION
Utilizes techniques to customize ArcGIS software through use of a current programming language. Publishing content to the internet and servers is also undertaken. Recommended preparation: CIS 122.
Credits: 5  Lecture: 4  Lab: 2

GEOG 285 - DATA CONVERSION AND DOCUMENTATION
Covers a variety of techniques to collect and convert data between various formats, projections and coordinate systems, etc. Cultivates student's ability to research and experiment with data and enhance problem-solving skills. Stresses use of metadata which allows the data user to determine whether a particular data set is suitable for its proposed use. Recommended preparation: GEOG 266.
Credits: 5  Lecture: 4  Other: 2

GEOG 286 - REMOTE SENSING
Introduces students to the theory and methods of remote sensing through use of satellite imagery. Practical exercises involve use of SPOT, LANDSAT and Quickbird images with ArcGIS/Imagine Analysis software. Digital analysis is discussed and performed including preprocessing, image classification and image evaluation. Intended for students enrolled in the second year of GIS or UAS programs, or similar academic preparation. See program director for details.
Credits: 5  Lecture: 4  Other: 2

GEOG 287 - ANALYSIS OF SPATIAL DATA
Leads students through the analytical capabilities of GIS. Course begins with the more elementary but useful techniques involving locating and describing features, then proceeds to more advanced techniques based on higher-level spatial objects. Lab exercises utilize the Spatial Analyst Extension of ArcGIS to perform analysis of raster datasets. Recommended preparation: GEOG 266.
Credits: 5  Lecture: 4  Other: 2

GEOG 290 - ENVIRONMENTAL PROBLEMS
Examines intentional and inadvertent human modification of the natural environment and local, regional and global problems it may cause. Includes deforestation, urbanization, resource depletion and climate. Recommended preparation: WR 121.
Credits: 3  Lecture: 3

GEOG 295 - WILDERNESS AND SOCIETY
Cultural and historical overview of the changing attitudes toward wilderness as reflected through literature and the history of federal land legislation. Attempts to define the social and economic values of wilderness lands and where they occur geographically. A reading intensive course.
Credits: 4  Lecture: 4

GEOG 298 - INDEPENDENT STUDY: GEOGRAPHY
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

GEOG 299 - SELECTED TOPICS: GEOGRAPHY
This course is in development.
Credits: 1 to 4

GEOLOGY

G 148 - VOLCANOES AND EARTHQUAKES
This lab science course examines the global occurrence, origin and geological processes that create volcanoes and earthquakes. In addition, the course explores geologic hazards, risks, monitoring techniques and prediction methods associated with earthquakes and volcanism. The course makes extensive use of historic and prehistoric records of earthquakes and volcanic events and highlights examples from Oregon and the western United States.
Credits: 4  Lecture: 3  Lab: 3

G 162CV - CASCADE VOLCANOES
Consists of field studies of selected areas with emphasis on relationship between rock type, geologic setting and topography. Includes lectures, laboratory and weekend field trips. Topic areas include Cascade Volcanoes.
Credits: 3  Lecture: 1  Lab: 6

G 199 - SELECTED TOPICS: GEOLOGY
This course is in development.
Credits: 1 to 6

G 201 - GEOLOGY I
Examines the nature and origins of igneous metamorphic and sedimentary rocks, volcanism and volcanic hazards, geological resources, interior of the earth and plate tectonics.
Credits: 4  Lecture: 3  Lab: 3

G 202 - GEOLOGY II
Examines the nature of earthquakes, mass wasting, rivers, glaciers, groundwater, deserts, rock deformation, mountain building and plate tectonics. Need not be taken in sequence.
Credits: 4  Lecture: 3  Lab: 3

G 203 - GEOLOGY III
Examines earth history, geologic time, plate tectonics, fossils and the origin of earth. Need not be taken in sequence.
Credits: 4  Lecture: 3  Lab: 3

G 207 - GEOLOGY OF THE PACIFIC NORTHWEST
This is a one-term introductory lab science course in geology. It provides an introduction to the regional geology of the Pacific Northwest with emphasis on Oregon, Washington and parts of neighboring states and provinces. Includes basic geologic principles, earth materials and geologic history of the Pacific Northwest. Required weekend field trip.
Credits: 4  Lecture: 3  Lab: 3

G 299 - SELECTED TOPICS: GEOLOGY
Selected Topics in Geology
Credits: 1 to 6

GERMAN

GER 101 - FIRST YEAR GERMAN I
German 101 is designed for beginners. Basic listening, comprehension, speaking and writing skills will be developed during this course. Focuses on phonetics, genders, descriptions of objects and people, conjugating regular and irregular verbs in the present tense, punctuation, question words, German word order, and vocabulary, which includes the following categories: the alphabet, numbers and greetings. Communication and German thought processes will be emphasized. Successful completion of this sequence, which should be taken in order, will prepare students for second-year level German at COCC or other universities.
Credits: 4  Lecture: 4

GER 102 - FIRST YEAR GERMAN II
Continues the development of reading, writing, listening and speaking skills. Focuses on usage of kennen and wissen, the accusative case and prepositions governed by the accusative, modal verbs, verbs with separable prefixes, forming plurals, the formal and informal imperative, and prepositions. Students are encouraged to review GER 101 concepts and vocabulary prior to class. Recommended preparation: GER 101 or one year of high school German.
Credits: 4  Lecture: 4

GER 103 - FIRST YEAR GERMAN III
Continues the development of reading, writing, listening and speaking skills. Focuses on the dative case including indirect objects and prepositions governed by the dative, prepositions that can be accusative or dative, past tense using sein and haben, coordinating conjunctions, and comparisons. Students are encouraged to review the concepts of GER 101 and GER 102 prior to class. Recommended preparation: GER 102 or two years of high school German.
Credits: 4  Lecture: 4
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Other Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GER 188</td>
<td>SPECIAL STUDIES: GERMAN</td>
<td>1</td>
<td>4</td>
<td>Explores topics of current interest in the discipline.</td>
</tr>
<tr>
<td>GER 201</td>
<td>SECOND YEAR GERMAN I</td>
<td>1</td>
<td>3</td>
<td>Continues, after GER 103, with the development of reading, writing, listening and speaking skills.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Focuses on subordinating conjunctions, reflexive pronouns and verbs in the accusative and dative,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>genitive, adjective endings and comparisons. Class begins with a review of GER 101, GER 102 and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GER 103. Recommended preparation: GER 103 or three years of high school German.</td>
</tr>
<tr>
<td>GER 202</td>
<td>SECOND YEAR GERMAN II</td>
<td>1</td>
<td>3</td>
<td>Continues with the development of reading, writing, listening and speaking skills. Focuses on</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>the concepts of adjectives used as nouns, the simple past tense, past perfect tense, expressing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>wishes and expectations, the future tense, relative clauses, negations using nicht, noch nicht,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>noch kein(e), and nicht mehr, verbs with fixed prepositions, do- and wo- compounds and the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>subjunctive. Recommended preparation: GER 201 or four years of high school German.</td>
</tr>
<tr>
<td>GER 203</td>
<td>SECOND YEAR GERMAN III</td>
<td>1</td>
<td>3</td>
<td>Continues with the development of reading, writing, listening and speaking skills. Focuses on</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>the concepts of subjunctive I and II, expressing opinions, indirect discourse in present and past</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>subjunctive I, the passive voice and the impersonal use of “man,” present participles, review of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GER 202 grammar and vocabulary. Recommended preparation: GER 202 or four years of high school</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>German.</td>
</tr>
<tr>
<td>GER 298</td>
<td>INDEPENDENT STUDY: GERMAN</td>
<td>1</td>
<td>4</td>
<td>Individualized, advanced study to focus on outcomes not addressed in existing courses or of special</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>prior coursework in the discipline.</td>
</tr>
<tr>
<td>GER 299</td>
<td>SPECIAL STUDIES: GERMAN</td>
<td>1</td>
<td>4</td>
<td>This course is in development.</td>
</tr>
</tbody>
</table>

**HHP ACTIVITY**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Other Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHPA 102</td>
<td>BEGINNING ROCK CLIMBING</td>
<td>1</td>
<td>3</td>
<td>Provides an introduction to rock climbing.</td>
</tr>
<tr>
<td>HHPA 103</td>
<td>TRAINING FOR ROCK CLIMBING</td>
<td>1</td>
<td>3</td>
<td>Provides training for rock climbing.</td>
</tr>
<tr>
<td>HHPA 104</td>
<td>INTERMEDIATE ROCK CLIMBING</td>
<td>1</td>
<td>3</td>
<td>This class focuses on preparing the student to transition into a lead sport climber. This class</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>builds upon the skills covered in the beginning rock climbing courses, including advanced belay</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>techniques, belay/rappel transitions, and anchor building in a sport climbing environment.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Students will develop a plans to improve their climbing techniques, strength and endurance.</td>
</tr>
<tr>
<td>HHPA 105</td>
<td>BACKPACKING</td>
<td>1</td>
<td>3</td>
<td>Provides instruction for backpacking.</td>
</tr>
<tr>
<td>HHPA 106</td>
<td>SNOWSHOEING</td>
<td>1</td>
<td>3</td>
<td>Provides an introduction to snowshoeing.</td>
</tr>
<tr>
<td>HHPA 107</td>
<td>BACKCOUNTRY SKIING</td>
<td>1</td>
<td>3</td>
<td>Provides an introduction to backcountry skiing.</td>
</tr>
<tr>
<td>HHPA 109</td>
<td>WHITewater KAYAKING</td>
<td>1</td>
<td>3</td>
<td>Provides introduction to whitewater kayaking.</td>
</tr>
<tr>
<td>HHPA 110</td>
<td>WHITewater RAFTING I</td>
<td>1</td>
<td>3</td>
<td>Provides introduction to whitewater rafting.</td>
</tr>
<tr>
<td>HHPA 112</td>
<td>BEGINNING MOUNTAIN BIKING</td>
<td>1</td>
<td>3</td>
<td>Introduction to mountain biking which will include local trail systems.</td>
</tr>
<tr>
<td>HHPA 114</td>
<td>INTERMEDIATE MOUNTAIN BIKING</td>
<td>1</td>
<td>3</td>
<td>Designed to build upon fundamental mountain bike skills. Trail etiquette and basic nutrition will</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>be reviewed. Introduces intermediate bike maintenance and advanced riding techniques. Rides will</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>take place on local trails. Previous mountain biking experience is necessary.</td>
</tr>
<tr>
<td>HHPA 115</td>
<td>WILDERNESS TRAINING: BEGINNING</td>
<td>1</td>
<td>3</td>
<td>Introduces a variety of outdoor activities, which may include: rock climbing, whitewater rafting,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>kayaking, canoeing, snowshoeing, caving, hiking and cross-country skiing. Develops basic skills in</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>outdoor activities and learns about appropriate preparation for participation.</td>
</tr>
<tr>
<td>HHPA 120</td>
<td>TAI CHI/QIGONG</td>
<td>1</td>
<td>3</td>
<td>Introduces the basic techniques of Tai Chi Yang style simplified form and three Qigong exercises,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>as well as theories and concepts for better health and relaxation through meditation in movement.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Can accommodate all levels.</td>
</tr>
<tr>
<td>HHPA 122</td>
<td>YOGA-BEGINNING</td>
<td>1</td>
<td>3</td>
<td>Introduces the basic techniques of yoga incorporating a wide range of yoga styles. Classes vary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>according to instructor offerings, which include Ashtanga, Hatha, Vinyasa, Yin, Restorative and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Kundalini.</td>
</tr>
<tr>
<td>HHPA 125</td>
<td>YOGA-INTERMEDIATE</td>
<td>1</td>
<td>3</td>
<td>Appropriate for any student who has a yoga background and is familiar with basic yoga postures,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>breathing and intentions. Self-exploration is enhanced through the introduction of variations of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>alternative movements to basic poses such as arm balances. Following a dynamic warm-up, students</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>will participate in a flow-type session with quick movements to increase heart rate. Deep stretch</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and shavasana will conclude each class. Students will often work in pairs on advanced postures.</td>
</tr>
<tr>
<td>HHPA 126</td>
<td>YOGA-ALL LEVELS</td>
<td>1</td>
<td>3</td>
<td>Modification and additional variation in postures for students wanting a more challenging practice,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>using a blend of different yoga styles. Appropriate for all levels.</td>
</tr>
<tr>
<td>HHPA 127</td>
<td>YOGA FOR ATHLETES</td>
<td>1</td>
<td>3</td>
<td>Designed for anyone (novice to advanced) who aspires to utilize the benefits of yoga to boost</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>their athletic performance in any sport. Although not required, it may be helpful to have had an</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>introductory course prior to this class. A dynamic, flow-style of Vinyasa practice linking breath</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>and movement with modifications emphasizing safety and anatomical clarity. The practice will</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>utilize traditional asanas (poses) to build a foundation for a robust athletic yoga tool. The</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>importance of strength will be equitably emphasized with Yin like deep-style stretching. Rest and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>recovery will be given equal time with an intro to the benefits of restorative practice utilizing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>props (bolsters).</td>
</tr>
</tbody>
</table>

174  coc.edu
HHPA 128 - YOGA/PILATES BLEND
Focuses on a blend of two modalities, with the flexibility of yoga and core strength training of Pilates.
Credits: 1    Other: 3

HHPA 130 - TOTAL FITNESS
High-intensity, physically demanding activity class geared toward improving overall physical fitness in a supportive team atmosphere. Various forms of games, skills, exercises and activities will be used to improve weakness areas as well as further enhance areas in which the student already excels physically. All levels welcome but a positive, can-do attitude is a must.
Credits: 1    Other: 3

HHPA 132 - JOGGING
Focuses on improving running economy and cardiovascular fitness through various running-related activities. Students will run at both on- and off-campus sites. Runners of all levels welcome.
Credits: 1    Other: 3

HHPA 133 - SKI CONDITIONING-NORDIC
An outdoor/indoor conditioning class for all levels of Nordic skiers. Goal of the class is to provide ski-specific cardiovascular fitness and muscular strength as well as improving Nordic ski technique. Various ski-specific drills and exercises will be used in a fun group atmosphere.
Credits: 1    Other: 3

HHPA 134 - CIRCUIT TRAINING
Traditional circuit training class for total body conditioning that includes interval training via different apparatuses and core circuit training using various forms of equipment. Emphasizes improvement in both core strength and cardiovascular fitness. Appropriate for all levels of fitness and exercise experience.
Credits: 1    Other: 3

HHPA 135 - CYCLING: STUDIO
Introduces indoor studio cycling skills to all fitness and experience level of cyclists. Emphasizes proper form and designed to provide a fun mode of enhancing cardiovascular fitness in a group setting.
Credits: 1    Other: 3

HHPA 136 - BOOT CAMP FOR WOMEN
Introduction for women to exercises that improve cardiovascular endurance, muscular strength and flexibility in a supportive team atmosphere. Utilizes interval training, core strength, plyometrics, running, games and weights and is appropriate for all levels of fitness and experience.
Credits: 1    Other: 3

HHPA 137 - PROGRESSIVE WALKING
A group class designed to prepare and progressively improve cardiovascular fitness through walking. An emphasis will be placed on monitoring intensity through heart rate. All levels of walkers are welcome.
Credits: 1    Other: 3

HHPA 138 - KI AIKIDO
Introduces the martial art of Ki Aikido, a form of self-defense and non-fighting to all levels of experience in Ki Aikido. It is based upon coordination of mind and body, not only in throwing, but also in the art of falling (ukemi).
Credits: 1    Other: 3

HHPA 140 - BASKETBALL
This activity class teaches all the fundamental skills and rules of basketball to all levels of basketball players. There will be an emphasis on team play.
Credits: 1    Other: 3

HHPA 141 - GOLF
Held at local golf courses and is taught by local professional golf instructors. Instruction of basic golf skills to all levels of golf players. Golf clubs may be available for use in class (contact the department for more information).
Credits: 1    Other: 3

HHPA 142 - BEGINNING RUGBY
Familiarizes students with the rules, skills, strategy, fitness level and basic concepts of modern Rugby Union Football. Equips students to be an informed Rugby participant.
Credits: 1    Other: 3

HHPA 143 - SOFTBALL
Focuses on fundamental skill development and team play for all levels of softball players.
Credits: 1    Other: 3

HHPA 144 - SOCCER
Focuses on fundamental skill development and team play for all levels of soccer players.
Credits: 1    Other: 3

HHPA 146 - TENNIS I
Focuses on skill development for beginning tennis players. Students will learn through various drills and court games.
Credits: 1    Other: 3

HHPA 147 - TENNIS II
Geared toward students with intermediate or advanced tennis skills. Students will work toward improving current tennis skill level and strategy by means of practice as well as feedback from the instructor. Recommended preparation: HHPA 146.
Credits: 1    Other: 3

HHPA 148 - VOLLEYBALL - ALL LEVELS
Focuses on fundamental volleyball skill development and team play for beginning students and continuing students who want to enhance their skill level.
Credits: 1    Other: 3

HHPA 149 - VOLLEYBALL - DOUBLES
Provides rules and strategy of doubles volleyball. Includes communication with teammates on the courts due to the faster pace of the game.
Credits: 1    Other: 3

HHPA 150 - CULTURAL DANCE FITNESS
Designed to introduce individuals to various types of energetic dance styles from Africa to the Caribbean in a fun, dance fitness setting as well as learning the art of choreography. Integrates several dance styles (i.e., West African, Dance Hall, Hip-Hop) to a variety of beats and rhythms from around the world. Designed for all levels.
Credits: 1    Other: 3

HHPA 153 - AEROBIC DANCE-HIP HOP
Explains the growing awareness of hip hop as a mind-body, dance-style aerobic movement. Includes choreographed moves with each class and building upon each other as a sequenced routine.
Credits: 1    Other: 3

HHPA 154 - DANCECISE
High-energy activity class emphasizing dance movements including jazz, contemporary and salsa styles.
Credits: 1    Other: 3

HHPA 156 - PILATES-BEGINNING
Through Pilates exercises, this class familiarizes students with the awareness of core flexibility and strength, relative muscle groups and joint actions of the core. Students will learn Pilates vocabulary and training techniques, including specific stretching, as well as stretching for general health. Also provides proper sequence form for stretching, the slide, rings, exercise balls and weights for cardio and overall balance.
Credits: 1    Other: 3

HHPA 157 - PILATES - ALL LEVELS
Includes a brief review of Pilates fundamentals (proper spine alignment, elongation, thoracic breath and core control, including the use of appropriate Pilates equipment). Students will learn several sequences of Pilates exercises with appropriate modifications for all fitness levels.
Credits: 1    Other: 3
HHPA 158 - STRETCH AND RELAXATION
Introduces students to progressive stretching activities and emphasizes the value of stretching to the overall relaxation process.
Credits: 1  Other: 3

HHPA 159 - BARRE BODY
Combines ballet & Pilates fundamentals with motivating music to improve fitness through use of ballet or body bars. This low-impact class is ideal for all fitness levels without traditional gym equipment. Muscles are engaged in strategic patterns that intermix small isometric movements with greater range of motion working toward a defined physique.
Credits: 1  Other: 3

HHPA 170 - SNOWBOARDING I
For beginning snowboarders. Students will learn the fundamentals of snowboarding with qualified instructors. Equipment must be provided by the student.
Credits: 1  Other: 3

HHPA 171 - SNOWBOARDING II
For intermediate to advanced snowboarders. Students will be provided instruction to enhance their current skill level in snowboarding. Equipment must be provided by the student.
Credits: 1  Other: 3

HHPA 172 - SNOWBOARDING III - COMPETITIVE FREESTYLE RIDING
Focuses on freestyle techniques for advanced riders. Emphasis of instruction is on freestyle maneuvers, including straight airs, 180s, and straight airs with grabs, as well as etiquette when riding in the half-pipe, slope-style facilities and natural freestyle terrain. Equipment must be provided by the student.
Credits: 1  Other: 3

HHPA 173 - BRAZILIAN JUJITSU
Modified version of traditional Japanese Jujitsu and martial art sport that focuses on gaining a dominant position over an opponent. Students will learn proper techniques, using leverage, sparring and self-defense drills to gain self-confidence.
Credits: 1  Other: 3

HHPA 174 - SWIMMING I - SWIM FITNESS AND TECHNIQUE
Swim Fitness and Technique helps student feel safe and comfortable in the water for at least ten minutes at a time, incorporating and refining swimming strokes.
Credits: 1  Other: 3

HHPA 176 - MASTERS SWIMMING
Designed to strengthen swimming stroke skills to the advanced level. Introduces advanced concepts of fitness swimming. Prepares students for a lifetime of participation in swimming and racing if desired. Students will attend organized masters swim team practices. Previous swimming experience expected.
Credits: 1  Other: 3

HHPA 177 - SWIMMING FUNDAMENTALS
Basic swim instructions for individuals with limited to no swim experience. Learn basic swim skills (floating, breathing techniques, and flutter kicking), swimming theory concepts and strokes (front and back crawl and breaststroke) at your own pace.
Credits: 1  Other: 3

HHPA 178 - SKI ALPINE I
Designed for beginning downhill skiers. Learn the fundamentals of skiing with qualified instructors. Equipment must be provided by the student.
Credits: 1  Other: 3

HHPA 179 - SKI ALPINE II
Designed for intermediate to advanced alpine skiers. Provides instruction to enhance current ski skill level. Equipment, including helmet, must be provided by the student.
Credits: 1  Other: 3

HHPA 182 - TAE KWON DO
A martial art form that if properly performed, improves cardiovascular endurance, muscular strength, and flexibility. Instruction includes techniques of self-defense, proper Tae Kwon Do etiquette and a cultural introduction of Dojang.
Credits: 1  Other: 3

HHPA 183 - WATER AEROBICS
Introduces water aerobics which improves cardiovascular endurance, muscular strength and flexibility in a low-impact environment.
Credits: 1  Other: 3

HHPA 184 - ZUMBA
ZUMBA dance fitness fuses hypnotic rhythms and easy-to-follow moves to create a dynamic fitness program. This course is designed to include cardiovascular strengthening, muscle toning with resistance and movements to enhance flexibility and balance.
Credits: 1  Other: 3

HHPA 185 - WEIGHT TRAINING
Covers the basic principles of weight training and proper use of weight room equipment and safety. The course includes a variety of weight training methods and incorporates core strength and flexibility activities. Students will develop their own weight lifting program throughout the term.
Credits: 1  Other: 3

HHPA 186 - STAND UP PADDLE BOARDING
Introduction into the world of stand-up paddle boarding. Designed for all levels, teaches the fundamentals of stand-up paddle boarding with a qualified instructor. Introduces skills for proper paddling technique, safety considerations and trip planning. Participants should be comfortable in and around the water. Equipment provided.
Credits: 1  Other: 3

HEALTH & HUMAN PERFORMANCE

HHP 100 - INTRODUCTION TO PUBLIC HEALTH
Provides an introduction to the core elements of public health science and practice, including health policy, health systems and health ethics. Open to all COCC students who want to know more about the dynamic, multi-disciplinary field of public health, what it is, how it is organized and how it works. Recommended preparation: Completion of WR 065 or higher or minimum placement into WR 121.
Credits: 4  Lecture: 4

HHP 110 - ORIENTATION TO PUBLIC HEALTH PROFESSIONS
Provides an introduction for students interested in health-related careers to the field of public health and its many career opportunities in behavioral and social sciences, community health (including maternal & child health), epidemiology, environmental health, health management and policy, health promotion, health informatics, minority health and health disparities, public health preparedness, gerontology and global health. Meet public health professionals in class and ‘on-the-job,’ explore public health interests and academic pathways. Recommended preparation: Completion of WR 065 or minimum placement into WR 121.
Credits: 1  Lecture: 1

HHP 131 - INTRODUCTION TO EXERCISE/SPORT SCIENCE
Introduces students to the profession of exercise science including an overview of basic concepts and careers in exercise physiology, athletic training, personal training, coaching, sports medicine, physical therapy and fitness management. Provides a comprehensive introduction to any student who is considering a career in the area of health, fitness, wellness, exercise physiology and sports medicine. Also, includes guest speakers currently working in the profession, as well as tours of local fitness facilities. Various fitness certifications are compared and contrasted. Recommended preparation: WR 065 or higher.
Credits: 3  Lecture: 3
HHP 188 - SPECIAL STUDIES: HHP
Explores topics of current interest in the discipline.
Credits: 1 to 6

HHP 199 - SELECTED TOPICS: HEALTH AND HUMAN PERFORMANCE ACTIVITIES
Includes both introductory courses and activities.
Credits: 1 to 6

HHP 210 - INTRODUCTION TO THE HEALTH CARE SYSTEM
Provides tools to examine and critically assess the U.S. health care delivery system, its components and the challenges created by its structure. Considers the U.S. health care system from the perspective of multiple players and partners, including consumers/patients, primary health care, hospitals, providers, insurers and government. Compares and contrasts the U.S. health care system to health care systems in other developed and emerging countries. Recommended preparation: HHP 100.
Credits: 3 Lecture: 3

HHP 212 - CPR - AMERICAN HEART ASSOCIATION HEARTSAVER WITH PEDIATRIC
The Heartsaver Automatic External Defibrillator (AED) with Pediatric CPR course teaches the basic techniques of adult CPR and use of an AED. Pediatric CPR skills may be taught if students live or work in a setting where children are present. Students also learn to use barrier devices in CPR and give first aid for choking for responsive adult, child and infant victims. Course teaches how to recognize the signs of four major emergencies: heart attack, stroke, cardiac arrest and foreign-body airway obstruction. Through the American Heart Association. Course meets the Dental Assistant standards.
Credits: 1 Lecture: 1

HHP 216 - SOCIOCULTURAL DIMENSIONS OF PHYSICAL ACTIVITY
This course will provide an overview of physical activity in contemporary society. It will look at relationships with the social processes: interrelationships between physical activity and cultural institutions.
Credits: 3 Lecture: 3

HHP 231 - HUMAN SEXUALITY
Explores physiological, sociological and psychological factors relating to human sexual behavior. Topics include male and female sexual anatomy, gender identity and roles, relationships and communication, fertility management and sexual diseases and dysfunctions. Recommended preparation: WR 065 or higher.
Credits: 3 Lecture: 3

HHP 240 - SCIENCE OF NUTRITION
Will introduce nutrition to exercise science, nutrition, dietetics, food science, and health science majors who have taken general chemistry. Concepts of nutrient metabolism and utilization, nutrient deficiencies and toxicities and their relationship to disease prevention and treatment. Meets requirements for COCC AS in EXSS and BS in EXSS at OSU-Cascades. Prerequisites: CH 104 or 105 or 106 or CH 221 or 222 or 223.
Credits: 3 Lecture: 3

HHP 242 - STRESS MANAGEMENT
Helps students develop a comprehensive approach to the management of stress. Examines the historical, emotional, intellectual, spiritual, psychological and physiological foundations of the stress concept. This broad understanding of stress will be the basis for the study of the role that stress plays in health and disease. Students will experiment with a wide variety of stress management and relaxation techniques. Recommended preparation: WR 065 or higher.
Credits: 3 Lecture: 3

HHP 243 - OCCUPATION HEALTH, AHA BL S CPR
This class provides an introduction to major concepts and issues in occupational health and safety, including health promotion, injury and disease prevention, and protection of worker populations from environmental hazards. The course will also include a section on stress management with a focus on the application of managing stress on the job, and will include the American Heart Association (AHA) Basic Life Support (BLS) for Health Care Providers (HCP) CPR course which is what we currently teach in our one-credit HHP 212A class.
Credits: 3 Lecture: 3

HHP 246 - INTRODUCTION TO ADAPTED PHYSICAL ACTIVITY
This course will provide an overview of cognitive, neuromuscular, sensory, and orthopedic impairments; understanding accessible physical activity programs for individuals with disabilities. This is a hybrid course where approximately 50% of the course will take place in a traditional face-to-face classroom and 50% will be delivered via Blackboard, your online learning management system, where you will interact with your classmates and with the instructor.
Credits: 3 Lecture: 3

HHP 248 - HEALTH PSYCHOLOGY
Health is defined as “a state of complete physical, mental and social wellbeing, and not merely the absence of disease” (World Health Organization, 1948). With that definition in mind, this course examines how biological, psychological, social and environmental factors affect physical health and wellbeing. Specific topics include historical and cultural perspectives of health, the psychology and physiology of stress, health behavior modification with emphases on primary prevention and health promotion, socioeconomic and healthcare inequalities, and an exploration of biopsychosocial factors related to chronic diseases like obesity, heart disease and HIV AIDS. This course is one of the four pre-Public Health core courses offered. Recommended preparation: WR 065 or higher.
Credits: 4 Lecture: 4

HHP 252 - FIRST AID & AHA BASIC LIFE SUPPORT PROVIDER CPR
First Aid & CPR instruction. First aid includes: immediate and temporary care for a wide variety of injuries, illnesses, conditions. CPR includes: patients of all ages; ventilation with a face shield, pocket mask and a bag-mask device; use of an automated external defibrillator (AED); relief of choking: both one- and two-person CPR; and compression-only CPR. Practical exam includes individual hands-on testing; successful completion of course results in National Safety Council Standard First Aid - card valid for three years and American Heart Association (AHA) Basic Life Support (BLS) for Provider Adult & Pediatric CPR - card valid for two years. Recommended preparation: WR 065 or higher.
Credits: 3 Lecture: 3

HHP 252A - FITNESS/FIRST AID
Introduces both first aid and wellness topics, such as immediate and temporary care for injury and illness, control of bleeding, care for poisoning, splinting, bandaging and transportation, as well as fitness, nutrition and stress management. Students earn first aid and CPR cards in both adult and infant from the National Safety Council upon completion of course. Recommended preparation: WR 065 and MTH 020 or higher.
Credits: 3 Lecture: 3

HHP 258 - HOLISTIC WELLNESS
Looks beyond health risk factors to broader wellness dimensions (i.e. mental, emotional, spiritual, environmental, cultural & financial). Conventional & alternative paradigms of chronic disease causes plus modalities for healing will be explored through the role of our minds, environment, relationships, spirituality and social support. Recommended preparation: WR 065 or higher.
Credits: 4 Lecture: 4
HHP 259 - CARE AND PREVENTION OF ATHLETIC INJURY
Introduces management of athletic injuries, injury recognition and assessment, proper care and treatment of athletic injuries and rehabilitation of athletic injuries. Emphasizes hands-on experience included for mastery of surface anatomy, injury assessment and proficiency in rudimentary injury care and rehabilitation practices. Recommended preparation: BI 231, HHP 260 and WR 065 or higher.
Credits: 3    Lecture: 3

HHP 260 - ANATOMICAL KINESIOLOGY
This is an introduction to the science of human movement (kinesiology). The course explores the anatomical elements such as muscle action and joint structure and function involved in the gross motor movement. Major emphasis will be on structural anatomy, primary movers of each joint, and muscle utilization for specific sport actions. Recommended preparation: BI 231 and WR 065 or higher.
Credits: 4    Lecture: 4

HHP 261 - EXERCISE PHYSIOLOGY
This course is designed to provide the student with an introductory foundation for understanding the physiology associated with exercise. Emphasis will be placed on how the various tissues and systems of the body adjust to acute work stress and ultimately adapt to chronic exercise training. Course materials will include metabolic, musculoskeletal, cardiovascular and respiratory adaptations to exercise and exercise training. Recommended preparation: MTH 020 or higher and WR 065 or higher.
Credits: 4    Lecture: 4

HHP 262 - EXERCISE TESTING AND PRESCRIPTION
The intent is to provide a practical guide for administering safe exercise testing as well as development of safe and effective exercise prescription for all clients including special populations. Specific content to be addressed includes: initial client consultation, risk factor classification, performance of hands-on exercise testing, prescribing appropriate aerobic, anaerobic, flexibility and resistance exercise plans, periodization, prevention of overtraining, metabolic calculations and legality including HIPAA laws. Recommended preparation: HHP 260 and HHP 261.
Credits: 3    Lecture: 3

HHP 266 - NUTRITION FOR HEALTH
Introduces the basics of nutrition for a physically active, healthy lifestyle. The course emphasizes nutrient function, energy production, weight management, body composition, psychosocial health, global impact of nutrition, prevention of nutrition related diseases, food guide pyramid, ergogenic aids, dieting and nutritional research. Course also includes a computerized nutritional assessment. Recommended preparation: MTH 020 or higher.
Credits: 3    Lecture: 3

HHP 267 - WELLNESS COACHING FUNDAMENTALS
Explore components of behavior change by providing an overview of the dimensions of wellness, coaching technique and models in health. Foundational concepts of positive psychology, including the history, theory and ethics, as well as mindfulness, appreciative inquiry and self-efficacy will be examined and applied. Recommended preparation: WR 065 or higher.
Credits: 3    Lecture: 3

HHP 268 - SUSTAINABLE FOOD AND NUTRITION
Former and author Wendell Berry once wrote that eating is an “agricultural act.” It is also an ethical, cultural, political and environmental act. In an attempt to understand the full impact of our food choices, this course will explore American food production from start to finish, past to present and field to fork. Along the way we will answer questions such as: How does a plant grow? What is the difference between conventional vs. organic agriculture? How and why did our current food system evolve? How much does a fast-food cheeseburger really cost? What and why is food biotechnology? Where can I buy a local head of lettuce or leg of lamb? And, ultimately, what should I eat? Recommended preparation: WR 065 or higher.
Credits: 4    Lecture: 4

HHP 270 - SPORT AND EXERCISE PSYCHOLOGY
Introduces broad range of topics relevant to sport and exercise psychology, including sport personality, motivation, psychological skills training, energy management, attention, imagery, competitive anxiety and mental relaxation. Content is relevant for coaches, athletes and others interested in the psychology of sport. Recommended preparation: WR 065 or higher.
Credits: 3    Lecture: 3

HHP 280A - PRACTICUM - EXERCISE SCIENCE
Provides exercise science practicums by the department in conjunction with the community in health & fitness programs including group fitness, personal training, wellness coaching, research, clinical professions such as physical therapy, occupational therapy, athletic training and cardiac rehabilitation. P/NP grading. Prerequisites: instructor approval. Recommended preparation: complete a minimum of three exercise science classes.
Credits: 1 to 2

HHP 280B - PRACTICUM - EXERCISE SCIENCE
Provides exercise science practicums by the department in conjunction with the community in health & fitness programs including group fitness, personal training, wellness coaching, research, clinical professions such as physical therapy, occupational therapy, athletic training and cardiac rehabilitation. P/NP grading. Prerequisites: instructor approval. Recommended preparation: complete a minimum of three exercise science classes.
Credits: 1 to 2

HHP 281 - PRACTICUM-HEALTH PROMOTION/PUBLIC HEALTH
Provides practicums co-mentored by department faculty in collaboration with community partners. Practicum sites may include, but are not limited to public health departments, community health centers, health promotion and education programs, local government organizations, environmental health organizations and social justice organizations. Thirty hours of practicum experience is equivalent to one credit. P/NP grading. Prerequisites: instructor approval. Recommended preparation: complete a minimum of three Health Promotion/Public Health courses.
Credits: 1    Other: 6

HHP 283 - INTRODUCTION TO ALTERNATIVE MEDICINE
Introduces the historical and sociopolitical context of conventional and “alternative” medical systems in the United States. A number of professional alternative medical practices will be examined as independent systems, and also as components of the larger context of the overall health care system in America.
Credits: 4    Lecture: 4

HHP 291 - LIFEGUARD TRAINING
Designed to teach the knowledge and skills needed to help prevent and respond to aquatic emergencies, including land and water rescue skills, as well as first aid, CPR and AED. Meets American Red Cross Lifeguard training standards. Participants should be comfortable in and around the water and be able to demonstrate proficient swimming technique.
Credits: 2    Lecture: 1 Other: 2

HHP 292 - WATER SAFETY INSTRUCTOR
Provides participants with the ability to teach swimming and water safety skills and a logical progression for aquatic skill development. Students receive Ellis & Associate Pool Lifeguard certificate upon successful completion of course.
Credits: 2    Lecture: 1 Lab: 2

HHP 295 - HEALTH AND FITNESS
Introduces a comprehensive overview of wellness concepts including fitness, nutrition, stress, disease prevention and various other lifestyle factors that improve the quality of life. Each student’s health and fitness is individually evaluated through a series of tests measuring cardiovascular endurance, strength, body composition, flexibility, blood pressure, nutrition, stress levels and blood lipid and blood glucose. Recommended preparation: or to be taken with WR 065 and MTH 020 or higher.
Credits: 3    Lecture: 3
HIT 180 - HIPAA MANAGEMENT

Provides a fundamental knowledge of health care delivery, health information systems, functions of the health record and the skills necessary to integrate theoretical knowledge with application functions. Lab includes application of health information technology procedures via web-based software. Students are required to pass a criminal history check prior to enrolling in HIT 103. Prerequisites: AH 111, CIS 120 and WR 121.

Credits: 5 Lecture: 4 Lab: 3

HIT 131A - DOCUMENT MANAGEMENT AND TECHNOLOGY

Provides specific fundamental experience in the identification and application of inpatient and outpatient records and reports based on current use of electronic health records (EHRs). It is important to have strong skills in spelling, medical terminology, the English language, attention to detail, proofreading, quality editing and grammatical appropriateness. Students must pass a face-to-face written final exam at 70% or higher. The overall grade parameter to pass this class is "C" (75%) or higher. Prerequisites: instructor approval.

Credits: 3 Lecture: 3

HIT 182 - INTRODUCTION TO MEDICAL CODING

Explores the history, arrangement and application of ICD-9-CM (legacy system), ICD-10-CM and CPT coding systems. ICD-10-CM/CPT conventions, updates, influencing entities and how these expectations are communicated to health care providers, coding clearinghouses, ethical and quality coding, coder responsibilities, etc. will be determined. Basic coding guidelines by body system and/or payer requirements will be explored and applied including reporting of ICD-10-CM/CPT codes, inpatient and ambulatory reporting/billing. Prerequisites: instructor approval. Recommended preparation: or to be taken with AH 111, AH 112, BI 231, BI 232, BI 233, HIT 184, HIT 103 and HIT 104.

Credits: 4 Lecture: 4

HIT 184 - ADVANCED PATHOPHYSIOLOGY

This course provides an in-depth study of human pathological processes, which affect body organs and interrelated body systems. Upon completion of this course, students will know the etiology, physical signs and symptoms, pathogenesis, diagnosis, treatment modalities and prognosis of disease conditions identified in specific body systems. Students will be able to analyze and interpret laboratory, EKG, pulmonary and radiologic findings. This course will prepare students to understand and apply clinical concepts to medical coding, utilization review, quality management and clinical documentation. Prerequisites: AH 112 and BI 232. Recommended to be taken with: BI 233.

Credits: 5 Lecture: 5

HIT 188 - SPECIAL STUDIES I

Explores topics of current interest in the discipline. P/NP grading.

Credits: 1 to 4

HIT 193 - DIRECTED PRACTICE I

Provides experience in the HIT workplace. Students report to a health care facility and experience planned activities at an approved location. Supervised by a registered health information administrator or registered health information technician. Fulfills 60 of the 120 total clinical hours distributed in the curriculum at various points of program completion. Forty hours on-site and twenty hours of preparatory instruction. P/NP grading. Prerequisites: instructor approval based on completion of first-year HIT curriculum.

Credits: 2 Other: 6

HIT 199 - SELECTED TOPICS: HEALTH INFORMATION TECHNOLOGY

This course is in development.

Credits: 1 to 4

HIT 201 - LEGAL ASPECTS OF HEALTH CARE

This course presents the medical-legal aspects of health care. The course is designed to provide a foundation for understanding the rapidly expanding field of laws and regulations affecting the health care industry. Special emphasis is placed in the areas of preservation of medical records, hospital and physician liability, statutes of limitations, consents for treatment and release of information, preparation of medical records in answer to a subpoena duces tecum, behavior of the medical record practitioner in court and principles of confidentiality highlights the technical role of the professional. Special legal implications for medical administration and risk management also are addressed. Prerequisites: instructor approval based on completion of first-year HIT curriculum.

Credits: 3 Lecture: 3

HIT 203 - HEALTHCARE DELIVERY AND TECHNOLOGY

Provides analysis of the common terms and procedures related to the development and implementation of information systems; specifically networks and interfaces (in reference to electronic health records), the personal health record (PHR), public health and other administrative applications/systems, database architecture and design along with systems analysis and database informatics. Also provided in this class is an overview of the health care delivery system and its relationship to technology in health care. Prerequisites: instructor approval based on completion of first-year HIT curriculum.

Credits: 3 Lecture: 3

HIT 205 - INTRODUCTION TO MEDICAL RECORD ANALYSIS

Application of qualitative and quantitative analyses of health records based on accreditation standards, licensing and certifying agencies. The applications of accrediting standards and healthcare industry compliance regulations are also covered. Prerequisites: instructor approval based on completion of first-year HIT program curriculum.

Credits: 3 Lecture: 3

HIT 272 - HEALTH INFORMATION MANAGEMENT

Studies organization and management principles in order to develop effective skills in data management, data governance and human resource administration for the health care workplace. Covers computer concepts with emphasis on DRG grouping and encoding applications.
via AHIMA virtual lab web-based software. Includes capstone service learning project and orientation to the HIM professional environment at the Oregon Health Information Management convention. Prerequisites: instructor approval based on completion of first-year HIT curriculum. Corequisites: HIT 287.

Credits: 5 Lecture: 4 Lab: 2

HIT 281 - HEALTH DATA COLLECTION
Studies data computation, presentation, and analysis of health statistics with an emphasis on validity and reliability. Includes definitions, the use of graphs and tables, measures of central tendency and percentiles. Emphasis on calculating hospital statistics. Prerequisites: instructor approval based on completion of first-year HIT curriculum.

Credits: 3 Lecture: 2 Lab: 2

HIT 282 - QUALITY IMPROVEMENT IN HEALTH CARE
Application and analysis of quality management, utilization management, risk management and other related studies. Also covered is the analysis of clinical data to identify trends that demonstrate quality, safety and effectiveness of health care. Abstraction of data for facility-wide quality management and performance improvement programs is also utilized. In addition, review of registries (cancer, disease, diabetes, etc.), indexes and databases are covered. Prerequisites: instructor approval based on completion of first-year HIT curriculum.

Credits: 4 Lecture: 3 Lab: 2

HIT 283 - CODING CLASSIFICATIONS
Places major emphasis on coding guidelines and application of codes for diseases and conditions in the ICD-10-CM/PCS coding classification. Prerequisites: instructor approval based on completion of first-year HIT curriculum.

Credits: 6 Lecture: 3 Lab: 6

HIT 284 - CLASSIFICATION AND REIMBURSEMENT SYSTEMS
Provides principles and applications of HCPCS coding classification (CPT and National Codes). Focuses on coding categories, guidelines, and application of code set. Emphasizes reimbursement systems including Prospective Payment Systems (PPS), Ambulatory Payment Classifications (APCs), Resource Based Relative Value System (RBRVS) and Outpatient Prospective Payment Systems (OPPS). Prerequisites: instructor approval based on completion of first-year HIT curriculum.

Credits: 4 Lecture: 4 Other: 2

HIT 285 - ADVANCED CODING CLASSIFICATIONS
The use of ICD-10-CM/PCS will offer greater coding detail and granularity and will greatly enhance the precision with which users measure quality, collect statistical data and submit claims for reimbursement. This course is designed to provide advanced level hands on application of ICD-10-CM/PCS and in depth instruction in ICD-10-PCS. Prerequisites: HIT 283, HIT 284 and instructor approval.

Credits: 4 Lecture: 4

HIT 287 - LEADERSHIP AND PROJECT MANAGEMENT
This course will provide students with the knowledge and skills to facilitate change, build teams with cultural awareness and understand the fundamentals of risk management as it applies to health information management leadership. A component of this course will include monitoring a service-learning project coordinated with the health care community. Curriculum includes how to plan, organize, develop and implement a project utilizing appropriate project management tools. Prerequisites: instructor approval. Corequisites: HIT 272.

Credits: 2 Lecture: 2

HIT 288 - SPECIAL STUDIES: HEALTH INFORMATION TECHNOLOGY
Explores topics of current interest in the discipline.

Credits: 1 to 4

HIT 293 - DIRECTED PRACTICE II
Provides experience in the HIT workplace. Students report to a health care facility and experience planned activities at an approved location. Supervised by a registered health information administrator or registered health information technician. Fulfills 60 of the 120 total clinical hours distributed in the curriculum at various points of program completion. Forty hours on-site and twenty hours of preparatory instruction. P/NP grading. Prerequisites: instructor approval based on completion of first and second-year HIT curriculum.

Credits: 2 Other: 6

HIT 294 - RHIT EXAM PREPARATION
Prepares RHIT students for the National RHIT Examination. Reviews core curriculum identified by AHIMA as essential domains of learning and provides practice exams. Prerequisites: instructor approval.

Credits: 1 Lecture: 1

HIT 295 - CCA EXAM PREPARATION
Prepares HIT students for the national Certified Coding Associate (CCA) Examination. Reviews core curriculum identified by AHIMA as essential for the CCA certification and provides practice exams. Prerequisites: instructor approval.

Credits: 1 Lecture: 1

HIT 296 - AMBULATORY DATA SYSTEMS
Focuses on electronic information systems in non-acute facilities with emphasis on professional medical billing and revenue cycle. Course will address healthcare insurance, legal and regulatory conditions, coding systems, reimbursement issues, and filing claims utilizing electronic medical data systems. Prerequisites: instructor approval based on completion of first-year HIT curriculum.

Credits: 3 Lecture: 2 Lab: 2

HIT 297 - CURRENT TOPICS
Discusses current trends, topics and procedures affecting the medical record professional and the delivery system in general. P/NP grading.

Credits: 3 Lecture: 2 Lab: 2

HIT 298 - INDEPENDENT STUDY: HIT
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.

Credits: 1 to 4

HIT 299 - SELECTED TOPICS: HIT
This course is in development.

Credits: 1 to 4

HISTORY

HST 101 - HISTORY OF WESTERN CIVILIZATION
Provides a framework for understanding the notion of “Western Civilization.” Surveys political, social, intellectual and cultural developments in Europe from prehistoric times to the early Medieval period. Covers the ancient civilizations, the establishment of early European civilizations and the world of the Greeks and Romans. HST 101, HST 102 and HST 103 need not be taken in sequence. Recommended preparation: or to be taken with WR 121.

Credits: 4 Lecture: 4

HST 102 - EUROPE: FROM THE MIDDLE AGES TO ENLIGHTENMENT (700-1700 C.E.)
Provides a framework for understanding the notion of “Western Civilization.” Surveys the development of European civilizations from the fall of the Roman Empire, continuing through the Medieval period into the early 1700s. Focuses on the cultural, religious, political and intellectual changes brought about by the Renaissance, Reformation, Enlightenment and Scientific Revolution, as well as the tensions in European society, which culminated in the French Revolution. The focus will extend from religion and politics to social class, gender and stereotypes. Need not be taken in sequence.

Credits: 4 Lecture: 4
HST 103 - EUROPE: REVOLUTION AND WAR (1789 - PRESENT)
Provides a framework for understanding the notion of “Western Civilization.” Explores European civilizations from the French Revolution in 1789 to the present day. Focuses on the establishment of nations, the impact of the Industrial Revolution, nationalism and racism, colonization and the two World Wars. Concludes by questioning the differences between civilization and barbarism. Focuses on the cultural, religious, political and intellectual changes that happened between the late 18th century and the present, extending from religion and politics to social class, gender and stereotypes based on nationality or ethnicity. Need not be taken in sequence.
Credits: 4    Lecture: 4

HST 104 - ANCIENT SOCIETIES (PRE-HISTORY - 500 C.E.)
Provides a survey of the development of world civilizations and nomadic/pastoral lifestyles. Investigates cultures, politics, belief systems and lifestyles from prehistoric times through 500 C.E. Covers origins of civilizations in the Middle East, the Mediterranean, Africa, China and the Indian subcontinent. Also covers the establishment of early European civilizations, the world of the Greeks and Romans and the Fall of Rome. Uses a comparative perspective in order to understand larger changes provoked by climate change, nomadic incursions and interactions on the Silk Road.
Credits: 4    Lecture: 4

HST 105 - THE EXPANSION OF WORLD RELIGIONS (500 - 1700)
Covers the world from 500 C.E. through early 1700s, focusing on the expansion of world religions, including Christianity, Buddhism, Hinduism and Islam. Focuses on the regions of Asia, Africa and India, and tells the story of Europe’s first worldwide expansion. Looks at history from political, cultural, social and intellectual angles using primary sources. Need not be taken in sequence.
Credits: 4    Lecture: 4

HST 106 - MODERN WORLD HISTORY: INDUSTRIALIZATION, NATIONS AND WAR (1800-PRESENT)
Traces the impact of industrialization upon the world. Industrialization propelled colonial expansion by European powers; traces the colonizers and the colonized. The twentieth century endured two world wars, several genocides and several wars of decolonization; focuses on the cultural and intellectual trends that went along with political turmoil, industrialization and modern warfare. Need not be taken in sequence.
Credits: 4    Lecture: 4

HST 188 - SPECIAL STUDIES: HISTORY
Explores topics of current interest in the discipline.
Credits: 1 to 4

HST 199 - SELECTED TOPICS: HISTORY
This course is in development.
Credits: 1 to 4

HST 201 - EARLY AMERICA - HISTORY OF THE UNITED STATES (PRE-HISTORY TO 1820)
Provides an overview of the civilizations of North America and the United States from pre-history to the early 19th century, covering the colonial, revolutionary and early national periods. Topics include Native American societies, the migration of Europeans and Africans and the impact on native populations, regional Protestant cultures, the emergence of racial slavery, the political origins and constitutional consequences of the American Revolution, politics, culture and war in the first few decades of existence for the United States. Need not be taken in sequence.
Credits: 4    Lecture: 4

HST 202 - 19TH AND EARLY 20TH CENTURY UNITED STATES HISTORY (1820-1920)
Provides an overview of United States history from approximately 1820 to 1920, covering the antebellum, civil war, reconstruction, gilded age and progressive periods. Topics include the Jacksonian era, territorial expansion, slavery and the Old South, the causes and consequences of the Civil War, successes and failures of Reconstruction, 19th-century society and culture, economic transformations, U.S. imperialism, progressivism and the United States entrance into World War I. Need not be taken in sequence.
Credits: 4    Lecture: 4

HST 203 - 20TH AND EARLY 21ST CENTURY UNITED STATES HISTORY (1920-PRESENT)
Provides an overview of United States history from approximately 1920 to the present, covering the modern period. Topics include the end of World War I and its consequences, modernity, the Great Depression, World War II, the Cold War, foreign policy determinants & conflicts since WWII, Civil Rights, 1960s-70s social and cultural changes, shifting economic and social role of government, feminism and changing status of women since WWII, immigration, 20th century society and culture, late 20th century politics, terrorism and other recent developments. Need not be taken in sequence.
Credits: 4    Lecture: 4

HST 204 - HISTORY OF THE CIVIL WAR
Examines problems of the Civil War period including politics, military leadership, troop life and activity, civilians, Native Americans, African-Americans, technology and unique geographic challenges in order to better understand the impact of the war on the entire nation of this “brothers’ war.” Recommended preparation: or to be taken with: WR 121.
Credits: 4    Lecture: 4

HST 207 - HISTORY OF THE AMERICAN WEST
Examines Native American tribal life, the emergence of a multicultural frontier, the problems, failures and success of new settlement patterns in the growing commercial development of the West’s unique assets. Recommended preparation: or to be taken with WR 121.
Credits: 4    Lecture: 4

HST 218 - NATIVE AMERICAN HISTORY
Examines Native American (or First Peoples) lifestyles before and after contact with European settlers. With increasing demands by whites and new immigrants for land, Native Americans struggled for survival implementing various tactics to retain control of their homelands and retain their unique cultures. Recommended preparation: or to be taken with WR 121.
Credits: 4    Lecture: 4

HST 225 - US WOMEN’S HISTORY
Survey of the problems and achievements of U.S. women from the 16th to the 20th century, including issues of race, ethnicity and class. Recommended preparation: or to be taken with WR 121.
Credits: 4    Lecture: 4

HST 235 - SEXUALITY IN 20TH CENTURY EUROPE
A survey of sexual cultures, politics and practices in Europe, from the waning of Victorianism to the collapse of Communism and the rise of Islam. This course provides an understanding of how gender and sexuality have changed over the course of the tumultuous twentieth century.
Credits: 4    Lecture: 4

HST 242 - HISTORY OF THE PACIFIC NW
Overview of Native American societies of the Pacific Northwest, patterns of white movement into the area, acquisition of the region by the United States, the long road to statehood and the impact of national politics on this unique region. Recommended preparation: or to be taken with WR 121.
Credits: 4    Lecture: 4

HST 258 - COLONIAL LATIN AMERICAN HISTORY
Surveys the history of economic, political and social development in Mexico, Central America and South America from the 15th century through the Wars of Independence. Recommended that HST 258 and HST 259 be taken in sequence, but not required. Recommended preparation: or to be taken with WR 121.
Credits: 4    Lecture: 4
HST 259 - MODERN LATIN AMERICAN HISTORY
Surveys Latin American history in Mexico, Central and South America from the Wars of Independence through modern times. Recommended that HST 258 and HST 259 be taken in sequence, but not required. Recommended preparation: or to be taken with WR 121.
Credits: 4    Lecture: 4

HST 260 - HISTORY OF ISLAMIC CIVILIZATIONS
This course covers political, social and religious developments in the Islamic world from 600 C.E. to the 1960s. It traces the formation of Islam and the establishment of the Caliphate; the impact of the Mongol Invasions; the Ottoman, Mughal and Safavid Empires; and the impact of European colonization and 20th Century movements of decolonization.
Credits: 4    Lecture: 4

HST 270 - 20TH CENTURY EUROPEAN HISTORY
Covers the intellectual, political and cultural history of 20th-century European history. Investigates events in a European context, analyzing the historical setting and significance of major occurrences in Europe, such as fascism, world wars, the Holocaust, Soviet communism and decolonization. Does not need to be taken in sequence.
Credits: 4    Lecture: 4

HST 280 - CO-OP WORK EXPERIENCE HISTORY
Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Prerequisites: instructor approval.
Credits: 1 to 3

HST 290 - EAST ASIAN HISTORY
Traditional China as the foundation of East Asian civilization. Recommended that HST 290, HST 291 and HST 292 be taken in sequence, but not required. Recommended preparation: or to be taken with WR 121.
Credits: 4    Lecture: 4

HST 291 - EAST ASIAN HISTORY
Development of Chinese, Japanese and Korean societies through the late 19th century. Recommended that HST 290, HST 291 and HST 292 be taken in sequence, but not required. Recommended preparation:
WR 121.
Credits: 4    Lecture: 4

HST 292 - EAST ASIAN HISTORY
Late Imperial China, Japan and Korea and their evolution/revolution into modern nation-states. Recommended that HST 290, HST 291 and HST 292 be taken in sequence, but not required. Recommended preparation:
WR 121.
Credits: 4    Lecture: 4

HST 298 - INDEPENDENT STUDY: HISTORY
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

HST 299 - SELECTED TOPICS: HISTORY
This course is in development.
Credits: 1 to 4

HOSPITALITY MANAGEMENT

HM 101 - INTRODUCTION TO HOSPITALITY
Provides an overview of the hospitality and tourism industry, its growth and development, industry segments and their distinguishing characteristics, trends and current concerns. Introduction to career opportunities and the employability skills needed to succeed in specific hospitality fields.
Credits: 4    Lecture: 4

HM 130 - HOSPITALITY INDUSTRY SUPERVISION AND PRINCIPLES OF LEADERSHIP
Learn the management/supervision/leadership responsibilities in the typical lodging and/or food service establishment. Stresses leadership, communication, morale, motivation, training, team building, and employee development and retention unique to lodging and food service operations.
Credits: 4    Lecture: 4

HM 150 - PROCUREMENT, INGREDIENT IDENTIFICATION AND FOOD COST CONTROL
Learn the principles of cost control, product yield tests, vendor relations and procurement, and an introduction to ingredient identification and tasting. Exposure to profit and loss statements, and how to track cost as it relates to the flow of food. Place, receive and store food orders, conduct quality assurance on all food items, and execute an electronic end-of-month inventory. Issue course ingredients utilizing supply requisitions. It is also an opportunity for industry vendors to speak with students, conduct ingredient tastings, and provide updates regarding industry practices. Prerequisites: CUL 090.
Credits: 3    Lecture: 1 Lab: 6

HM 160 - WINE AND SPECIALTY BEVERAGE MANAGEMENT AND SERVICE
Learn the theoretical and practical information about the organization of a beverage program within the operation of a hospitality business. Included are the legal and moral responsibilities that come with the sale of alcoholic beverages, purchasing and marketing, distillation, brewing, mixology and non-alcoholic beverage service. Emphasis placed on wine and beverage knowledge, pair principles, cost control measures, inventory, and sanitation laws and practices.
Credits: 3    Lecture: 3

HM 190 - DINING ROOM OPERATIONS
Exposure to the importance of service, sanitation and appearance in a real-life dining room setting. Learn and practice styles of service including à la carte, reception, banquet and buffet. Additionally, learn the primary guidelines for service, guest relations, etiquette phone use and Point Of Sale systems. Learn about different dining room staff positions, proper use of tabletop flatware, china, and glassware and table set-up. Students will receive the following industry certifications in this course: OLCC Alcohol Service Permit, FDRP Dining Room Associate and Wine Steward Associate Certificates and Allergy Safe certificate.
Credits: 5    Lecture: 2 Lab: 9

HM 210 - MENU COMPOSITION AND ANALYSIS
Analyze menu design and effectiveness for a diversity of local restaurant establishments. Learn about standardized recipes and cost cards, understanding income and profit and loss statements, nutritional aspects of menu planning and design and menu configuration. Analyze and critique industry menus and create menus from the perspective of concept, clarity, cost, price and efficiency. Conduct an analysis of the sales mix for the Elevation Restaurant as part of a group assignment, evaluate the sales distribution of food and beverage items and give presentations to the Elevation staff as to how to make perspective design and offering improvements. Prerequisites: CUL 090.
Credits: 3    Lecture: 3

HM 230 - LODGING MANAGEMENT
Explore current operational practices of lodging operations throughout the world. Study management functions related to front office, housekeeping, marketing, reservations, maintaining customer accounts, laws affecting lodging operations and typical service problems. Go on field trips to learn about different kinds of lodging operations throughout the state.
Credits: 4    Lecture: 4

HM 240 - HOSPITALITY LAW
Learn about the hotel/guest relationship, innkeeper’s lien, crimes against innkeepers, overview of employment rights, policy formulation, duty to protect guests and their belongings, ejection of guests and non-guests, and an introduction to general business law dealing with torts and
contracts. Issues concerning travel law will be included. Recommended preparation: WR 121 and HM 101.
Credits: 4  Lecture: 4

HM 275 - MIXOLOGY AND BEVERAGE OPERATIONS
Create a wide variety of classic and everyday mixed drinks in a standard bar setting. Learn about bar glassware and equipment identification, pouring techniques, common cocktail mixing methods, history of distilled spirits, origin and characteristics of various distilled spirit brands, distillation process, bartenders job description and responsibilities, cost control, beverage pricing and responsible alcohol service. Prerequisites: instructor approval and Oregon Liquor Control Commission (OLCC)
Server Permit.
Credits: 4  Other: 8

HM 280 - HOSPITALITY MANAGEMENT INDUSTRY INTERNSHIP
Serves as a supervised work experience within the restaurant management/hospitality industry designed to expand career knowledge and experiential confidence while increasing knowledge, speed, timing, organization and ability to execute industry skills on a repetitive basis. Students will receive a diverse work experience that is designed on a systematic rotation of different stations that related to management functions within a restaurant or hospitality industry venue. Students can complete 100% of the experience in competencies that are relevant to the program curriculum, as it is outlined in the course syllabus and internship agreement. The internship is concluded by a final supervisor evaluation. P/NP grading. Prerequisites: instructor approval.
Credits: 1 to 6

HM 290 - CAREER SUCCESS AND E-FOLIO PRESENTATION
Finalize your Cascade Culinary Institute eFolio including updated, effective résumés, cover letters, reference letters, photos of prepared dishes, class projects and certificates earned during study at CCI. Learn about career opportunities, networking, volunteerism and interview techniques. P/NP grading. Prerequisite: CUL 170 and instructor approval.
Credits: 2  Lecture: 2

HM 298 - INDEPENDENT STUDY: HOSPITALITY MANAGEMENT
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

HUMAN DEVELOPMENT

HD 100CS - COLLEGE SUCCESS
College Success is designed to give new students a broad overview of college and life success strategies. The course introduces students to college resources, students services and personal behaviors that support successful academic transition, growth and planning. Topics include personal responsibility, self-motivation, time management, academic planning, financial planning, decision making, health and learning styles.
Credits: 3  Lecture: 3

HD 100PM - PROcrastination & MOTivation
Introduces students to the characteristics of procrastinating behaviors. The class explores reasons for procrastination and how to self-negotiate to eliminate non-productive behaviors. Specific tools to address individual styles of procrastination will be introduced with an emphasis on identifying personal values to motivate one to action and achieve defined goals.
Credits: 1  Lecture: 1

HD 100TT - TEST TAKING
Designed for students challenged by tests or assessment materials. The class introduces students to the process of effective test taking including preparation for all types of tests and classroom assessment tools, study and relaxation techniques and actual test taking. Students will be introduced to pro-active strategies to address test anxiety, utilize test results for improved performance and access instructors for guidance and performance.
Credits: 1  Lecture: 1

HD 100VC - VALUES CLARIFICATION
Designed to assist students in defining the motivation behind their college investment and develop a compelling academic plan integrated with their personal life plan. Students will identify their key motivators (values), assess current life choices and roles in the framework of the defined values, develop a plan of action that realistically supports success, choose action steps resulting in the achievement of defined outcomes and develop strategies to continually reassess and measure academic/personal success.
Credits: 1  Lecture: 1

HD 101 - STUDY STRATEGIES
Emphasizes study skills, acquisition of college knowledge, resources and personal responsibility while building and using strategies for college and workplace success. Effective learning and study strategies are reviewed and practiced including text reading, note taking, test taking, listening strategies and time management. Learning styles are identified and connected to pro-active behaviors. College resources, campus protocol and ethical student behavior are introduced and integrated with examination of self-talk and application of visualization processes to enhance confidence and self-esteem in the college environment.
Credits: 3  Lecture: 3

HD 102 - LEADERSHIP DEVELOPMENT
Teaches basic principles of leadership development and staff management in order to prepare student/staff leaders to effectively work in their assigned roles within Student Life and together as a team. Includes topics designed to increase knowledge and skills in the areas of diversity awareness, communication, conflict management, teambuilding, group development, personal awareness, time management and values clarification. As a result of this class, students will become familiar with the roles and expectations of the Student Life staff and be able to professionally represent COCC in their leadership roles on campus.
Prerequisites: department approval.
Credits: 2  Lecture: 2

HD 103 - STRATEGIES FOR LIFE MANAGEMENT
Helps college students identify and manage internal factors that contribute to positive mental, physical and emotional health during their college journey. Through exploring proven strategies for self-management, students will be able to analyze, create and implement a personalized set of habits and routines that will support their journey through college and beyond.
Credits: 3  Lecture: 3

HD 109 - EFFECTIVE JOB SEARCH STRATEGIES
Introduces students to an effective, comprehensive approach to the job search process. Students will learn how to develop a job search plan, accurately and effectively complete job applications, write resumes and cover letters accordingly, identify marketable skills and prepare for job interviews.
Credits: 2  Lecture: 2

HD 110 - CAREER PLANNING
Provides tools and resources for making informed career decisions. Covers assessing skills, values, interests, personality, barriers, lifestyle, education and approaches to decision making. Covers how to research career information. Includes educational decision-making in determining a field or program of study, and college or training program.
Credits: 3  Lecture: 3

HD 188 - SPECIAL STUDIES: HUMAN DEVELOPMENT
Explores topics of current interest in the discipline. P/NP grading.
Credits: 1 to 4

HD 190 - OLI LEADERSHIP SKILLS I
HD 190 is the first in a 3-quarter series. This first quarter lays the foundation for the series by providing high school students with activities
that encourage them to: establish personal and team goals; develop effective teamwork skills; explore and articulate their cultural identity; explore aspects of leadership including varying styles, qualities and cultural implications. Interaction with college mentors prepares students of varying races and ethnicities to embrace post-secondary education as both desirable and attainable. P/NP grading. Prerequisites: instructor approval.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lecture</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD 191</td>
<td>OLI LEADERSHIP SKILLS II</td>
<td>1 to 2</td>
<td></td>
<td>This course is in development.</td>
</tr>
<tr>
<td>HD 192</td>
<td>OLI LEADERSHIP SKILLS III</td>
<td>1 to 2</td>
<td></td>
<td>Provides strategies from accepted and culturally appropriate models for facilitating group counseling with clients with a variety of disorders including substance abuse.</td>
</tr>
<tr>
<td>HD 199</td>
<td>SELECTED TOPICS: HUMAN DEVELOPMENT</td>
<td>1 to 4</td>
<td></td>
<td>Provides a broad overview of the field of addiction through a look at the issues and treatments involved. Includes history, prevention regarding alcohol, drugs, nicotine, eating disorders, depression and relapse prevention.</td>
</tr>
</tbody>
</table>

### HUMAN SERVICES/ADDICTIONS STDS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lecture</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS 101</td>
<td>ORIENTATION TO HUMAN SERVICES</td>
<td>3</td>
<td>Lecture: 3</td>
<td>Introduces the human services profession. Helps students evaluate their fit within the human services field. Highlights self-understanding and individual compatibility with human services occupations. Emphasizes prevention, early intervention concepts and programs, significance of social justice and multicultural equity.</td>
</tr>
<tr>
<td>HS 161</td>
<td>ETHICS FOR HUMAN SERVICES</td>
<td>3</td>
<td>Lecture: 3</td>
<td>Examines the legal and ethical issues facing human service practitioners. Explores how to set and maintain professional boundaries. Evaluates the roles, functions and legal/ethical responsibilities of human services workers, including the process of ethical decision making and awareness of the moral and legal complexities in the field of human services.</td>
</tr>
<tr>
<td>HS 162</td>
<td>EFFECTIVE HELPING SKILLS I</td>
<td>4</td>
<td>Lecture: 4</td>
<td>Focus is on skills of interacting with people both verbally and non-verbally, as well as the ethical and cultural underpinnings to helping and interviewing. Emphasis placed on understanding and application of the principles of interviewing. Significant concentration on practicing skills with peers.</td>
</tr>
<tr>
<td>HS 180</td>
<td>ADDICTIONS, HIV AND OTHER INFECTIOUS DISEASES</td>
<td>4</td>
<td>Lecture: 4</td>
<td>Presents the foundations for developing the skills and sensitivities needed to practice as culturally alert counselors. Explore issues and trends related to culture, ethnicity, race, nationality, age, gender, sexual orientation, mental and physical abilities/disabilities, education, religious and spiritual values, immigrant dynamics and socioeconomic factors which influence counseling relationships, process and treatment outcomes.</td>
</tr>
</tbody>
</table>

### HUMAN SERVICES/ADDICTIONS STDS (Continued)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lecture</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS 200</td>
<td>ADDICTIVE BEHAVIOR</td>
<td>3</td>
<td>Lecture: 3</td>
<td>Provides strategies from accepted and culturally appropriate models for facilitating group counseling with clients with a variety of disorders including substance abuse.</td>
</tr>
<tr>
<td>HS 206</td>
<td>GROUP COUNSELING SKILLS FOR HUMAN SERVICES</td>
<td>4</td>
<td>Lecture: 4</td>
<td>Introduces child/adolescent biopsychosocial development and evaluates the effects of substance abuse on that development. Covers the social and cultural implications. Interaction with college mentors prepares students of varying races and ethnicities to embrace post-secondary education as both desirable and attainable.</td>
</tr>
<tr>
<td>HS 209</td>
<td>INTRODUCTION TO PSYCHOLOGICAL TRAUMA: THEORY AND PRACTICE</td>
<td>4</td>
<td>Lecture: 4</td>
<td>Introduces types, history, and impact of trauma on individuals, family, and community. Explores the impact on those working with trauma survivors and inadvertent re-traumatization of victims that occurs by the social service system. It introduces crisis management strategies in the context of a trauma informed practice.</td>
</tr>
</tbody>
</table>
| HS 210      | CO-OCCURRING DISORDERS | 4      | Lecture: 4 | Recognize and differentiate symptoms and treatment of substance related and addictive disorders and mental health issues. Develop
knowledge, skills and theoretical frameworks applicable to co-occurring disorders. Understand best practice models and integrated treatment for co-occurring disorders. Recommended preparation: WR 121.

Credits: 4  Lecture: 4

HS 224 - PSYCHOPHARMACOLOGY
This course covers the knowledge required to pass the pharmacology section of the Certified Alcohol and Drug Counselor (CADC) I exam. It includes the ways drugs are used, controlled and valued culturally; how the human body functions normally, including knowledge of cells, nerve cells and basic bodily systems (i.e., respiratory, circulatory, endocrine and digestive; how drugs are absorbed, distributed, metabolized and excreted and how drugs affect these systems).

Credits: 4  Lecture: 4

HS 250 - PROCESS ADDICTIONS
Provides a broad overview of process addictions including a look at the issues and treatments involved. Process addictions are defined as addiction to certain mood-altering behaviors, actions or routine of actions such as gambling, eating, shopping, working or sexual activities. Recommended preparation: or to be taken with WR 121.

Credits: 4  Lecture: 4

HS 260 - COUNSELING THEORIES
Introduces major counseling theories that have demonstrated effectiveness with a variety of mental health issues including substance abuse disorders. Includes an overview of 10 specific theories (including affective, behavioral and cognitive approaches), their founders, key concepts, techniques and appropriate applications. Recommended preparation: WR 121.

Credits: 4  Lecture: 4

HS 262 - EFFECTIVE HELPING SKILLS II
Introduces students to intentional interviewing/motivational interviewing as a foundation for developing basic counseling skills. Focus will be on developing more intensive counseling skills with significant opportunity for hands-on practice. Videotaping is used extensively. Recommended preparation: HS 162 or instructor approval.

Credits: 4  Lecture: 4

HS 263 - COUNSELING THE CHEMICALLY DEPENDENT CLIENT
Trains students in a systematic approach to screening, assessing and treatment planning. Goal is to determine the most appropriate course of action given the client's needs and characteristics and the available resources. This is a collaborative, ongoing process in which the counselor and client develop desired treatment outcomes and identify strategies to achieve them.

Credits: 3  Lecture: 3

HS 266 - CASE MANAGEMENT FOR THE CHEMICALLY DEPENDENT CLIENT
Provides foundation skills to successfully manage client cases in a treatment setting. Includes skills in the ASAM Criteria including client assessment, treatment planning, treatment plan review, writing of clinical progress notes, treatment summary and discharge planning and coordination with other agencies. Recommended to be taken with WR 121.

Credits: 4  Lecture: 4

HS 290 - INTRODUCTION TO PRACTICUM IN HUMAN SERVICES
This is an introduction to practicum and should be taken at least one term before the practicum. The goal of this course is to prepare students for a successful practicum. In this course students will develop their resume, job search and job interviewing techniques and research possible practicum sites.

Credits: 1  Lecture: 1

HS 291 - PRACTICUM IN HUMAN SERVICES I
Practicum is closely supervised opportunity to implement professional skills, knowledge and attitudes presented in prior Human Services coursework. Provides experience working on site in a human service agency to integrate field and classroom experience. Students also attend a weekly seminar and meet individually with both the practicum instructor and the site supervisor throughout the quarter. Students are required to have a placement confirmed prior to the term they decide to begin. Addiction Studies students must have completed HS 161, HS 162, HS 206 and HS 290 prior to enrolling in this class. Note: 1,000 hours supervised experience are required before taking the Oregon Certified Alcohol and Drug Counselor I exam.

Credits: 4  Lecture: 1  Other: 9

HS 292 - PRACTICUM IN HUMAN SERVICES II
This second-term practicum is more comprehensive and provides an opportunity to develop more advanced skills. Addiction Studies students must have completed HS 161, HS 162, HS 206 and HS 291 prior to enrolling in this class. With instructor approval only students may co-enroll in HS 291. Note: 1,000 hours supervised experience are required before taking the Oregon Certified Alcohol and Drug Counselor I exam.

Credits: 4  Lecture: 1  Other: 9

HS 293 - PRACTICUM IN HUMAN SERVICE III
This second-term practicum is more comprehensive and provides an opportunity to develop more advanced skills. Addiction Studies students must have completed HS 161, HS 162, HS 206, HS 291 and HS 292 prior to enrolling in this class. With instructor approval only students may co-enroll in HS 292. Note: 1,000 hours supervised experience are required before taking the Oregon Certified Alcohol and Drug Counselor I exam. Course may be repeated for credit.

Credits: 4  Lecture: 1  Other: 9

HS 298 - INDEPENDENT STUDY: HUMAN SERVICES
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.

Credits: 1 to 4

HS 299 - SELECTED TOPICS: HUMAN SRVCS
This course is in development.

Credits: 1 to 6

HUMANITIES

HUM 105 - ITALIAN LIFE AND CULTURE
Offered as a required course in the Florence Quarter study abroad program. The student will gain a broad overview of contemporary Italian society by examining cultural traditions and values. Besides topical lectures by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as Etruscan Fiesole, the Uffizi Gallery, the Accademia Museum and the Medici Pitti Palace. (Elective only: does not satisfy general education requirement).

Credits: 2  Lecture: 2

HUM 106 - BRITISH LIFE AND CULTURE
Offered as a required course in the London Quarter study abroad program. The student will gain a broad overview of contemporary British culture and society by examining traditions and institutions that impact the British way of life in the twenty-first century. Besides topical presentations by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites as the Museum of London, the National Gallery, Shakespeare’s Globe Theatre and the Houses of Parliament.

Credits: 3  Lecture: 3

HUM 107 - SPANISH LIFE AND CULTURE
Offered as a required course in the Barcelona Quarter study abroad program. The student will gain a broad overview of contemporary Spanish society by examining cultural traditions and values. Besides topical lectures by native guest lecturers, the course engages students in experiential learning through field trips to such historic and cultural sites
as Gaudí’s Barcelona, the Gothic quarter and the Dali museum. (Elective credit only: does not satisfy general education requirements).

Credits: 3 Lecture: 3

HUM 188 - SPECIAL STUDIES: HUMANITIES
Explores topics of current interest in the discipline.
Credits: 1 to 4

HUM 199 - SELECTED TOPICS: HUMANITIES
This course is in development.
Credits: 1 to 4

HUM 210 - CULTURE AND LITERATURE OF ASIA
Introductory study of representative literary texts, films and related language arts, in English or in translation, of Asian regions and countries, such as China, India and Japan, examined in the context of their histories and cultural traditions. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 211 - CULTURE AND LITERATURE OF AFRICA
Introductory study of representative oral arts, literature, film and related creative arts, in English or in translation, of sub-Saharan African peoples, examined in context of their histories and cultural traditions. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 212 - CULTURE AND LITERATURE OF THE AMERICAS
Interdisciplinary study of representative literary and historical texts (and other media) from Hispanic and Afro-Caribbean cultures of traditional, colonial and post-colonial origin. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 213 - CULTURE AND LITERATURE OF MIDDLE EAST
Introductory study of representative Arabic, Persian and Hebrew literary texts in translation, placed in the context of films and other cultural media of the Middle East and Northern Africa. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 230 - IMMIGRANT EXPERIENCE AMERICAN LITERATURE
Credits: 4 Lecture: 4

HUM 240 - NATIVE AMERICAN LITERATURE AND CULTURE
Introduction to traditional oral and contemporary Native American texts with an emphasis on cultural contexts and continuity. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 255 - CULTURAL DIVERSITY IN CONTEMPORARY AMERICAN LITERATURE
This course examines cultural diversity as recorded in American literature since 1965, emphasizing literary and cultural values in poetry, fiction and drama. Readings focus on writers’ views of life within historically marginalized groups based on ethnicity, gender and sexual identity. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 256 - INTRODUCTION TO AFRICAN-AMERICAN LITERATURE
Survey of African-American literature (selected fiction, autobiography, poetry and drama of the 19th and 20th centuries), placed in the context of major African-American achievements in the visual arts, music and film. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 261 - POPULAR CULTURE: SCIENCE FICTION
Focuses on the significance of science, technology and on such topics as the idea of the future and the “limits of the human” as revealed in popular culture through genres such as fiction, film, music, comics, anime and manga and advertising. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 262 - POPULAR CULTURE: THE AMERICAN WESTERN
Historical study of the Western story and the cowboy hero in American culture through genres such as fiction, film, television, comics and journalism. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 263 - POPULAR CULTURE: DETECTIVE STORIES
Historical study of crime stories and the detective figure as revealed in popular culture through genres such as fiction, film, advertising and journalism. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 264 - POPULAR CULTURE: SPY THRILLER
Thematic study of espionage stories and the spy figure, as revealed in popular culture through genres such as fiction, film, advertising and journalism. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 265 - POPULAR CULTURE: NOIR FILM AND FICTION
Historical, thematic and technical study of film noir and related fiction as a subversive force in popular culture. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 266 - POPULAR CULTURE: TRAVEL LITERATURE
Cross-cultural study of travel as exploration, personal narrative, anthropological inquiry and social criticism of places and peoples represented as “other” or “exotic.” Examines popular culture as depicted in genres such as travel memoirs, journalism, advertising, educational videos and feature films that critique touristic assumptions. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 268 - DIGITAL GAMES CULTURE
This course will approach digital games through an academic socio-cultural lens, identifying key elements of evolving game studies theory, which considers digital game design, digital games play and digital games as a cultural practice that, in addition to play/entertainment, offers a new and developing medium for story-telling and learning. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 269 - POPULAR CULTURE GRAPHIC NOVELS
Examines the role of comic books and graphic novels as cultural and artistic creations in popular culture and literature. Identifies a vocabulary for discussing, explaining, writing, and analyzing comics. Explores relevant social and historical events in the development of comics. May include comics to film comparisons or principal author studies. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

HUM 299 - SELECTED TOPICS: HUMANITIES
This course is in development.
Credits: 1 to 4

ICHISHKIN

ICH 101 - FIRST YEAR ICHISHKIN NATIVE LANGUAGE I
Introduces the Ichishkin language of the Warm Springs (Sahaptin) people. First course of a three-term sequence of study of the Native American language, Ichishkin, at the first-year college level. The first term will introduce students to alphabet characters, sounds and simple phrases.
Credits: 4 Lecture: 4
ICH 102 - FIRST YEAR ICHISHKIN NATIVE LANGUAGE II
Introduces the Ichishkin language of the Warm Springs (Sahaptin) people. Second of a three-term sequence of study of the Native American language, Ichishkin, at the first-year college level. The second term will develop student familiarity with simple phrases and basic conversation. Recommended preparation: ICH 101.
Credits: 4  Lecture: 4

ICH 103 - FIRST YEAR ICHISHKIN NATIVE LANGUAGE III
Introduces students to the Ichishkin language of the Warm Springs (Sahaptin) people. Third of a three-term sequence of study of the Native American language, Ichishkin, at the first-year college level. The third term will focus on refining conversational skills. Recommended preparation: ICH 102.
Credits: 4  Lecture: 4

ITALIAN

IT 101 - FIRST YEAR ITALIAN I
Designed for beginners. Emphasizes active communication in Italian. Develops students' basic skills in listening, reading, writing and speaking in Italian. Successful completion of this sequence prepares students for entry into second-year level at COCC or any other university. Should be taken in sequence. Students who have previously learned Italian should contact the instructor for advice on which class to take. This class is intended for students who have no knowledge of Italian.
Credits: 4  Lecture: 4

IT 102 - FIRST YEAR ITALIAN II
Continues the development of reading, writing, listening and speaking skills. Students are expected to have completed IT 101 material, and are encouraged to review Italian 101 concepts and vocabulary prior to class. Course should be taken in sequence. Recommended preparation: IT 101 or one year of high school Italian; students who have previously learned Italian should contact the instructor for advice on which class to take.
Credits: 4  Lecture: 4

IT 103 - FIRST YEAR ITALIAN III
Continues the development of reading, writing, listening and speaking skills. Course should be taken in sequence. Recommended preparation: IT 102 or two years of high school Italian; students who have previously learned Italian should contact the instructor for advice on which class to take.
Credits: 4  Lecture: 4

IT 199 - SELECTED TOPICS: ITALIAN
This course is in development.
Credits: 4

IT 201 - SECOND YEAR ITALIAN I
Continues the work of first year Italian, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Culture, regionalisms and history incorporated; course taught mostly in Italian. Recommended preparation: IT 103; students who have previously learned Italian should contact the instructor for advice on which class to take.
Credits: 4  Lecture: 4

IT 202 - SECOND YEAR ITALIAN II
Continues the work of Italian 201, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Culture, regionalisms and history incorporated; course taught mostly in Italian. Recommended preparation: IT 201; students who have previously learned Italian should contact the instructor for advice on which class to take.
Credits: 4  Lecture: 4

IT 203 - SECOND YEAR ITALIAN III
Continues the work of Italian 202, reviewing, expanding and perfecting pronunciation, structure and vocabulary for the purpose of active oral and written communication. Increasing emphasis on writing and reading skills. Culture, regionalisms and history incorporated; course taught mostly in Italian. Recommended preparation: IT 202; students who have previously learned Italian should contact the instructor for advice on which class to take.
Credits: 4  Lecture: 4

IT 298 - INDEPENDENT STUDY: ITALIAN
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

IT 299 - SELECTED TOPICS: ITALIAN
This course is in development.
Credits: 1 to 4

JOURNALISM

J 188 - SPECIAL STUDIES: JOURNALISM
Explores topics of current interest in the discipline.
Credits: 1 to 4

J 199 - SELECTED TOPICS: JOURNALISM
This course is in development.
Credits: 1 to 4

J 215 - PUBLICATIONS LAB
Practical application of communications instruction through work on the student newspaper. Students are involved in all areas of production including reporting, photojournalism, advertising, production and distribution. P/NP grading. Recommended preparation or recommended to be taken with: J 216.
Credits: 1  Lab: 3

J 216 - REPORTING 1
A beginning class in newswriting. Emphasis is placed on writing leads, developing the story and a sense for news. Character and communication of news and the rights and responsibilities of journalists explored. Open to all students. Recommended preparation: WR 121.
Credits: 3  Lecture: 3

J 217 - REPORTING 2
A continuation of Reporting 1 with emphasis placed on comprehensive news story writing, covering speeches and meetings and interviewing. Recommended preparation: J 216.
Credits: 3  Lecture: 3

J 280 - JOURNALISM PRACTICUM
Community work experience in journalism (may include internships in local media). P/NP grading.
Credits: 1 to 3

J 298 - INDEPENDENT STUDY: JOURNALISM
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

J 299 - SELECTED TOPICS: JOURNALISM
This course is in development.
Credits: 1 to 4
LIB 199 - SPECIAL TOPICS: LIBRARY
This course is in development.
Credits: 1 to 3

MANUFACTURING

MFG 100 - MFG ORIENTATION
Provides new MATC students with the required information before participating in self-directed learning at MATC. Includes understanding MATC procedures, safety, manufacturing careers, introduction to lean manufacturing and computer login procedures. P/NP grading.
Credits: 1 Lecture: 1

MFG 101 - BLUEPRINT READING
Provides student with training to read and interpret various types of industrial blueprints. Includes interpretation of line types, geometric tolerancing and dimensioning, surface finish callouts, auxiliary views and orthographic projection. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2 Lab: 6

MFG 102 - BLUEPRINT READING SHEET METAL
Provides student with training to read and interpret various types of sheet metal blueprints. Covers line and print development, sheet metal layout, pattern drafting and bend allowances, maximum utilization of material, identification of sheet metal types and grades, correct use of sheet metal for the application and sheet metal bend and shear strengths. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2 Lab: 6

MFG 103 - WELDING TECHNOLOGY I
Introductory course covering basic welding processes. Includes relevant safety topics and introduction to shielded metal arc welding and gas metal arc welding. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 3 Lab: 9

MFG 105 - WELDING TECHNOLOGY II
Intermediary course focused on welding carbon steel plate in specific out-of-position set-ups. Includes continuing practice in GMAW and SMAW welding and interpretation of inspection standards related to weld quality. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 3 Lab: 9

MFG 107 - WELDING TECHNOLOGY III
Final course offered in the basic welding technology series. Includes welding practice utilizing electrodes F-1 through F-4 in the SMAW process and introduction to gas tungsten arc welding and flux core arc welding. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 3 Lab: 9

MFG 109 - LEAN PRACTICES
Lean practices are methods used to eliminate waste in any process to which they are applied. This course provides students with an understanding of lean practices commonly used in industry including: value stream mapping, standardized work, 5S, structured problem solving, visual factory, Kanban/pull systems other lean tools. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2 Lecture: 2

MFG 110 - MANUFACTURING PROCESSES I
Credits: 3 Lab: 9

MFG 112 - MANUFACTURING PROCESSES II
Continued student proficiency development in machining operation including speed and feed calculations, milling machine and lathe...
MFG 114 - MANUFACTURING PROCESSES III
Final course in the basic manufacturing processes series. Continued student proficiency development in the operation of basic machine tools, introduction to computer numerical control programming and operations, and a capstone project to demonstrate machining proficiency. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 3 Lab: 9

MFG 115 - DESIGN PROCESSES I
Introduction to computer-aided manufacturing. Includes interpretation and construction of technical drawings and technical sketching. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 116 - MANUFACTURING ELECTRICAL SYSTEMS
Studies electrical circuitry and components used in manufacturing applications. Includes introductory AC/DC electrical circuit construction and Ohm’s Law. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 118 - FLUID POWER SYSTEMS I
Introductory fluid power class. Includes single(double-acting cylinder operations, directional control valve operations, fluid power symbols and the creating of operational hydraulic and pneumatic circuits. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 133 - QUALITY ASSURANCE
An introductory quality control course that includes precision and semi-precision measuring, digital measuring tool operations, measuring practice using digital gauges, micrometers, depth gauge and height gauge measuring tools. The course also includes an introduction to statistical process control and pneumatic gauging topics. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 160 - MATERIALS ENGINEERING
A continuation of Quality Assurance topics focused on materials. Includes shear, hardness, tensile and compression testing and other material analyzing techniques. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 3 Lab: 9

MFG 199 - SELECTED TOPICS: MANUFACTURING
Offers selected topics of study through workshops and independent study format. Provides opportunities for students to investigate topics of interest beyond what is covered in current degree. Prerequisites: instructor approval. Credits: 1 to 3

MFG 201 - BENCH WORK
Using hand tools, files, hacksaw, chisels and coated abrasives. Includes shop safety, hand tapping, thread measurement, arbor press operations, micrometer and vernier caliper reading. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 202 - METALS PREPARATION
Bandsaw, cold saw auto stop operations, ironworker hole punching and abrasive power tool operations. Includes safety, profile cutting, shearing, material identification, blade welding, blade selection and offhand grinding operations. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 203 - LAYOUT
Semi-precision and precision layout practices. Includes height gauge operations, surface plate set-ups, bolt circle layout and the use of hand and power tools to produce accurate workpiece profiles. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 205 - DRILL PRESS
Drill press operations training. Includes safety, machine nomenclature, measuring and sharpening drills, machine set-up, cutting tool selection, magnetic based drill, electric drill motor and radial arm drill operations. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 206 - SURFACE GRINDING I
Horizontal grinding machine operations. Includes machine nomenclature, chucking methods, wheel dressing, workpiece setups and cutting operations. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 210 - VERTICAL MILLING
Vertical milling machine operations. Includes safety, work holding, table set-ups, power feeds, digital read-out operation, cutter selections, climb and conventional cutting and spindle speed changes. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 211 - CNC MILL OPERATOR
Computer numerical control machining center operator training. Includes safety, machine maintenance, tool offsets, controller editing and operations, cutting tool set-ups, carbide insert and holders and part running. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 213 - CNC TURNING OPERATOR
Computer numerical control turning center operator training. Includes safety, machine maintenance, coordinate systems, tool length offsets, controller editing and operations, overrides, tool set-ups and loading, carbide insert and holder selections, tool vectors and part running. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 214 - LATHE OPERATOR I
Introductory manual lathe operations training. Includes safety, machine maintenance, quick-change tooling, chuck set-ups, compound taper cutting, general turning and drilling operations. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 216 - LATHE OPERATOR II
Advanced lathe operations training. Four-jaw chucking, taper turning, carbide cutting tool selections, boring, single point threading, thread measurement and other precision turning operations. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 230 - CNC PROGRAMMING MILL
Programming computer numerical control mills and machining centers. Includes G & M programming, canned cycles, subroutines, profile milling, cutter diameter compensation, part proofing. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 232 - CNC PROGRAMMING LATHE
Programming computer numerical control turning center. Includes G & M manual programming, canned cycles, subroutines, profile shaping, TNR, tool vectors, cutter selection and part proofing. Prerequisites: instructor approval. Recommended preparation: MFG 100. Credits: 2 Lab: 6

MFG 234 - CAD/CAM MILL
CAD/CAM operations related to programming a computer numerical control machining center. Includes drilling 2-1/2 D and 3-D milling operations using wire frame and solids model geometry. A student considering this course should be familiar with CNC milling machine
MFG 236 - CAD/CAM LATHE
CAD/CAM operations related to programming computer numerical control turning centers. Includes drilling, grooving and threading operations using wire frame and solids model geometry. A student considering this course should be familiar with CNC lathe operations and G & M programming. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 238 - OPTICAL COMPARATOR
Optical comparator operations. Includes operation of H-14 metrology controller, stage set-up and fixtureing, inspection of rectangular and round workpieces. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 1    Lab: 3

MFG 239 - COORDINATE MEASUREMENT MACHINE
Coordinate measuring machine operations. Includes establishment of part coordinate systems, touch probe calibration procedures and measuring workpiece geometry. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 1    Lab: 3

MFG 241 - ELECTRIC MOTOR CONTROL
Peripheral devices used to control motors. Includes study of components used to control industrial motors and automated systems. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 242 - PROGRAMMABLE LOGIC CONTROLLERS I
Introduction to programmable logic controller programming. Includes ladder logic, sealing circuits and event sequencing. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 243 - INDUSTRIAL SENSORS
Sensor applications. Includes study of mechanical, electronic and proximity sensor applications found in a typical manufacturing environment. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 244 - PROGRAMMABLE LOGIC CONTROLLERS II
Continuation of Programmable Logic Controller training. Includes advanced programming problems, discrete IO interfacing, PLC timers and counters. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 245 - ELECTRICAL CONTROL/FLUID POWER
Electrical control of pneumatic and hydraulic circuits. Includes pressure valves, sensors, interfacing with PLC, control sequencing, timing and circuit design. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 246 - MECHANICAL TROUBLESHOOTING
This course is an overview of mechanical drive systems and safety, key fasteners, power transmission systems, lubrication concepts, plain bearings, ball bearings, roller bearings and gaskets and seals. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 250 - ADDITIVE MANUFACTURING
This course provides students with a basic understanding of Additive Manufacturing concepts including various processes used in rapid prototyping. Students will be able to design and create sample parts using a 3-D printing process. Prerequisites: instructor approval. Recommended preparation: MFG 100 and CIS 135S1.
Credits: 2    Lab: 6

MFG 254 - MANUFACTURING JIGS AND FIXTURES
Jig and fixture design practices. Includes clamps, locators, degrees of freedom, radial and conical locators, templates, automated clamping and modular fixtureing. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 262 - WELDING INSPECTION/QUALITY CONTROL
Studies quality control issues related to weld joint inspection. Includes student exposure to visual and nondestructive inspection techniques that are utilized by welders and inspectors to interpret and monitor AWS quality standards. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 264 - AUTOMATED WELDING AND CUTTING
Cutting and welding steel shapes using numerically controlled processes. Includes cutting torch settings, set-up, maintenance practices and plasma-cutting exercises. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 266 - MANUFACTURING COST ESTIMATION
Cost estimation techniques used in the analysis and planning of manufacturing projects. Includes software estimates, manufacturing costs, standard vs. actual costs, fixtureing and welding-related topics. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 267 - OXYGEN-FUEL AND PLASMA CUTTING
Gas torch, air carbon arc and plasma gas cutting. Includes torch set-up and maintenance, flame setting, diagnostics, track torch operations, circle cutting and carbon arc scarfing practice. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 271 - SMAW I
Shielded metal arc welding. Includes machine set-up, fillet and groove welds on plain carbon steel in all positions. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 272 - GMAW I
Gas metal arc welding. Includes machine set-up for short-circuiting and spray transfer on plain carbon steel. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 273 - SMAW II
Shielded metal arc welding. Includes machine set-up, groove welds on plain carbon steel plate, stainless steel plate and pipe. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 274 - GMAW II
Gas metal arc welding. Includes machine set-up for groove welds on plain carbon steel pipe and plate and aluminum plate. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 275 - SMAW III
Shielded metal arc welding. Includes machine set-up, groove welds on plain carbon steel to a limited plate thickness of 3/4” and pipe in all positions. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6
MFG 276 - GMAW III
Gas metal arc welding. Includes machine set-up, groove welds on plain carbon steel and stainless steel in all positions. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 280 - CO-OP WORK EXPERIENCE MANUFACTURING
Credit granted for applicable on-the-job work experience. Minimum of 90 hours of work for the three credits granted. P/NP grading. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 1 to 3

MFG 281 - GTAW I
Gas tungsten arc welding. Includes machine setup for fillet and groove welds on plain carbon steel in all positions. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 282 - FCAW I
Flux core arc welding. Includes machine set-up for fillet and groove welds on plain carbon steel in all positions. Limited thickness to 3/4" plate. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 283 - GTAW II
Gas tungsten arc welding. Includes machine setup for fillet and groove welds on plain carbon steel, aluminum, stainless steel tubing and plate in all positions. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 284 - FCAW II
Flux core arc welding. Includes machine set-up for fillet and groove welds on pipe and plain carbon steel plate to a limited plate thickness to 3/4.” Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 285 - GTAW III
Flux core arc welding. Includes machine set-up for fillet and groove welds on plain carbon steel plate in all positions. Limited thickness to 3/4.” Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 286 - FCAW III
Flux core arc welding. Includes machine set-up and groove welds on plain carbon steel plate and pipe in limited positions to a plate thickness of less than 3/4.” Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 2    Lab: 6

MFG 287 - CNC PRESS BRAKE AND SHEARING
Covers safety and operation of equipment utilized in parting, forming and fabricating sheet metal. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 3    Lab: 9

MFG 288 - INDUSTRIAL FABRICATION
Sheet metal fabrication focusing on proper fit techniques, length and width allowances, welding processes, utilization of jigs and fixtures and the use of fasteners. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 3    Lab: 9

MFG 289 - MATERIAL HANDLING-FORK LIFT SAFETY
Focuses on identifying and ordering sheet metal materials plus the safe storage and handling of those materials. Includes OSHA safety regulations and fork lift operation and safety. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 1    Lab: 3

MFG 290 - CERTIFICATION TEST PREPARATION AWS I
Testing materials preparation for Level One Weld Certification Testing. Includes materials test sample preparation, set-up, testing, grinding samples and evaluation. P/NP grading. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 4    Lecture: 2.5 Lab: 4.5

MFG 291 - CERTIFICATION TEST PREPARATION NIMS I
Testing materials preparation for Level One NIMS Certification Testing. Includes materials test workplace preparation, set-up, testing and evaluation activities. P/NP grading. Prerequisites: instructor approval. Recommended preparation: MFG 100.
Credits: 1    Lab: 3

MASSAGE THERAPY

LMT 101 - INTRO MASSAGE THERAPY CAREER
Explore the education and academic requirements of the LMT program and the requirements for massage therapy licensure in Oregon.
Credits: 1    Lab: 2

LMT 113 - KINESIOLOGY FOR MASSAGE THERAPY I
Provides an introduction and overview of the basic principles of kinesiology. Emphasizes anatomical terminology, skeletal anatomy and function, the study of joints and their functions, and palpation skills. This is the first in a three-part series of kinesiology for massage therapists. Prerequisites: WR 065 or higher or minimum placement into WR 121, MTH 010 or higher or minimum placement into MTH 020. Recommended preparation: BI 121 or BI 122 or BI 231. Corequisites: LMT 130, LMT 155, LMT 170.
Credits: 4    Lecture: 3 Lab: 3

LMT 118 - KINESIOLOGY FOR MASSAGE THERAPY II
Continues study of the muscles that will include attachments, actions, nerves, joints and the boney landmarks. Second course in a three-part series of kinesiology for massage therapist. Prerequisites: LMT 113.
Credits: 4    Lecture: 3 Lab: 3

LMT 124 - KINESIOLOGY FOR MASSAGE THERAPY III
Continues a study of muscles that will include attachments, actions, nerves, joints and the boney landmarks. Emphasizes palpation skills. Third course in a three-part series of kinesiology for massage therapists. Prerequisites: LMT 118.
Credits: 4    Lecture: 3 Lab: 3

LMT 130 - MASSAGE FUNDAMENTALS
Introduction to the history of massage, self-care, proper body mechanics, basic medical terminology, universal sanitation precautions, draping, communication and the effects of Swedish massage strokes. Prerequisites: WR 065 or higher or minimum placement into WR 121, MTH 010 or higher or minimum placement into MTH 020. Recommended preparation: BI 121 or BI 122 or BI 231. Corequisites: LMT 113, LMT 155, LMT 170.
Credits: 2    Lecture: 2

LMT 135 - MANAGING A MASSAGE PRACTICE
Managing a Massage Practice will explore business structures, legal and tax documentation requirements for a massage therapy practice. Students will formulate a marketing plan including advertising, market analysis and professional goals.
Credits: 3    Lecture: 3

LMT 140 - PATHOLOGY FOR MASSAGE THERAPY
The effects of massage therapy on the body systems will be discussed including the indications and contraindications to massage. The basic mechanisms of the disease process and medical terminology will be reviewed. Prerequisites: BI 121 or BI 231.
Credits: 4    Lecture: 4

LMT 145 - MASSAGE I
The theory of Swedish massage, physiological effects and the practical application will be incorporated into the development of a massage therapy routine. Basic Subjective Objective Action Plan (SOAP) charting skills are introduced. Prerequisites: LMT 130 and LMT 170.
Credits: 4    Lecture: 2.5 Lab: 4.5
COURSE DESCRIPTIONS

LMT 150 - MASSAGE II
The theory and practice of various modalities including deep tissue, trigger point therapy, muscle energy technique and stretching are introduced. Incorporates client assessment and treatment planning for a massage session. Prerequisites: LMT 118 and LMT 145.
Credits: 4 Lecture: 2.5 Lab: 4.5

LMT 155 - EASTERN THEORY & PRACTICE
This course is philosophically neutral and will focus on Chinese Medicine as the primary model which includes an introduction to eastern philosophy and its complimentary healing techniques. Prerequisites: WR 065 or higher or minimum placement into WR 121, MTH 010 or higher or minimum placement into MTH 020. Recommended preparation: BI 121 or BI 122 or BI 231. Corequisites: LMT 113, LMT 130, LMT 170.
Credits: 2 Other: 4

LMT 160 - HYDROTHERAPY
The principles and techniques of water as it relates to a massage therapy session in its three forms; solid, liquid and vapor. Prerequisites: LMT 145.
Credits: 1 Other: 2

LMT 170 - PROFESSIONAL ETHICS AND RULES
The professional and ethical boundaries that govern the practice of massage therapy will be explored. The Oregon Administrative Rules and Statutes that apply to licensed massage therapists will be examined and discussed. Prerequisites: WR 065 or higher or minimum placement into WR 121, MTH 010 or higher or minimum placement into MTH 020. Recommended preparation: BI 121 or BI 122 or BI 231. Corequisites: LMT 113, LMT 130, LMT 155.
Credits: 2 Lecture: 2

LMT 175 - SWEDISH RELAXATION CLINIC
Swedish Relaxation Clinic will perform basic Swedish relaxation massage therapy techniques on the general public while demonstrating professionalism, client communication, and client consent during supervised public clinics. Prerequisites: LMT 145.
Credits: 2 Lecture: 1 Lab: 3

LMT 180 - THERAPEUTIC CLINIC
Therapeutic Clinic offers relaxation and treatment massage therapy techniques to the general public. Subjective Objective Action Plan (SOAP) charting, professionalism, client communication and client consent will be performed during supervised public clinics. P/NP grading. Prerequisites: LMT 150.
Credits: 3 Lecture: 1 Lab: 6

LMT 188 - SPECIAL STUDIES: LMT
Specific modules that relate to first year courses. Credits: 1 to 4

LMT 199 - SELECTED TOPICS: LICENSED MASSAGE THERAPY
Selected Topics related to Massage Therapy. Credits: 1 to 4

LMT 205 - MOVEMENT FOR MASSAGE
The student will explore their body mechanics and body awareness through the practice of Qigong to meet the physical demands of a massage therapy career.
Credits: 1 Other: 2

LMT 206 - THE SPIRIT OF MASSAGE
The Spirit of Massage will explore a holistic view of massage and facilitate a self-awareness of one’s personal connection to the massage therapy session and client goals. P/NP grading.
Credits: 1 Lecture: 1

LMT 210 - COMMUNITY OUTREACH
Massage therapy research and case studies topics will be explored using methods of assessment of the benefits of massage. Internships and externships may be included. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.
Credits: 2 Lecture: 1 Other: 3

LMT 216 - AROMATHERAPY I
An introduction to the properties and benefits of essential oils and their effects on the body when used in clinical and holistic settings.
Credits: 2 Lecture: 2

LMT 217 - AROMATHERAPY II
Advanced exploration of the essential oils examined in Aromatherapy I and utilization in a massage therapy session. Prerequisites: LMT 216.
Credits: 2 Lecture: 2

LMT 226 - THAI MASSAGE I
Traditional fundamentals of Thai bodywork techniques will be explored. A basic Thai floor massage routine will be practiced using traditional Thai equipment. Students should have the ability to kneel and move around on their feet and knees. P/NP grading. Prerequisites: LMT 130 and LMT 155.
Credits: 2 Lecture: 1 Other: 2

LMT 227 - THAI MASSAGE II
Students will explore the deeper roots of Thai bodywork and the “Sen.” Advanced techniques and stretches will be practiced in a Thai bodywork routine using traditional Thai equipment. Students should have the ability to kneel and move around on their feet and knees. P/NP grading. Prerequisites: LMT 226.
Credits: 2 Lecture: 1 Other: 2

LMT 228 - FOOT REFLEXOLOGY
Students will practice reflexology routines, pressure points and techniques that combine to make a unique foot massage similar to those enjoyed throughout the world. P/NP grading.
Credits: 2 Lecture: 1 Other: 2

LMT 229 - JAPANESE FACIAL MASSAGE
Japanese Facial Massage combines massage and acupressure to reduce muscular tensions, increase blood and energy flow, while restoring elasticity to the skin. P/NP grading.
Credits: 1 Other: 2

LMT 240 - NEUROMUSCULAR TREATMENTS I
This is advanced myofascial coursework that focuses on the treatment of specific conditions and injuries using neuromuscular massage therapy treatment protocols. Prerequisites: LMT 145, LMT 150, LMT 175.
Credits: 5 Lecture: 4 Lab: 3

LMT 241 - NEUROMUSCULAR TREATMENT-EXTREMITIES
This is advanced myofascial coursework that focuses on the treatment of specific injuries and conditions using massage therapy neuromuscular treatment protocols. Prerequisites: LMT 150.
Credits: 2 Lecture: 1 Other: 2

LMT 245 - EFFECTIVE OFFICE DECISIONS
This course will explore insurance billing, retail selling, target marketing, bookkeeping, credentialing and other issues a massage practice may encounter. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.
Credits: 2 Lecture: 2

LMT 250 - CRANIAL SACRAL LEVEL I
This course will offer a cranio sacral approach to massage therapy with an emphasis on relevant anatomy. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.
Credits: 5 Lecture: 4 Lab: 3

LMT 255 - ZEN SHIATSU
Zen Shiatsu history, basic theory and techniques used in this massage modality will be introduced. This class will offer hands-on experience while working with a clothed client in the style of Shizuto Masunaga. Recommended preparation: LMT 155 and LMT 130.
Credits: 3 Lab: 6

LMT 256 - ADVANCED ZEN SHIATSU
The incorporation of advanced Shiatsu theory, assessment strategies, and techniques using meridian therapy and psubo manipulation.
Hands-on experience in the style of Shizuto Masunaga will be included. Prerequisites: LMT 255.

**Credits:** 3  **Other:** 6

**LMT 257 - CHINESE MEDICINE THEORY**
Chinese Medicine Theory will provide a deeper understanding of Eastern/American foundational elements and the application of the elements as it relates to therapeutic massage therapy and bodywork. Prerequisites: LMT 155.

**Credits:** 3  **Lecture:** 2  **Other:** 2

**LMT 258 - EASTERN CLINIC**
Students will practice Shiatsu and/or Thai bodywork techniques on the general public during the supervised clinic. P/NP grading. Prerequisites: LMT 255 or LMT 226.

**Credits:** 2  **Lecture:** 1  **Lab:** 3

**LMT 260 - SPA TREATMENTS**
Spa treatment commonly used in spa facilities will be explored. A variety of spa treatments will be practiced in class. Contraindications, hygiene, sanitation and spa etiquette will be examined. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

**Credits:** 5  **Lecture:** 4  **Lab:** 3

**LMT 261 - ANCIENT HAWAIIAN MASSAGE**
Introduction to the history and the traditions of ancient Hawaiian precepts on bodywork and healing. P/NP grading.

**Credits:** 1  **Other:** 2

**LMT 265 - SPORTS MASSAGE**
The principles of Deep Tissue, Myofascial Release and Muscle Energy Techniques will be applied to target sports performance and exercise recovery and will be integrated in the rehabilitation of athletic related injuries. Prerequisites: LMT 150.

**Credits:** 3  **Other:** 6

**LMT 266 - SPORTS MASSAGE CLINIC**
Students will practice sports massage techniques targeting athletic performance, exercise recovery and soft tissue rehabilitation of athletic related injuries. P/NP grading. Prerequisites: LMT 265.

**Credits:** 2  **Lecture:** 1  **Lab:** 3

**LMT 270 - CLINICAL ASSESSMENTS**
This is a non-treatment course that will evaluate and assess ROM, posture, gait and soft tissue injury when determining massage therapy treatment options. Students taking Advanced Treatment courses are advised to enroll. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

**Credits:** 4  **Lecture:** 3  **Lab:** 3

**LMT 271 - PREGNANCY MASSAGE**
Advanced massage training when working with pregnant clients that will include precautions, draping, positioning and how massage can support women in labor. Prerequisites: LMT 145.

**Credits:** 1  **Other:** 2

**LMT 288 - SPECIAL STUDIES: LMT**
Specific coursework related to massage therapy. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

**Credits:** 1 to 4

**LMT 295 - INTEGRATED THERAPIES**
This course will explore the history and cultural aspects of Ayurveda principles and bodywork and how it may be integrated into a traditional massage therapy setting. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

**Credits:** 3  **Lecture:** 2  **Lab:** 3

**LMT 299 - SELECTED TOPICS: LMT**
Selected topics related to massage therapy. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

**Credits:** 1 to 7

cocc.edu

---

**MATHEMATICS**

**MTH 010 - DEVELOPMENTAL MATHEMATICS**
Introduces mathematics and its application, explains language and symbols used in math; develops concepts in whole number, fraction and decimal operations and applications; and develops analytical thinking while emphasizing study and learning skills necessary for success in math courses and overcoming anxiety toward math.

**Credits:** 4  **Lecture:** 4

**MTH 020 - PRE-ALGEBRA**
Emphasizes applications of basic arithmetic skills. Equips students to handle everyday arithmetic problems and lays a foundation for algebra. Topics include ratio, proportion, percent, measurement, perimeter, area, volume and integers. Recommended preparation: MTH 010.

**Credits:** 4  **Lecture:** 4

**MTH 029 - FRACTION REVIEW WORKSHOP**
Provides a concentrated experience for students needing a review of fractions and associated number theory skills. This course is not a replacement for students who place into or need to take MTH 010. May be taken concurrently with another math class. P/NP grading.

**Credits:** 2  **Lecture:** 2

**MTH 031 - HEALTH CARE MATH**
This is a three-credit course designed for students majoring in Addiction Studies, Massage Therapy, Health Information Technology, among others. Includes topics from pre-algebra and descriptive statistics.

**Credits:** 3  **Lecture:** 3

**MTH 058 - MATH LITERACY I**
Introduces pattern recognition, estimation and number sense, working with units, linear equations and inequalities. Explores how to clearly communicate arguments supported by quantitative evidence using words, tables, graphs and mathematical equations. TI-83 or TI-84 calculator required. Recommended preparation: MTH 010 or minimum placement into MTH 020.

**Credits:** 4  **Lecture:** 4

**MTH 060 - ALGEBRA I**
Introduction to algebra, integers, rational and real numbers, algebraic expressions, linear equations in one and two variables, and systems of linear equations. Recommended preparation: MTH 020.

**Credits:** 4  **Lecture:** 4

**MTH 065 - ALGEBRA II**
Continues development of manipulative algebra skills from MTH 060. Includes algebraic expressions and polynomials, factoring algebraic expressions, rational expressions, roots and radicals and quadratic equations. Recommended preparation: MTH 060.

**Credits:** 4  **Lecture:** 4

**MTH 085 - TECHNICAL MATHEMATICS I**
First in a two-term sequence designed for majors in forest technology, fire science, CADD and GIS, among others. Includes introduction to algebra and geometry with a focus on units of measurement, formula manipulation, solving linear and literal equations, exponents, three-dimensional geometry and preparation for trigonometry. Real-world applications are emphasized. Recommended preparation: MTH 020 and/or MTH 060.

**Credits:** 4  **Lecture:** 4

**MTH 086 - TECHNICAL MATHEMATICS II**
Second in a two-term sequence designed for majors in forest technology, fire science, CADD and GIS, among others. Includes a review of geometry and a thorough discussion of trigonometry with an introduction to vectors and their applications. The second half of the term includes an introduction to functions and their applications including graphing equations, developing equations from graphs, analysis of linear and non-linear functions and functions as models. Students will work in teams...
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lecture:</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 095</td>
<td>INTERMEDIATE ALGEBRA</td>
<td>4</td>
<td>4</td>
<td>Continues the algebra foundation necessary to study college-level mathematics and statistics. Includes systems of equations and inequalities, linear and quadratic regressions, functions and function notation, equation solving through manual and graphical means, inequalities and complex numbers. Graphing calculator required. TI-83 or TI-84 recommended. Recommended preparation: MTH 065.</td>
</tr>
<tr>
<td>MTH 098</td>
<td>MATH LITERACY II</td>
<td>4</td>
<td>4</td>
<td>Introduces normal distribution and regression/curve fitting. Covers modeling, graphing and solving of linear and quadratic equations. Introduces problem solving with linear systems of equations. Explores how to clearly communicate sophisticated arguments supported by quantitative evidence using words, tables, graphs and mathematical equations as appropriate. TI-83 or TI-84 calculator required. Prerequisites: MTH 058.</td>
</tr>
<tr>
<td>MTH 099</td>
<td>SELECTED TOPICS: MATHEMATICS</td>
<td>4</td>
<td>4</td>
<td>Offers selected topics in mathematics for courses generally available only once. Topics and credits to be arranged. P/NP grading.</td>
</tr>
<tr>
<td>MTH 105</td>
<td>MATH IN SOCIETY</td>
<td>4</td>
<td>4</td>
<td>Math in Society is a rigorous mathematics course designed for students in Liberal Arts and Humanities majors. The course provides a solid foundation in quantitative reasoning, symbolic reasoning and problem solving techniques needed to be a productive, contributing citizen in the 21st century. Prerequisites: MTH 095 or higher or minimum placement into MTH 105.</td>
</tr>
<tr>
<td>MTH 111</td>
<td>COLLEGE ALGEBRA</td>
<td>4</td>
<td>4</td>
<td>Introduces graphs and functions (linear, quadratic, polynomial, rational, exponential and logarithmic) using a graphing calculator. First term of a precalculus sequence for science students. Graphing calculator required. TI-83 or TI-84 recommended. Recommended preparation: MTH 095.</td>
</tr>
<tr>
<td>MTH 112</td>
<td>TRIGONOMETRY</td>
<td>4</td>
<td>4</td>
<td>Examines the applied, real-world and theoretical mathematical implications of the trigonometric functions. The symbolic, numerical and graphical representations of these functions and their applications form the core of the course. Emphasizes solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. Graphing calculator required. TI-83 or TI-84 recommended. Recommended preparation: MTH 111.</td>
</tr>
<tr>
<td>MTH 113</td>
<td>TOPICS IN PRECALCULUS</td>
<td>4</td>
<td>4</td>
<td>Examines topics chosen from the applied, real-world and theoretical mathematical implications of analytic geometry, nonrectangular coordinate systems, vectors, matrices and sequences. The symbolic, numerical, and graphical representations of these functions and their applications form the core of the course. Emphasizes solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. The primary focus is preparation for Calculus. Graphing calculator required. TI-83 or TI-84 recommended. Recommended preparation: MTH 112.</td>
</tr>
<tr>
<td>MTH 188</td>
<td>SPECIAL STUDIES: MATHEMATICS</td>
<td>4</td>
<td>4</td>
<td>Explores topics of current interest in the discipline.</td>
</tr>
<tr>
<td>MTH 198</td>
<td>PRACTICUM IN MATHEMATICS</td>
<td>2</td>
<td>1</td>
<td>Allows students to gain exposure to an elementary classroom setting, gain experience in teaching/tutoring math to elementary-school-age children and gain an understanding of learning theory and processes as they apply to mathematics education.</td>
</tr>
<tr>
<td>MTH 199</td>
<td>SELECTED TOPICS: MATHEMATICS</td>
<td>1 to 4</td>
<td>3</td>
<td>Offers selected topics in mathematics for courses generally available only once. Topics and credits to be arranged.</td>
</tr>
<tr>
<td>MTH 211</td>
<td>FUNDAMENTALS OF ELEMENTARY MATHEMATICS I</td>
<td>4</td>
<td>4</td>
<td>Introduces problem-solving, sets, natural and whole numbers, number theory and fractions. First term of a sequence for students planning to become elementary teachers but open to any students wanting to study the foundations of mathematics. Recommended preparation: MTH 095.</td>
</tr>
<tr>
<td>MTH 212</td>
<td>FUNDAMENTALS OF ELEMENTARY MATHEMATICS II</td>
<td>4</td>
<td>4</td>
<td>Covers decimals, percents, ratio and proportion, integers, rational and real numbers and statistics and probability. Second term of a sequence for students planning to become elementary teachers but open to any student wanting to study the foundations of mathematics. Recommended preparation: MTH 211.</td>
</tr>
<tr>
<td>MTH 213</td>
<td>FUNDAMENTALS OF ELEMENTARY MATHEMATICS III</td>
<td>4</td>
<td>4</td>
<td>Covers geometric shapes, measurement, congruence and similarity, and coordinate and transformational geometry. Third term of a sequence for students planning to become elementary teachers but open to any student wanting to study the foundations of mathematics. Recommended preparation: MTH 211.</td>
</tr>
<tr>
<td>MTH 231</td>
<td>DISCRETE MATHEMATICS</td>
<td>4</td>
<td>4</td>
<td>Topics in the course will examine in detail the applied, real-world and theoretical mathematical implications of the mathematical concepts elementary logic and set theory, functions, direct proof techniques, contradiction and contraposition, mathematical induction and recursion, elementary combinatorics, basic graph theory, minimal spanning trees. The symbolic, numerical and graphical representations of the mathematical concepts will be expanded and explored. Emphasis will be on solving problems symbolically, numerically and graphically and understanding the connections among these methods in interpreting and analyzing results. Recommended preparation: MTH 112.</td>
</tr>
<tr>
<td>MTH 241</td>
<td>CALCULUS FOR MANAGEMENT/SOCIAL SCIENCE</td>
<td>4</td>
<td>4</td>
<td>Introduces basic concepts of differential and integral calculus for students majoring in management and social science. Includes elementary differential and integral calculus of polynomial, logarithmic and exponential functions, and their applications to business, management and social sciences. A graphing calculator is required. TI-83 or TI-84 recommended. Recommended preparation: MTH 111.</td>
</tr>
<tr>
<td>MTH 243</td>
<td>INTRODUCTION TO PROBABILITY AND STATISTICS I</td>
<td>4</td>
<td>4</td>
<td>Introduces probability and descriptive statistics. Includes critical readings of graphs and data, basic probability theory, random variables and binomial and normal probability distributions. Culminates with the Central Limit Theorem. A graphing calculator is required. TI-83 or TI-84 recommended. Recommended preparation: MTH 111 (for those needing MTH 241 or MTH 251), MTH 105.</td>
</tr>
</tbody>
</table>
COURSE DESCRIPTIONS

MTH 244 - INTRODUCTION TO PROBABILITY AND STATISTICS 2
Introduces methods of inferential statistical analysis. Includes sampling techniques, confidence intervals, hypothesis testing, tests of association, linear regression and categorical analysis. Basic computer skills (especially spreadsheet knowledge) are desirable. A graphing calculator is required. TI-83 or TI-84 recommended. Prerequisites: MTH 243.
Credits: 4 Lecture: 4

MTH 245 - MATHEMATICS FOR MANAGEMENT, LIFE AND SOCIAL SCIENCES
This is a Finite Math course that covers techniques of counting, probability and elements of statistics including binomial and normal distributions, introductory matrix algebra and elements of linear programming. Recommended preparation: MTH 111.
Credits: 4 Lecture: 4

MTH 251 - CALCULUS I
Introduces concepts of differential calculus for science, mathematics and engineering students. Includes limits and continuity; the derivative; rates of change; derivatives of polynomial, rational and trigonometric functions; applications including maximum-minimum problems; antiderivatives and definite integrals. Topic presentation includes group discovery activities. Real applications, technical writing, group activities and group projects are emphasized. A graphing calculator is required. TI-83 or TI-84 is recommended. Computer literacy recommended. Recommended preparation: MTH 112 or MTH 113.
Credits: 4 Lecture: 3 Lab: 3

MTH 252 - CALCULUS II
Introduces concepts of integral calculus to science, mathematics and engineering students. Includes antidifferentiation, fundamental theorem, integration techniques, numerical methods, improper integrals and mathematical modeling with applications to geometry, physics, economics and population dynamics. Topic presentation includes group discovery activities. Real applications, technical writing, group activities and group projects are emphasized. A graphing calculator is required. TI-83 or TI-84 recommended. Computer literacy recommended. Recommended preparation: MTH 251.
Credits: 4 Lecture: 3 Lab: 3

MTH 253 - CALCULUS III
Introduces further calculus concepts to science, mathematics and engineering students. Includes infinite sequences, infinite series, Taylor series, parametric equations and functions in polar coordinates and an introduction to linear algebra including systems of linear equations, vectors, matrices, linear independence/dependence, matrix inverses, determinants, eigenvalues, eigenvectors. Real applications, technical writing, group activities and group projects are emphasized. A graphing calculator is required. TI-83 or TI-84 is recommended. Computer literacy recommended. Recommended preparation: MTH 252.
Credits: 4 Lecture: 3 Lab: 3

MTH 254 - VECTOR CALCULUS I
Introduces concepts of vector calculus to science and engineering students. Includes vectors and vector functions, parametric curves, functions of several variables, partial derivatives, gradients, directional derivatives and optimization problems. A graphing calculator is required. TI-83 or TI-84 is recommended. Computer skills required. Recommended preparation: MTH 253.
Credits: 4 Lecture: 3 Lab: 3

MTH 255 - VECTOR CALCULUS II
Continuation of the study of vector analysis for science and engineering students. Includes double and triple integrals with applications to area, volume and center of mass; introduction to vector analysis including divergence, curl, line integrals and work, surface integrals; conservative fields and the theorems of Green and Stokes. A graphing calculator is required. TI-83 or TI-84 recommended. Basic computer skills required. Recommended preparation: MTH 254.
Credits: 4 Lecture: 3 Lab: 3

MTH 256 - APPLIED DIFFERENTIAL EQUATIONS
Introduction to the application of differential equations for science and engineering students. Includes first- and second-order linear and nonlinear equations, systems of linear first-order differential equations and applications appropriate for science and engineering; numerical, graphical, series and analytical solutions are covered. Computer skills are recommended and a graphing calculator is required. TI-83 or TI-84 is recommended. Recommended preparation: MTH 253.
Credits: 4 Lecture: 3 Lab: 3

MTH 261A - INTRODUCTION TO LINEAR ALGEBRA
Provides an introduction to linear algebra concepts for science, math and engineering majors. Topics include vectors, matrices, systematic solution to linear systems, determinants, linear dependence and independence, linear transformations and eigenvalues and eigenvectors. Recommended preparation: MTH 252.
Credits: 2 Lecture: 2

MEDICAL ASSISTANT

MA 110 - INTRODUCTION TO CLINICAL MEDICAL ASSISTING
First of two classes that introduce key cognitive, psychomotor and affective competencies related to the clinical responsibilities of the medical assistant as identified by the CAAHEP and the MAERB. Covered concepts include application of standard precautions and infection control, patient preparation and education, performance of vital signs, delivery of oral and parenteral medications, use and application of skills to begin assisting with medical exams and procedures. Math component includes basic skills in preparation for understanding and calculating medication dosage. Body structure, function, pathology and medical terminology are reviewed in relationship to their impact on various body systems. Prerequisites: AH 111; AH 112; AH 113; Choose either (BI 121 and BI 122) or (BI 231; BI 232 and BI 233); CIS 120 (or computer competency test); MTH 095 or higher; SP 218; and WR 121. Corequisites: MA 110.
Credits: 7 Lecture: 5 Lab: 6

MA 111 - INTRODUCTION TO PROFESSIONAL MEDICAL ASSISTING
First of two classes that introduce key competencies related to office practices and administrative responsibilities of the medical assistant as defined by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Medical Assisting Educational Review Board (MAERB). Includes concepts related to professionalism, diversity, confidentiality, written and oral communication, application of telephone techniques, legal concepts, introductory scheduling and triage skills and office safety. See MA 110 for Medical Assisting program prerequisites. Corequisites: MA 110.
Credits: 5 Lecture: 5

MA 120 - CLINICAL MEDICAL ASSISTING II
Second of two classes covering key cognitive, psychomotor and affective competencies related to clinical responsibilities of the medical assistant as identified by the CAAHEP and the MAERB. Students will expand skills required to assist with diagnostic testing, outpatient procedures and office-based lab testing. Students will demonstrate greater mastery of concepts such as standard precautions, infection control, medical and surgical asepsis, patient preparation and delivery of oral and parenteral medications. Math components include basic skill review in preparation for understanding, calculating and delivering oral and parenteral medications. Body structure, function, pathology and medical terminology are reviewed in relationship to their impact on various body systems. Prerequisites: MA 110 and MA 111. Corequisites: MA 121.
Credits: 7 Lecture: 5 Lab: 6

MA 121 - ADMINISTRATIVE MEDICAL ASSISTING
Second of two courses that cover key competencies related to office practices and administrative responsibilities of the medical assistant as identified by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Medical Assisting Educational Review Board (MAERB). Includes concepts related to professionalism, diversity, confidentiality, written and oral communication, application of telephone techniques, legal concepts, introductory scheduling and triage skills and office safety. See MA 110 for Medical Assisting program prerequisites. Corequisites: MA 121.
MS 112 - INTRODUCTION TO TACTICAL LEADERSHIP
This course introduces students to the personal challenges and competencies that are critical for effective leadership. Topics include developing life skills such as goal setting, time management, physical fitness and stress management relative to leadership, officership and the Army profession. Students will further explore Army leadership dimensions in depth, as they relate to tactical leadership. This class is open to any student in any course of study. Recommended preparation: MA 111.
Credits: 1 Lecture: 1

MS 113 - ORIENTEERING AND LAND NAVIGATION
This course introduces students to basic orienteering and map reading. Students will gain confidence in their ability to read different types of maps, plan routes and find their location on the ground using a military map and compass. Students will learn to identify terrain features on a map and on the ground. Students will use these skills to move from one point to another by orienteering and terrain association. This class is open to any student in any course of study. Recommended preparation: MA 112.
Credits: 1 Lecture: 1

MS 180 - ARMY PHYSICAL FITNESS
The course familiarizes the students with the Army Physical Fitness Program and FM 21-20 through an individually-regimented physical fitness training program. Students will receive guidance on proper nutrition and fitness to excel in a physically demanding environment as well as being given the opportunity to plan and implement their own total fitness program. Class is open to any student in any course of study.
Credits: 1 Lab: 3

MS 211 - FOUNDATIONS IN LEADERSHIP
This course explores the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and effective communication techniques. Aspects of personal motivation and team building are practiced during the conduct of leadership coursework. The focus continues to build on developing knowledge of the skills that Army leaders need to excel, as well as broadening knowledge of operations of the current military. No military obligation is incurred through participation in the course. This class is open to any student in any course of study. Recommended preparation: MS 113.
Credits: 2 Other: 4

MS 212 - EFFECTIVE TEAM BUILDING
This course examines the challenges of leading tactical teams in the complex contemporary operating environment (COE). This course explores dimensions of terrain analysis and land navigation, small unit tactics and the fundamentals of patrolling. It continues to explore the dimension of creative and innovative tactical leadership strategies and styles by examining team dynamics and effective time management techniques. Aspects of personal motivation and team building are practiced during the conduct of Leadership Labs. No military obligation is incurred through participation in the course. This course is open to any student in any course of study. Recommended preparation: MS 211.
Credits: 2 Other: 4

MS 213 - FUNDAMENTALS OF MILITARY OPERATIONS
This course introduces the fundamentals of military operations by exploring the military approach to conducting various operations, and the planning and procedures required to be successful in these operations. It continues to explore the dimensions of creative and innovative tactical leadership strategies and styles by examining team dynamics and effective time-management techniques. An introduction to squad-level tactics will focus on applying military decision-making processes and delivering military orders. No military obligation is incurred through participation in the course. Leadership coursework will be used to reinforce the tactical and operational concepts covered in the course. Recommended preparation: MS 212.
Credits: 2 Other: 4

MILITARY SCIENCE

MS 111 - LEADERSHIP AND PERSONAL DEVELOPMENT
This course introduces students to the personal challenges and competencies that are critical for effective leadership. Students will learn the basic skills related to leadership and the Army profession. The focus is on developing basic knowledge and comprehension of Army leadership dimensions while gaining a comprehensive understanding of the ROTC program, its purpose in the Army, and its advantages for the student. This course is open to any student in any course of study.
Credits: 1 Lecture: 1
<table>
<thead>
<tr>
<th>COURSE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 101 - MUSIC FUNDAMENTALS</td>
<td>Presents the fundamentals of music making, including notation of pitch, rhythm, music terminology, scales, key signatures, intervals and chord spelling. Requires no previous musical experience. This course is an ideal preparation for students who intend to enroll in MUS 111, Music Theory. Students interested in learning about music history, styles and composers (Baroque, Classical, Romantic, etc.) should consider MUS 201, MUS 202 or MUS 203. Credits: 3 Lecture: 3</td>
</tr>
<tr>
<td>MUS 111 - MUSIC THEORY IA</td>
<td>Harmony of the common-practice period with attention to part writing and analysis. An entrance placement exam will be given during the first class session. This sequence of courses should be taken by all students who intend to major or minor in music. Recommended preparation: MUS 101; recommended to be taken with MUS 114. Credits: 3 Lecture: 3</td>
</tr>
<tr>
<td>MUS 112 - MUSIC THEORY IB</td>
<td>Harmony of the common-practice period with attention to part writing and analysis. Recommended preparation: MUS 111; recommended to be taken with: MUS 115. Credits: 3 Lecture: 3</td>
</tr>
<tr>
<td>MUS 113 - MUSIC THEORY IC</td>
<td>Harmony of the common-practice period with attention to part writing and analysis. Recommended preparation: MUS 112; recommended to be taken with: MUS 116. Credits: 3 Lecture: 3</td>
</tr>
<tr>
<td>MUS 114 - MUSICIANSHIP IA</td>
<td>Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work. Recommended to be taken with: MUS 111. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 115 - MUSICIANSHIP IB</td>
<td>Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work. Recommended preparation: MUS 114; recommended to be taken with MUS 112. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 116 - MUSICIANSHIP IC</td>
<td>Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work. Recommended preparation: MUS 115; recommended to be taken with MUS 113. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 123 - OPERA PERFORMANCE</td>
<td>Study, rehearsal and performance of operas for vocalists, instrumentalists and production technicians. An audition is required before enrollment. May be repeated, no limit. Credits: 1 Other: 3</td>
</tr>
<tr>
<td>MUS 131 - PIANO CLASS I</td>
<td>Teaches fundamentals of piano performance in a class format. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 132 - PIANO CLASS II</td>
<td>Teaches fundamental piano skills in a class format. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 133 - PIANO CLASS III</td>
<td>Teaches fundamental piano skills in a class format. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 134 - VOICE CLASS I</td>
<td>Teaches fundamentals of vocal performance in a class format. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 135 - VOICE CLASS II</td>
<td>Teaches fundamental vocal skills in a class format. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 136 - VOICE CLASS III</td>
<td>Teaches fundamental vocal skills in a class format. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 137 - CLASS GUITAR I</td>
<td>Teaches fundamentals of guitar performance in a class format. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 138 - CLASS GUITAR II</td>
<td>Teaches fundamental guitar skills in a class format. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 139 - CLASS GUITAR III</td>
<td>Teaches fundamental guitar skills in a class format. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 141 - JAZZ IMPROVISATION</td>
<td>Introduces students to jazz improvisation in a laboratory (performance) setting. No previous experience or knowledge about jazz or improvisation necessary. Students should have some previously developed proficiency on an instrument or voice. May be repeated, no limit. Credits: 2 Lecture: 2</td>
</tr>
<tr>
<td>MUS 144 - SPECIAL STUDIES: MUSIC</td>
<td>Study and performance of music for large jazz band. One major concert is presented each term. May be repeated, no limit. Contact ensemble conductor for information about required audition. Credits: 1 Other: 3</td>
</tr>
<tr>
<td>MUS 145 - CONCERT BAND</td>
<td>Study and performance of music for the concert band. One major concert is presented each term. May be repeated; no limit. Contact ensemble conductor for information about required audition. Credits: 1 Other: 3</td>
</tr>
<tr>
<td>MUS 146 - SYMPHONY</td>
<td>The study and performance of music for symphony orchestra. One major concert is presented each term. May be repeated, no limit. Contact ensemble conductor for information about required audition. Credits: 1 Other: 3</td>
</tr>
<tr>
<td>MUS 147 - CASCADE CHORALE</td>
<td>Study, rehearsal and performance of choral literature. Meets Tuesday evenings and welcomes both college students and community members. Performs a major concert each term. May be repeated; no limit. Please note: purchase of concert dress outfit required. Contact choral program director for information about required audition. Credits: 1 Other: 3</td>
</tr>
<tr>
<td>MUS 148 - COLLEGE CHOIR</td>
<td>Focuses on preparation and performance of choral literature from a wide variety of styles and periods. Performs one major concert each term and occasionally other concerts off campus. May be repeated, no limit. Credits: 2 Lecture: 1 Lab: 3</td>
</tr>
<tr>
<td>MUS 149 - SELECTED TOPICS: MUSIC</td>
<td>This course is in development. Credits: 1 to 3</td>
</tr>
</tbody>
</table>
MUS 201 - UNDERSTANDING MUSIC
Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers Medieval, Renaissance, Baroque and Classical era music while MUS 202 discusses music and composers from the Romantic, 20th century and Contemporary periods. MUS 203 typically diverges from Western fine-art music and focuses on various musical styles from around the world. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes) should enroll in MUS 101.
Credits: 3 Lecture: 3

MUS 202 - UNDERSTANDING MUSIC
Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers Medieval, Renaissance, Baroque and Classical era music while MUS 202 discusses music and composers from the Romantic, 20th century and Contemporary periods. MUS 203 typically diverges from Western fine-art music and focuses on various musical styles from around the world. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes) should enroll in MUS 101.
Credits: 3 Lecture: 3

MUS 203 - UNDERSTANDING MUSIC
Introduces the history of Western fine-art music and its literature. Encompasses the study of musical vocabulary, style, form, principal composers and the historical development of music in various style periods. The content of each course varies somewhat from term to term, but typically MUS 201 covers Medieval, Renaissance, Baroque and Classical era music while MUS 202 discusses music and composers from the Romantic, 20th century and Contemporary periods. MUS 203 typically diverges from Western fine-art music and focuses on various musical styles from around the world. The classes need not be taken in sequence and do not require any previous musical experience. Students interested in learning how to read musical notation (rhythm, notes) should enroll in MUS 101.
Credits: 3 Lecture: 3

MUS 205 - INTRODUCTION TO JAZZ HISTORY
Introduction to the history of jazz. Major styles and significant jazz artists are studied in depth. No previous musical knowledge required.
Credits: 3 Lecture: 3

MUS 207 - HISTORY OF ROCK MUSIC
Students will learn the history of rock music from its beginnings in earlier forms of popular music to the present; to understand the relationship of this music to larger cultural, political and economic formations; and to become familiar with aspects of musical structure that have been used in rock music. Students will communicate their knowledge through participation with discussion groups, activities, listening examples and a written project about an artist or rock band that came out of rock music.
Credits: 3 Lecture: 3

MUS 211 - MUSIC THEORY IIA
A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources, musical form and style analysis including an introduction to harmonic practices of the 20th and 21st centuries. Recommended preparation: MUS 211. Recommended to be taken with MUS 216.
Credits: 3 Lecture: 3

MUS 212 - MUSIC THEORY IIB
A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources, musical form and style analysis including an introduction to harmonic practices of the 20th and 21st centuries. Recommended preparation: MUS 211. Recommended to be taken with MUS 215.
Credits: 3 Lecture: 3

MUS 213 - MUSIC THEORY IIC
A continuation of common-practice period harmony (Music Theory I) with stress on chromatic resources, musical form and style analysis including an introduction to harmonic practices of the 20th and 21st centuries. Recommended preparation: MUS 211. Recommended to be taken with MUS 215.
Credits: 3 Lecture: 3

MUS 214 - MUSICIANSHIP IIA
Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work. Recommended preparation: MUS 116; recommended to be taken with MUS 211.
Credits: 2 Lecture: 2

MUS 215 - MUSICIANSHIP IIB
Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work. Recommended preparation: MUS 214; recommended to be taken with MUS 212.
Credits: 2 Lecture: 2

MUS 216 - MUSICIANSHIP IICC
Builds aural acuity through drill and practice in ear training, sight singing and dictation. Computer based exercises and tests are an important part of the work. Recommended preparation: MUS 215; recommended to be taken with MUS 213.
Credits: 2 Lecture: 2

MUS 298 - INDEPENDENT STUDY: MUSIC
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

MUSIC - SMALL ENSEMBLES/LESSONS
MUP 105 - JAZZ COMBO
Performance of wide range of jazz styles in a small-group setting with an emphasis on developing knowledge and skills in improvising. Students should have some previously developed proficiency on an instrument or voice. May be repeated, no limit.
Credits: 2 Lecture: 2

MUP 111 - WOODWIND ENSEMBLE
The study and performance of chamber music for woodwind instruments in an ensemble such as a woodwind or a clarinet quartet. May be repeated, no limit. Prerequisites: instructor approval.
Credits: 2 Lecture: 2

MUP 114 - VOCAL ENSEMBLE
A select group of singers that focuses on various jazz idioms: blues, funk, Latin and straight-ahead. Enrollment is by audition. Recommended to be taken with MUS 197A, College Choir. Contact choral program director for information about required audition. May be repeated, no limit.
Credits: 2 Lecture: 2

MUP 146 - STRING ENSEMBLE
Study and performance of chamber music for bowed string instruments in a group such as string quartet or for string ensembles including a keyboard instrument. May be repeated, no limit. Prerequisites: instructor approval.
Credits: 2 Lecture: 2
NUR 098 - SPECIAL STUDIES: NURSING
Allows nursing students to pursue a special content area. Special study arrangements must be made through the nursing program coordinator.
Credits: 1 to 8

NUR 099 - SPECIAL TOPICS: NURSING
This course is in development.
Credits: 1 to 8

NUR 103 - NURSING ASSISTANT
Covers basic nursing assistant level one care and effective communication skills for clients in acute and long-term care facilities. Issues of confidentiality, client rights and role of the nursing assistant are discussed. Students are eligible to sit for the Oregon State Board of Nursing-sanctioned certified nursing assistant level one examination upon satisfactory performance of course outcomes and assessments; and completion of the minimum 155 mandatory student contact hours: 80 hours of lecture/lab and 75 hours of clinical experience. Clinic takes place in acute and long-term care facilities. To enroll in the course, students must hold a current American Heart Association, Health Care Provider CPR card, pass a criminal history check, pass a urine drug screen and meet immunization and TB test requirements. CNA Program Director approval required.
Credits: 7 Lecture: 3.2 Lab: 4.8 Other: 7.5

NUR 104 - CERTIFIED NURSING ASSISTANT: LEVEL 2
Provides an Oregon State Board of Nursing-approved standardized curriculum and competency evaluation for the designation of Certified Nursing Assistant Level 2. This course focuses on technical skills, interpersonal skills and communication, safety, infection control and documentation with the outcome of demonstrated proficiency in knowledge, skills and abilities in these areas. The course has a clinical component to be scheduled at with a clinical partner. Requires that students hold a current, unencumbered Oregon CNA 1 certificate (verified prior to registration) as well as hold a current American Heart Association BLS Provider CPR card, pass a criminal history check and meet immunization and TB test requirements (required after registration but prior to class participation). Prerequisites: department approval based on review of current, unencumbered Oregon CNA1 certificate. Recommended preparation: NUR 103.
Credits: 6 Lecture: 4 Lab: 3 Other: 3

NUR 106 - NURSING I
Introduces fundamental concepts of nursing practice (nursing process, critical thinking, therapeutic communication and cultural considerations); includes a clinical lab focused on core beginning level nursing skills and clinical practicum for application of knowledge and skills. Addresses issues associated with clients with altered states of health. Introduces the major drug classifications and pharmacological principles. First term of the practical nurse and registered nurse programs. Prerequisites: admission to the Nursing program and department approval.
Credits: 12 Lecture: 7 Lab: 6 Other: 9

NUR 107 - NURSING II
Develops knowledge and skills in nursing practice concepts that are necessary in providing nursing care to patients experiencing health alterations. Includes a learning resource center lab for developing skills in the areas of medication administration, intravenous therapy, simple wound management and urinary catheterization and a clinical practicum to apply knowledge and skills to the adult patient with medical-surgical nursing needs. Second term of the practical nurse and registered nurse programs. Prerequisites: admission to the Nursing program and department approval.
Credits: 10 Lecture: 4 Lab: 4.5 Other: 13.5

NUR 108 - NURSING III
Provides students with the opportunity to obtain the knowledge and skills that are necessary to implement the role of a practical nurse in providing care to acutely ill patients across the lifespan. Concepts of mental health and maternal child nursing are introduced. The ability to communicate effectively, therapeutically and professionally is emphasized. The learning resource center lab focuses on developing skills in parenteral, and nutritional therapies. Students will also complete a simulation experience and a comprehensive assessment of a complete set of core nursing skills from the first year of the Nursing program. The clinical practicum provides the opportunity for patient-centered care based on established standards and contributes to nursing care delivery at the practical nurse level. Final term of the practical nursing sequence and the third term of the Nursing program. Prerequisites: admission to the Nursing program and department approval.
Credits: 11 Lecture: 6 Lab: 3 Other: 12
COURSE DESCRIPTIONS

NUR 188 - SPECIAL STUDIES: NURSING I
Allows first-year nursing students to pursue a special content area in nursing. Special study arrangements must be made through the designated Nursing department special studies coordinator.
Credits: 1 to 8

NUR 199 - SELECTED TOPICS: NURSING I
Presents selected topics of study in the field of nursing offered on a temporary or experimental basis for first year Nursing students.
Credits: 1 to 8

NUR 206 - NURSING IV
Focuses on the integration of knowledge and skills acquired in the first year of the Nursing program as the student transitions from the practical nurse to the registered nurse role. Nursing curriculum expands on the concepts of nursing process, caring, holism and professionalism at the registered nurse level. Emphasis is on the development of competency in critical thinking and caring interventions toward individuals and families. The learning resource center lab focuses on the development of higher-level assessment and intravenous medication and fluid therapy. Clinical practicum provides the students with an opportunity to provide holistic, individualized nursing care for complex medical-surgical and mentally ill clients. Fourth term of the Nursing program, first term of the RN sequence. Prerequisites: admission to the nursing program and department approval.
Credits: 11 Lecture: 6 Lab: 4.5 Other: 10.5

NUR 207 - NURSING V
Introduces community-based nursing care of individuals and families, care of the critically ill patient, as well as maternal child care of the high-risk patient. The nursing curriculum continues to expand on the role of the RN to promote critical thinking and clinical decision-making. Students further develop their skills in patient teaching, patient care planning and management. A simulation experience allows the students to manage the care of a patient through multiple stages of an illness using a team approach. The clinical practicum focuses on mastering the nursing process to provide and direct holistic and individualized patient care to increasingly complex patients. Students are provided additional experiences in the community-based and mental health settings. Fifth term of the Nursing program, second term of the RN sequence of the program. Prerequisites: admission to the nursing program and department approval.
Credits: 10 Lecture: 5 Other: 15

NUR 208 - NURSING VI
Focuses on refining clinical decision-making skills related to the complex health care needs of patients across the lifespan in a variety of health care settings. Concepts of quality nursing care, legal and ethical issues, professional communication, leadership and management of care, and collaborative practice are addressed in relation to nursing practice. Students participate in a four-week, full-time capstone clinical experience focusing on managing groups of patients or individual patients with high-level needs. The course concludes with a capstone case study presentation and a national board preparation exam. Sixth term of the Nursing program, third term of the RN sequence. Prerequisites: admission to the Nursing program and department approval.
Credits: 9 Lecture: 4 Other: 15

NUR 218 - BASIC EKG
Basic three-lead electrocardiograph interpretation. Open to allied health, exercise science and nursing students.
Credits: 1 Lecture: 1

NUR 280A - CWE NURSING I
Provides an opportunity for first year Nursing students who also possess their CNA license to obtain college credit while providing direct patient care in acute or long-term care facility. P/NP grading. Prerequisites: admission to the Nursing program and certified nursing assistant status and department approval.
Credits: 1 to 4

NUR 280B - CWE NURSING II
Provides an opportunity for second year Nursing students who also possess their LPN license to obtain college credit for providing direct patient care while employed in a long-term or acute-care facility. P/NP grading. Prerequisites: admission to the nursing program and LPN status and department approval.
Credits: 1 to 4

NUR 288 - SPECIAL STUDIES: NURSING
Allows second-year nursing students to pursue a special content area in nursing. Special study arrangements must be made through the nurse administrator.
Credits: 1 to 8

NUR 289 - INDEPENDENT STUDY: NURSING
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

NUR 299 - SELECTED TOPICS: NURSING
Presents selected topics of study in the field of nursing offered on a temporary or experimental basis for second year Nursing students.
Credits: 1 to 3

OUTDOOR LEADERSHIP

OL 111 - INTRODUCTION TO OUTDOOR LEADERSHIP
Designed to introduce students to the field of outdoor recreation, outdoor education, adventure education, therapeutic recreation and experiential education. Upon completion of this course, students should have a good understanding of the differences between the subspecialties in the field. Includes the history of programs, an introduction to theories, current topics, career options and preparation needed for those careers. Course may help students decide if an educational path in outdoor leadership is something they wish to pursue. Guest speakers representing various careers/areas will present their experiences to the class. This course is a recommended foundation for other outdoor leadership program courses. Prerequisites: WR 065 or higher.
Credits: 3 Lecture: 3

OL 160 - PROCESSING THE EXPERIENCE
Students will be introduced to a variety of creative processing tools to be used either during or after the experience. The use of a field journal for reflection notes, as well as for processing through creative pursuits like sketching or painting will be introduced, as will group-based processing tools like formal debriefs, creating skits and collaborative art projects.
Credits: 2 Lecture: 2

OL 171 - TECHNICAL SKILLS FOR OUTDOOR LEADERSHIP
This course focuses on introducing students to a variety of basic skills, gear and systems necessary for a variety of Outdoor pursuits, including alpine mountaineering, challenge course and rock climbing. Students are introduced to a variety of skills, with the intention of moving into more guide-oriented courses later in their program. This class will present students with various technical skills that will serve as a foundation for the advanced training in specific outdoor disciplines. Students will be introduced to gear, such as software (ropes, webbing, harnesses) and hardware (carabiners, friction devices), skills, such as knots, belaying, rappelling and systems such as anchors, raises, lowers.
Credits: 2 Other: 4

OL 194AA - AVALANCHE LEVEL I
This course is designed to introduce the student to the various factors that contribute to avalanche hazard including terrain, weather, snowpack and the human component (good vs. bad decision making). Avalanche safety equipment such as transceivers, probes and shovels are also presented, with instruction on how to use each of these critical pieces of safety gear. Additional field time is spent on practicing transceiver search
techniques (single and multiple burial), snowpack assessment (through a ‘Test-pit Plus’) and safe travel practices/group travel skills. The course includes one or more mock avalanche rescues.

 Credits: 1 Other: 2

OL 194AB - AVALANCHE LEVEL I REFRESHER
This course is designed to review the materials from Avalanche Level I, including the various factors that contribute to avalanche hazard including terrain, weather, snowpack and the human component (good vs. bad decision making). Avalanche safety equipment such as transceivers, probes and shovels and their correct use. New material will include use of a field notebook and standardized data recording, as well as completing full pit profiles. Field time is spent practicing and reviewing transceiver search techniques (single and multiple burial), snowpack assessment (through test pit, test pit plus and full pit), and safe travel practices and group travel skills. Students must have completed an Avalanche Level I course within the past five years. Recommended preparation: OL 194AA.

 Credits: 2 Lecture: 1 Other: 2

OL 194AC - AVALANCHE LEVEL II
This course is designed to build on the skills developed in an Avalanche Level I course. The various factors that contribute to avalanche hazard including terrain, weather, snowpack and the human component (good vs. bad decision making) will be reviewed, as will avalanche safety equipment such as transceivers, probes and shovels and their correct use. New material will include use of a field notebook and standardized data recording, as well as completing full pit profiles. Field time is spent practicing and reviewing transceiver search techniques (single and multiple burial), snowpack assessment (through test pit, test pit plus and full pit), and safe travel practices and group travel skills. Students must have completed an Avalanche Level I or Level I Refresher course within the past five years. Recommended preparation: OL 194AA or OL 194AB.

 Credits: 2 Lecture: 1 Other: 2

OL 199 - SELECTED TOPICS: OUTDOOR LEADERSHIP
This course is in development.

 Credits: 1 to 4

OL 207 - SEMINAR IN OUTDOOR LEADERSHIP
This course will help prepare students for entering the job market and/or setting up a professional practicum through the following: where to search for jobs, how to apply and how to interview; and how to prepare professional resumes, cover letters, experience resumes and professional portfolios. Professional development opportunities such as conferences, certifications, trainings, etc. will be discussed, as will current research and trends in employment in fields related to outdoor leadership.

 Credits: 2 Lecture: 2

OL 244 - PSYCHOLOGY OF RISK AND ADVENTURE
Introduces students to psychological theories and topics relevant to adventure and risk, including perception, motivation, anxiety, arousal and risk-taking. This course will provide a theoretical and skills-based approach to understanding why the psychological components of risk and adventure play a pinnacle role in outdoor leadership. Recommended preparation: or to be taken with WR 121.

 Credits: 3 Lecture: 3

OL 251 - WILDERNESS FIRST AID
Designed to provide the student with the necessary knowledge and skills to care for an injured or suddenly ill person in a remote location. The methods and protocols presented follow the Wilderness Medical Society guidelines for a 16 hour certification and are specific to a wilderness setting. The Wilderness Medical Society defines wilderness as a remote geographical location more than one hour from definitive care.

 Credits: 1 Lecture: 1 Lab: 1

OL 253 - WILDERNESS ADVANCED FIRST AID
This course is designed to provide the student with the necessary knowledge and skills to care for an injured or suddenly ill person in a remote location. The methods and protocols presented in this class follow the Wilderness Medical Society guidelines for a 36 hour certification and are specific to a wilderness setting. The Wilderness Medical Society defines wilderness as a remote geographical location more than one hour from definitive care.

 Credits: 2 Other: 6

OL 255 - OUTDOOR LIVING SKILLS
Educates the student on how to travel safely for extended periods in the backcountry. Presents essentials of life (water, food and shelter/clothing) and how they can be provided in an outdoors setting. Also, discusses navigation, backcountry medicine and wilderness use/wilderness concepts. Lecture, discussion and lab (demonstration, practical application and practice) used. Students conduct one solo overnight and one group weekend outing. This course is a recommended foundation for other outdoor leadership program courses.

 Credits: 5 Lecture: 4 Lab: 3.6

OL 263 - BASIC WILDERNESS LIFE SUPPORT
Basic Wilderness Life Support is a wilderness first responder course designed to provide an individual with an in-depth knowledge of wilderness medicine and the basic skills to treat the most common injuries and illnesses encountered in the wilderness. This course is appropriate for those who spend a lot of time in remote locations (professionally or recreationally). The methods and protocols presented in this class follow the Wilderness Medical Society guidelines for a 74 hour certification and are specific to a wilderness setting. The Wilderness Medical Society defines wilderness as a remote geographical location more than one hour from definitive care. Students are required to complete a 1 credit CPR course with certification in order to satisfy the BWLS certification. A specific section of the American heart Association’s Healthcare Provider CPR course will be offered exclusively for BWLS students. Registration for the CPR class will be separate from registration for the BWLS class.

 Credits: 5 Lecture: 3 Other: 4

OL 271 - FACILITATING GROUP EXPERIENCES
Introduces the broad concepts of group facilitation and presents the various “generations” of adventure facilitation. Students will become familiar with various models of the facilitation process and how each relates to experiential learning. Coursework integrates introductory concepts of leadership, foundational experiential education theory and the practice of facilitation in a variety of modes, including both high and low elements. Students are responsible for facilitating various group initiatives as a way to further comprehend the concepts presented. Successful students will be prepared to effectively and confidently facilitate groups in a variety of learning environments. This is a foundation course and a recommended preparation for other Outdoor Leadership Program courses. Prerequisites: OL 111, OL 263, OL 255 and WR 121.

 Credits: 5 Lecture: 4 Lab: 3

OL 273 - OUTDOOR RECREATION LEADERSHIP
This course is designed to provide both theoretical and practical knowledge of group leadership in an outdoor setting. Topics will be presented in lecture, discussed in various leadership scenarios and then applied in group outings that the students will plan and lead. Special emphasis will be placed on group safety issues and risk assessment/risk management. Prerequisites: OL 111, OL 263, OL 255 and WR 121.

 Credits: 5 Lecture: 4 Lab: 3.6

OL 280 - CO-OP WORK EXPERIENCE - OL
Provides practicums by the department in conjunction with the community in outdoor recreation, outdoor education, adventure education, environmental education, experiential education and wilderness therapy. Students must be approved for enrollment by an HHP-OL advisor before registering for this course. P/NP grading. Prerequisites: instructor approval. Recommended preparation: complete a minimum of three OL classes.

 Credits: 2 Other: 6

OL 294AC - ALPINE CLIMBING
Designed to introduce the student to guiding, teaching and leading technical mountain travel with specific emphasis on rock, snow and ice anchors; glacier travel and crevasse rescue; and climbing steeper
snow and ice. Additional relevant topics may also be introduced (e.g., avalanche safety, high altitude). Prerequisites: OL 171, OL 271, OL 273.
Credits: 3 Other: 6

OL 294CA - CANOE PROGRAM INSTRUCTION AND GUIDING
Introduce students to guiding, teaching and leading flat and moving water canoe programs. May also introduce swift water rescue, whitewater techniques, etc. Students will be instructed on the use of a variety of canoeing equipment and techniques used for travel by canoe within instructing/guiding situations (this course will teach much of the preliminary level material). Topics will include such areas as: water dynamics, rescue, client care and welfare, managing a group setting, risk assessment, as well as specific technical skills. Emphasis will be placed on advanced technical skill development and practical application. Although some time will be spent canoeing, this is not an activity course; all aspects of the course will be designed to teach the basic concepts of leading others in a variety of canoeing situations. Prerequisites with concurrency: OL 271 and OL 273.
Credits: 3 Other: 6

OL 294MB - MOUNTAIN BIKE GUIDING AND TRAIL STEWARDSHIP
This course is designed to instruct the student how to provide a fun and safe guided mountain bike experience to people of all ages through a combination of field lecture and hands-on practice. Students will learn how to teach basic mountain bike skills, design and lead group trips, diagnose trailside mechanical issues and perform basic trailside bike maintenance, and understand the characteristics and importance of sustainable mountain bike trail development and stewardship. The majority of the class time for this course will be spent in the field. Prerequisites: OL 271 and OL 273.
Credits: 3 Other: 6

OL 294RC - TEACHING ROCK CLIMBING
This course is designed as an introduction to guiding/teaching rock climbing. Students will be instructed on the use of a variety of climbing equipment and techniques used for top-roped and lead climbing in guiding/teaching situations (this course will not teach beginning level material except in how to teach such material to a beginner student/client/friend). Topics will include such areas as: client care and welfare, managing a group setting, risk assessment, as well as technical skills. Emphasis will be placed on group work, discussion and practical application. Although some time will be spent climbing, this is not an activity course; all aspects of the course will be designed to teach the basic concepts of leading others in a variety of rock climbing situations. Prerequisites: OL 171, OL 271 and OL 273.
Credits: 3 Other: 6

OL 294WG - WHITETWATER RAFT GUIDING
This course is designed to instruct the student on how to provide a fun and safe whitewater raft experience to people of all ages through a combination of lecture and hands-on practice. Students will learn how to guide paddle rafts and oar rafts, read whitewater, lead group trips and execute various whitewater rescue techniques. The majority of the class time for this course will be spent in the field, including overnight camping, and a variety of weather conditions may be encountered. A background in camping or outdoor living skills is strongly recommended. Please dress appropriately. Prerequisites: OL 271, OL 273 and OL 171.
Credits: 3 Other: 6

OL 298 - INDEPENDENT STUDY: OL
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

PHARMACY TECHNICIAN

PHM 100 - PHARMACY TECHNICIAN PRACTICE I
This course teaches pharmacy technician students information, techniques and procedures needed to assist the pharmacist in delivery of pharmaceutical products and services. The main objective is to provide the students with a working knowledge of the many aspects of pharmacy in community, institution and other practice settings. Progressive learning takes place as new information and skill sets are studied throughout the course. Students will understand the regulatory agencies and laws that affect pharmacy practice. Emphasis is placed on the duties and responsibilities of the pharmacy technician to assist the pharmacist. This course explores employment opportunities, interpretation and processing of prescriptions, pharmacy law, standards of practice and orientation to the skills required for the occupation of a pharmacy technician. Prerequisites: WR 065 or higher or minimum placement into WR 121 and MTH 058 or higher, or minimum placement into MTH 095. Corequisites: PHM 101, PHM 120.
Credits: 5 Lecture: 5

PHM 101 - PHARMACY TECH LAW AND ETHICS
This course orients students to the work of pharmacy technicians. Students learn the concept of direct patient care and the technician's role in its delivery with emphasis on the complementary roles of pharmacists and technicians in both the community and institutional pharmacy setting. Students are introduced to the federal and state laws as well as the standards of practice which govern the practice of pharmacy. Students will be able to identify examples of professionalism in pharmacy and discuss the important areas of the Health Insurance Portability and Accountability Act (HIPAA) as it relates to patient confidentiality. Corequisites: PHM 100, PHM 120.
Credits: 3 Lecture: 3

PHM 110 - PHARMACY CALCULATIONS
This online course reviews basic mathematics related to the application of math concepts to the duties of the pharmacy technician. This course covers the systems of weight, measurement and temperature and the conversion from one system to the other. Emphasis is placed on the math skills needed to calculate doses, drug quantity or volume, intravenous flow rates and percentage concentrations and to learn the mechanics of proportions related to pharmaceutical dosing. The basics of retail pricing and accounting are introduced. Prerequisites: MTH 095 or higher, PHM 100, PHM 101 and PHM 120. Corequisites: PHM 130, PHM 140.
Credits: 3 Lecture: 3

PHM 115 - RETAIL SIMULATION LAB
Laboratory instruction complements the lecture with hands-on experience in medication preparation, dispensing, calculations and business applications.
Credits: 2 Other: 4

PHM 120 - PHARMACOLOGY I
This online course introduces students to trade and generic names of commonly prescribed drugs used in prevention and treatment of various disease entities. Emphasis is placed on important contraindications, side effects, precautions and interaction of drugs and the process of drug utilization review. The course will provide a basic understanding of pharmacological categories and factors than can affect drug kinetics. Corequisites: PHM 100, PHM 101.
Credits: 5 Lecture: 5

PHM 130 - PHARMACOLOGY II
This online course continues the introduction to trade and generic names of commonly prescribed drugs used in prevention and treatment of various disease entities. Emphasis is placed on important contraindications, side effects, precautions and interaction of drugs and the process of drug utilization review. The course will provide a basic understanding of pharmacological categories and factors than can affect drug kinetics. Corequisites: PHM 110, PHM 140.
Credits: 5 Lecture: 5
PHM 140 - PHARMACY TECHNICIAN PRACTICE II
Teaches the information, techniques and procedures needed to assist the pharmacist in delivery of pharmaceutical products and services. Provides a working knowledge of the many aspects of pharmacy in a community, institution and other practice settings. Progressive learning takes place as new information and skill sets are studied throughout the course. Students will understand the regulatory agencies and laws that affect pharmacy practice. Emphasis is placed on the duties and responsibilities of the pharmacy technician. This course explores employment opportunities, interpretation and processing of prescriptions, pharmacy law, standards of practice and orientation to the skills required for the occupation of a pharmacy technician. Application of skills in a practical setting will be covered. This is a four-credit hybrid course and students should expect to spend nine to 12 hours per week completing the required course work. In addition to the online section, this course requires a one-credit (20 hour) lecture-lab session. Lab sessions are 1.5 hours once a week (days and times to be determined). The labs will be held on the COCC Bend campus and students are responsible for all travel expenses. Corequisites: PHM 110, PHM 130.
Credits: 5 Lecture: 5

PHM 145 - INSTITUTIONAL SIMULATION LAB
Laboratory instruction completes the lecture with hands-on experience in intravenous medication preparation, sterile compounding, calculations and maintaining drug stocks.
Credits: 2 Other: 4

PHM 181 - PHARMACY TECHNICIAN SEMINAR
This online seminar presents discussions on various aspects of the practicum. Students will share work related experiences with the instructor and their peers. Students will prepare to take the Pharmacy Technician National Certification exam. Covers employment opportunities, resume writing, completing job applications and interviewing skills. P/NP grading. Prerequisites: PHM 110, PHM 130 and PHM 140. Corequisites: PHM 190, PHM 191.
Credits: 2 Lecture: 2

PHM 190 - PHARMACY TECHNICIAN PRACTICUM I:
HOSPITAL/INSTITUTIONAL
This course is an unpaid learning experience which takes place on site at a prearranged clinical facility and is supervised by a registered pharmacist. Each credit is equivalent to 30 hours participation in the clinical worksite. Passing grade will require completion of 120 hours of practice at a facility registered with the Central Oregon Community College Pharmacy Technician program. You must keep a notebook to log experiences at the worksite and report in the Journal Section of the College Pharmacy Technician program. You must keep a notebook to practice at a facility registered with the Central Oregon Community College Pharmacy Technician program. Recommended preparation: WR 121.
Credits: 1 to 4

PHM 191 - PHARMACY TECHNICIAN PRACTICUM II:
RETAIL/COMMUNITY
This course is an unpaid learning experience which takes place on-site at a prearranged clinical facility and is supervised by a registered pharmacist. Each credit is equivalent to 30 hours participation in the clinical setting. Passing grade will require completion of 120 hours of practice at a facility registered with the Central Oregon Community College Pharmacy Technician program. You must keep a notebook to log experiences at the worksite and report in the Journal Section of the Pharmacy Seminar Course (PHM 181). A satisfactory evaluation must be submitted by your preceptor that you have successfully exhibited skills in a retail (community) pharmacy. P/NP grading. Corequisites: PHM 181, PHM 190.
Credits: 1 to 4

PHILOSOPHY

PHL 170 - PHILOSOPHY OF LOVE AND SEX
Provides an overview of the primary historical and contemporary Western views on the nature and meaning of romantic love. Students will analyze the links philosophers have found among beauty, friendship, passion, loyalty and transcendence and will also create their own philosophies of romantic love.
Credits: 3 Lecture: 3

PHL 199 - SELECTED TOPICS: PHILOSOPHY
This course is in development.
Credits: 1 to 3

PHL 200 - FUNDAMENTALS OF PHILOSOPHY
Explores some of the major questions and philosophical subject areas of the Western World. Includes questions such as the existence of God, or not; how we know what we think we know; social and political philosophy; ethics; free will and determinism; the existence of other minds; questions concerning the existence of a mind-independent external world; and philosophical underpinnings of science.
Recommended preparation: WR 121
Credits: 4 Lecture: 4

PHL 201 - PROBLEMS OF PHILOSOPHY-EPistemology
Explores basic problems and different theories of knowledge along with related issues in metaphysics, for example: how to define the nature and limits of knowledge; rationalist vs. empiricist perspectives; assumptions about reality and existence; and arguments for and against the existence of God. Recommended preparation: WR 121.
Credits: 3 Lecture: 3

PHL 202 - PROBLEMS OF PHILOSOPHY - ETHICS
Explores basic problems in moral and social philosophy along with issues related to human nature, for example: how to define a good life or a good society; what is the nature of happiness, pleasure, virtue and justice; consequence vs. duty-based theories; the role of reason and/or passion; and arguments for and against natural law. Recommended preparation: WR 121.
Credits: 3 Lecture: 3

PHL 203 - PROBLEMS OF PHILOSOPHY - LOGIC
Introduction to the study of reasoning and critical thinking. This involves identifying and evaluating deductive and inductive forms, distinguishing validity from truth/soundness, examining informal fallacies and the limits of language, constructing different types of arguments and applying these tools to issues in science, politics, morality and everyday life. Recommended preparation: MTH 095 or minimum placement into MTH 105 and WR 121.
Credits: 3 Lecture: 3

PHL 298 - INDEPENDENT STUDY: PHILOSOPHY
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: Instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

PHYSICS

PHL 201 - GENERAL PHYSICS I
Studies Newtonian Mechanics beginning with basic math concepts and continuing into kinematics, dynamics, uniform circular motion, energy, momentum and rotational equivalents of some of these topics. Lab addresses experiments and applied settings of Newtonian Mechanics along with explorations of diverse methods for analyzing and interpreting scientific data. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence. Recommended to be taken with MTH 111.
Credits: 5 Lecture: 4 Lab: 3
PH 202 - GENERAL PHYSICS II
Studies basic electrostatic and magnetic interactions. Builds on concepts from PH 201 and continues into electrostatic forces, electric field concepts, electric potential, basic DC circuit concepts, magnetic interactions and forces, sources of magnetic fields and Faraday’s Law. Lab addresses concepts and measurements in thermal physics and continues to explore the processes by which science seeks answers to questions. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence. Recommended to be taken with MTH 112.
Credits: 5   Lecture: 4   Lab: 3

PH 203 - GENERAL PHYSICS III
Studies periodic behavior and topics from modern physics. Builds on concepts from previous terms and considers the physics of periodic motion, mechanical waves, wave interference, standing waves, acoustic waves, electromagnetic waves, geometric optics, diffractions and topics from special relativity to quantum mechanics. Lab includes basic optical experiences along with a long-term project to affirm student abilities to integrate investigative lab concepts from previous terms. Meets the basic requirements for many pre-health and life science programs. Should be taken in sequence.
Credits: 5   Lecture: 4   Lab: 3

PH 211 - GENERAL PHYSICS I
Studies Newtonian Mechanics beginning with basic math concepts and continuing into kinematics, dynamics, uniform circular motion, energy, momentum and rotational equivalents of some of these topics. At all stages, applications of calculus to the solving of problems will be explored. Lab addresses experiments and applied settings of Newtonian Mechanics along with explorations of diverse methods for analyzing and interpreting scientific data. Required for engineering students and most students planning programs in the physical sciences. Should be taken in sequence. Recommended preparation: MTH 251.
Credits: 5   Lecture: 4   Lab: 3

PH 212 - GENERAL PHYSICS II
Studies basic electrostatic and magnetic interactions. Builds on concepts from PH 211 and continues into electrostatic forces, electric field concepts, electric potential, basic DC circuit concepts, magnetic interactions and forces, sources of magnetic fields and Faraday’s Law. At all stages, applications of calculus to the solving of problems will be explored. Lab addresses concepts and measurements in thermal physics and continues to explore the processes by which science seeks answers to questions. Required for engineering students and most students planning programs in the physical sciences. Should be taken in sequence. Recommended preparation: MTH 252 and PH 211.
Credits: 5   Lecture: 4   Lab: 3

PH 213 - GENERAL PHYSICS III
Studies periodic behavior and topics from modern physics. Builds on concepts from previous terms and considers the physics of periodic motion, mechanical waves, wave interference, standing waves, acoustic waves, electromagnetic waves, geometric optics, diffractions and topics from special relativity to quantum mechanics. At all stages, applications of calculus to the solving of problems will be explored. Lab includes basic optical experiences along with a long-term project to affirm student abilities to integrate investigative lab concepts from previous terms. Required for engineering students and most students planning programs in the physical sciences. Should be taken in sequence. Recommended preparation: MTH 253 and PH 212; recommended to be taken with MTH 256.
Credits: 5   Lecture: 4   Lab: 3

PH 299 - SELECTED TOPICS: PHYSICS
This course is in development.
Credits: 1 to 5

POLITICAL SCIENCE

PS 188 - SPECIAL STUDIES: POLITICAL SCIENCE
Explores topics of current interest in the discipline.
Credits: 1 to 4

PS 198 - CO-OP WORK EXPERIENCE POLITICAL SCIENCE INTERNSHIP
Credits: 1 to 15

PS 199 - SELECTED TOPICS: POLITICAL SCIENCE
This course is in development.
Credits: 1 to 4

PS 201 - INTRODUCTION TO US GOVERNMENT AND POLITICS
Examines the American political system with its separation of powers, limited authority and guarantee of individual liberty. Includes studies of political ideology, parties, voting, media and interest groups. Special emphasis will be placed on a detailed study of the Constitution and its application in today’s America. Recommended preparation: WR 121.
Credits: 4   Lecture: 4

PS 203 - STATE/Local GOVERNMENT
Examines the thousands of governments located at the state and local levels. Explores separation of powers between governors, legislatures and state court systems. Opportunity for individual involvement in the administration, innovation and promotion of democracy is investigated. Recommended preparation: or to be taken with WR 121.
Credits: 3   Lecture: 3

PS 204 - INTRODUCTION TO COMPARATIVE POLITICS
Surveys the field of comparative politics through in-depth analyses of countries in Europe, the Middle East, Asia, Africa and the Americas. Comparative structures of these governments will be explored and analyzed in light of separation of powers, limited authority and individual rights. Recommended preparation: WR 121.
Credits: 4   Lecture: 4

PS 205 - INTRODUCTION TO INTERNATIONAL RELATIONS
Introduces complex relations among the nations of a rapidly changing world. Focuses on the nature of the international system and factors affecting conflict and cooperation within the system. Recommended preparation: WR 121.
Credits: 4   Lecture: 4

PS 206 - INTRODUCTION TO POLITICAL THOUGHT
Introduces the broad range of issues and approaches in political theory. Examines the diversity of the field, as it includes both classic and historical texts as well as contemporary thought. From Plato to Machiavelli, and from Locke to Nietzsche, this course examines the major political themes of justice, equality, democracy, power and liberty. Recommended preparation: WR 121.
Credits: 4   Lecture: 4

PS 207 - POLITICS OF THE MIDDLE EAST
This course is intended as an introduction to politics in the Middle East and therefore provides a general overview of some of the chief issues of contemporary Middle Eastern politics. These include the impact of colonialism, nationalism and nation-state formation, regional crisis, the Arab-Israeli conflict, the politics of oil, Islamism, democratization, political economy, globalization and human rights.
Credits: 4   Lecture: 4

PS 250 - TERRORISM AND THE AMERICAN PUBLIC
The course defines terrorism, considers the motivations of terrorists, considers policy proposals that might be taken to reduce the likelihood of terrorism, and investigates the tensions inherent in democracies between civil liberties and national security. Recommended preparation: WR 121.
Credits: 4   Lecture: 4
PSY 101 - APPLIED PSYCHOLOGY
This course introduces the basic foundation of psychology to degree-seeking students and career and technical students. Focuses on practical applications of psychological principles in the workplace and everyday life. Topics include motivation, emotions, individual development, identifying problem behavior, coping resources, group dynamics and communication skills.
Credits: 3 Lecture: 3

PSY 188 - SPECIAL STUDIES: PSYCHOLOGY
Explores topics of current interest in the discipline.
Credits: 1 to 4

PSY 199 - SELECTED TOPICS: PSYCHOLOGY
This course is in development.
Credits: 1 to 4 Lecture: 4 Lab: 12 Other: 12

PSYCHOLOGY

PSY 201 - MIND AND BRAIN
Introduces psychology as a scientific study of the biological bases of behavior. Includes history of psychology as a science and surveys methods of inquiry, statistics, sensation, perception, states of consciousness including drug effects, motivation, emotion, learning, memory, language, thinking and intelligence. The major theoretical approaches to psychology are included. Recommended preparation: WR 060 or minimum placement into WR 065.
Credits: 4 Lecture: 4

PSY 202 - MIND AND SOCIETY
Emphasizes psychology as a scientific process, surveying methods of inquiry. Overview of selected areas of psychological study including: human development through the life span; human sexuality; health psychology; personality theories and assessment; psychological disorders; intervention and therapy; social psychology and human factors psychology. The major theoretical approaches to psychology are included. Recommended preparation: WR 060 or minimum placement into WR 065.
Credits: 4 Lecture: 4

PSY 204 - RESEARCH METHODS: DESIGN AND ANALYSIS
Learn scientific method and deepen your appreciation of why it is a valuable method for learning about the world. Teaches scientific concepts and terminology, how the scientific literature is used to generate hypotheses and interpret research findings, how research studies are designed, how data are collected and managed, and how statistics are used to understand data. Class will include discussions of parametric and nonparametric analyses, between subject designs, within subject designs, differences between experimental and correlational research and the differences between qualitative and quantitative data. Recommended preparation: WR 060 or minimum placement into WR 065.
Credits: 4 Lecture: 3 Lab: 3

PSY 205 - CO-OP WORK EXPERIENCE POLITICAL SCIENCE
Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Prerequisites: instructor approval.
Credits: 1 to 3

PSY 207 - CO-OP WORK EXPERIENCE PSYCHOLOGY
Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Prerequisites: instructor approval.
Credits: 1 to 3

PSY 208 - CO-OP WORK EXPERIENCE PSYCHOLOGICAL SCIENCES
Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Prerequisites: instructor approval.
Credits: 1 to 3

PSY 209 - CO-OP WORK EXPERIENCE SOCIAL WORK
Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Prerequisites: instructor approval.
Credits: 1 to 3

PSY 213 - INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY
This course provides a scientific introduction to the brain's anatomy and function. It builds a foundation for understanding sensory and motor systems, brain rhythms and brain plasticity. Essential neurophysiological processes that underlie topics such as human development, cognitive and emotional behavior, gender and psychological disorders will be presented. Recommended preparation: BI 121, BI 122, BI 231, BI 232, BI 233 or PSY 201.
Credits: 4 Lecture: 3 Lab: 3

PSY 214 - PERSONALITY PSYCHOLOGY
Examines the major theoretical perspectives on personality formation, including biological, psychodynamic, humanistic, cognitive, behavioral and sociocultural influences. Personality tests and measures are also discussed. The major theoretical approaches to psychology are included. Recommended preparation: WR 060 or minimum placement into WR 065.
Credits: 4 Lecture: 4

PSY 215 - DEVELOPMENTAL PSYCHOLOGY
Comprehensive study of human development over the life span from prenatal through late adult development. Focuses on physical, cognitive and psychosocial changes throughout the human life cycle and emphasizes an interactionist approach to explain developmental processes and outcomes. The major theoretical approaches to psychology are included. Recommended preparation: WR 060 or minimum placement into WR 065.
Credits: 4 Lecture: 4

PSY 216 - SOCIAL PSYCHOLOGY
Surveys influence of psychological processes on groups and the influence of culture, society and groups on individuals. Includes analysis and exploration of behavior from a social psychology perspective. Topics include aggression, prejudice, conformity, affiliation, altruism, persuasion, interpersonal attraction, social cognition, conflict resolution, attitude formation and change, and applied social psychology. Recommended preparation: WR 060 or minimum placement into WR 065; and PSY 202 or SOC 201.
Credits: 4 Lecture: 4

PSY 219 - ABNORMAL PSYCHOLOGY
Introductory survey of the variety of emotional, mental and behavioral disorders experienced by humans. History, theoretical perspectives, diagnostic criteria and issues, etiology and treatment strategies are covered for the major forms of psychopathology. Recommended preparation: WR 060 or minimum placement into WR 065.
Credits: 4 Lecture: 4

PSY 225 - EATING DISORDERS
This course explores eating behavior, weight regulation and body image in contemporary society. Cultural, familial, social, personal and biological factors in eating and weight problems will be examined. The course will cover the full continuum from normal, healthy eating to clinical eating disorders and related behaviors, which include chronic dieting, excessive exercise, emotional eating, binge eating, obesity or poor body image. Recommended preparation: WR 060 or minimum placement into WR 065.
Credits: 3 Lecture: 3

PSY 227 - ANIMAL BEHAVIOR
This course will cover the fundamental aspects of animal behavior: how and why animals behave and how animal behavior is studied. Topics include mechanisms of behavior, behavioral ecology, feeding, predation, mating, parenting, communication and social behavior.
Credits: 4 Lecture: 3 Lab: 3

PSY 228 - POSITIVE PSYCHOLOGY
This course explores the components necessary to help a person flourish in their environment by addressing the biopsychosocial aspects that contribute to positive behaviors and human strengths. Material will provide an overview of the theories of happiness, importance of self-care and positive social cognitions, utilizing strengths in personal and professional venues, and means of achieving healthy relationships.
personally and with one’s community. Recommended preparation: WR 060 or minimum placement into WR 065.

Credits: 4 Lecture: 4

PSY 233 - PSYCHOLOGY OF VIOLENCE & AGGRESSION
Addresses the developmental, social, physiological and cultural aspects that contribute to violence and aggression as well as the legal issues involved. Includes an overview of the theories of aggression, as well as factors influencing family violence, violent children, mob mentality, hate crimes, war and terrorism, stalking, sex crimes and murder. Recommended preparation: WR 060 or minimum placement into WR 065.

Credits: 4 Lecture: 4

PSY 250 - READINGS IN PSYCHOLOGY
Provides a scientific introduction to how to critically read and discuss scientific literature. Prerequisites: instructor approval.

Credits: 1 Other: 2

PSY 261 - INDONESIA FIELD STUDY
Prepares students for International Field Study Program in Indonesia. Topics include Indonesian culture and history, Indonesian language and development and design of a field research project to be conducted in Indonesia. Prerequisites: instructor approval.

Credits: 3 Lecture: 3

PSY 280 - CO-OP WORK EXPERIENCE PSYCHOLOGY
Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Prerequisites: instructor approval.

Credits: 1 to 4

PSY 298 - INDEPENDENT STUDY: PSYCHOLOGY
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.

Credits: 1 to 4

PSY 299 - SELECTED TOPICS: PSYCHOLOGY
This course is in development.

Credits: 1 to 4

READING

RD 099 - SELECTED TOPICS: READING
This course is in development.

Credits: 1 to 4

RD 117 - COLLEGE READING
Offers instruction in flexible reading skills. Focuses on building reading speed and comprehension, and acquiring a repertoire of reading strategies suitable for understanding and retaining information acquired in typical college reading.

Credits: 3 Lecture: 3

RD 199 - SELECTED TOPICS: READING
This course is in development.

Credits: 1 to 3

SOCIOLOGY

SOC 141 - FILM & SOCIETY: RACE, GENDER AND CLASS
Examines the representation of race, social class and gender in film. Special attention is given to how particular representations reflect the broader historical context surrounding when the films were produced and culturally based audience sentiments. Anthropological and sociological analyses of the films will be provided to give a multi-disciplinary account of how films reflect, create and support various ideological positions regarding race, class and gender. This course is also offered as ANTH 141; students cannot use credit from both courses.

Credits: 2 Lecture: 1 Lab: 3

SOC 142 - FILM & SOCIETY: GLOBAL CULTURES
Examines global issues in both foreign and domestic films from sociological and anthropological perspectives. Selected films cover topics that are relevant to understanding global processes such as global economy and Islam in the contemporary world, as well as films that address the more regionally localized processes of community and family. The purpose of the course is to use film to expose students to diverse perspectives and to encourage the critical awareness of the global interconnections that influence and constrain our modern lives. Films will include documentaries, as well as feature films.

Credits: 2 Lecture: 1 Lab: 3

SOC 143 - FILM & SOCIETY: CONTEMPORARY ISSUES
Examines contemporary issues in film from sociological and anthropological perspectives. Selected films cover such topics as youth culture, nationalism, local culture and poverty, mental health or other social problems. The content of the films, as well as issues of film production, historical context and audience reception will be the major focus of analysis.

Credits: 2 Lecture: 1 Lab: 3

SOC 199 - SELECTED TOPICS: SOCIOLOGY
This course is in development.

Credits: 1 to 4

SOC 201 - INTRODUCTION TO SOCIOLOGY
Provides conceptual tools for analyzing and understanding social forces that shape our lives. The relationships among socialization and social groups, as well as economic, political and religious systems are investigated. This course is considered a human relations component.

Recommended preparation: WR 121.

Credits: 4 Lecture: 4

SOC 208 - SPORT AND SOCIETY
While we use sociology to help make sense of sport, we also use sport to develop the ability to think sociologically about society. Subjects include sport and: values, socialization, deviance, social problems and social inequities. Recommended preparation: SOC 201.

Credits: 4 Lecture: 4

SOC 211 - SOCIAL DEVIANCE
Examines the definition of deviant behavior. Focuses on deviant behavior of societies as well as individuals including issues such as drugs, organized crime, government deviance and crimes against women.

Recommended preparation: WR 121 or SOC 201.

Credits: 4 Lecture: 4

SOC 212 - RACE, CLASS AND GENDER
Analyzes the relationship between race, class, and gender and political and economic systems. Critically examines the interrelationship between race, class and gender and societal structures and history.

Recommended preparation: WR 121 or SOC 201.

Credits: 4 Lecture: 4

SOC 215 - SOCIAL ISSUES AND SOCIAL MOVEMENTS
Applies sociological analysis to contemporary issues and movements. Examples include the environmental crisis, race and ethnic relations, sexual deviancy, drug abuse, health care and violence.

Recommended preparation: WR 121 or SOC 201.

Credits: 4 Lecture: 4

SOC 219 - SOCIOLOGY OF RELIGION
Surveys a variety of religious traditions and introduces the sociological perspective for the study of religion as part of a larger social order. Explores the nature of religious beliefs and practices, both historically and in contemporary context. Examines the relationship between religious traditions and the current globalization of the institution of religion in culture and society.

Recommended preparation: SOC 201.

Credits: 4 Lecture: 4
COURSE DESCRIPTIONS

SOC 222 - SOCIOLOGY OF FAMILY
The course examines the interrelationships between family life and society. By focusing on the interaction between family and society, the course addresses the impact of economic, social and political conditions on the institution of family past and present. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

SOC 250 - SOCIOLOGY OF POPULAR CULTURE
Course applies a sociological perspective to the study of films, music, advertising and other forms of popular culture. Three separate elements of popular culture are examined: the production of culture, the reception of culture and the text or symbols themselves. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

SOC 298 - INDEPENDENT STUDY: SOCIOLOGY
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.
Credits: 1 to 4

SOC 299 - SELECTED TOPICS: SOCIOLOGY
This course is in development.
Credits: 1 to 4

SPANISH

SPAN 101 - FIRST YEAR SPANISH I
Course designed for beginners; students with prior Spanish experience should contact COCC Spanish instructors to determine which Spanish course is appropriate for them. Begins the development of reading, writing, listening and speaking skills. Focuses on the concepts of pronunciation, gender, descriptions, possessives, present tense -ar verbs, numbers, question words and vocabulary that includes the following categories: alphabet, people, greetings, school items, family and activities.
Credits: 4 Lecture: 4

SPAN 102 - FIRST YEAR SPANISH II
Continues the development of reading, writing, listening and speaking skills. Focuses on the concepts of weather, time & date, clothing, colors, regular -er/-ir verbs, the verb gustar, interrogatives, stem-changing verbs (i-ie, e-i, o-ue), the city, the home, furniture & appliances, the verb estar (used with prepositions, adjectives, the present progressive and estar), the verb ir and the phrase ir + infinitivo (used to refer to the future) and adjectives referring to physical and emotional states. Students are encouraged to review SPAN 101 concepts and vocabulary prior to class. Recommended preparation: SPAN 101 or one year of high school Spanish.
Credits: 4 Lecture: 4

SPAN 103 - FIRST YEAR SPANISH III
Final course in the first-year sequence. Continues the development of reading, writing, listening and speaking skills. Focuses on the concepts of emotion, adjective clauses, adverbial clauses and conjunctions, reciprocal verbs, the conditional tense, the past subjunctive, the past perfect tense and vocabulary covering the following: animals, personal relationships, popular culture, health and medical emergencies, and nationalities and political terms. Recommended preparation: SPAN 103 or four years of high school Spanish.
Credits: 4 Lecture: 4

SPAN 199 - SELECTED TOPICS: SPANISH
This course is in development.
Credits: 1 to 4

SPAN 201 - SECOND YEAR SPANISH I
First course of the second-year sequence. Continues, after SPAN 103, with the intermediate development of reading, writing, listening and speaking skills. Includes review of the preterite tense and vocabulary from SPAN 103. Focuses on the imperfect tense, (usages with and in conjunction with the preterite), indirect, direct and double object pronouns, indefinite and negative words, por/para, creating adverbs and vocabulary including the following categories: chores and housework, fiestas and other celebrations, pastimes and diversion, and accidents. Recommended preparation: SPAN 103 or three years of high school Spanish.
Credits: 4 Lecture: 4

SPAN 202 - SECOND YEAR SPANISH II
Continues with the intermediate development of reading, writing, listening and speaking skills. Focuses on the concepts of relative pronouns, the imperative (commands: formal, informal, plural and singular), the use of pronouns with the imperative, the impersonal and passive se, comparisons, using se to describe unplanned occurrences or accidents, the simple future tense and vocabulary including the following categories: travel, shopping, fine art and nature and the environment. Recommended preparation: SPAN 201 or four years of high school Spanish.
Credits: 4 Lecture: 4

SPAN 203 - SECOND YEAR SPANISH III
Final course in the second-year sequence. Continues with the intermediate development of reading, writing, listening and speaking skills. Focuses on the concepts of estar used with past participles, the presente perfecto, the present subjunctive (used with: impersonal expressions, expressions of doubt, expressions of desire, expressions of emotion, adjective clauses, adverbial clauses and conjunctions), reciprocal verbs, the conditional tense, the past subjunctive, the past perfect tense and vocabulary covering the following: animals, personal relationships, popular culture, health and medical emergencies, and nationalities and political terms. Recommended preparation: SPAN 202 or four years of high school Spanish.
Credits: 4 Lecture: 4

SPAN 211 - SPANISH CONVERSATION AND CULTURE I
Designed for students who wish to continue mastering fluency in the speaking of Spanish. Objective is to study various Spanish-speaking cultures. Taught exclusively in Spanish and some student participation is required. Does not meet baccalaureate degree language requirements. Recommended preparation: or to be taken with SPAN 203.
Credits: 3 Lecture: 3

SPAN 212 - SPANISH CONVERSATION AND CULTURE II
Designed for students who wish to continue mastering fluency in the speaking of Spanish. Objective is to study various Spanish-speaking cultures. Taught exclusively in Spanish and some student participation is required. Does not meet baccalaureate degree language requirements. Recommended preparation: or to be taken with SPAN 203.
Credits: 3 Lecture: 3

SPAN 213 - SPANISH CONVERSATION AND CULTURE III
Designed for students who wish to continue mastering fluency in the speaking of Spanish. Objective is to study various Spanish-speaking cultures. Taught exclusively in Spanish and some student participation is required. Does not meet baccalaureate degree language requirements. Recommended preparation: or to be taken with SPAN 203.
Credits: 3 Lecture: 3

SPAN 288 - SPECIAL STUDIES: SPANISH
Explores topics of current interest in the discipline.
Credits: 1 to 4
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Lecture</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP 241</td>
<td>MEDIA, COMMUNICATION, SOCIETY</td>
<td>3</td>
<td>3</td>
<td>Analyzes the social and cultural impact of media, including broadcast, print, film and digital communication. Also examines careers in selected areas of media. Recommended preparation: WR 121.</td>
</tr>
<tr>
<td>SP 242</td>
<td>INTRODUCTION TO AUDIO BROADCASTING AND PODCASTING</td>
<td>4</td>
<td>4</td>
<td>Learn audio production for broadcast or podcast. Create original PSAs and news-stories while developing on-air and pre-recorded audio delivery techniques.</td>
</tr>
<tr>
<td>SP 250</td>
<td>LISTENING</td>
<td>1</td>
<td>1</td>
<td>Gives students a deeper understanding of and more practical skills in listening to increase understanding and to help others.</td>
</tr>
<tr>
<td>SP 251</td>
<td>EMOTIONAL INTELLIGENCE</td>
<td>1</td>
<td>1</td>
<td>Gives students a basic understanding of the biological roots of emotion and the skills needed for the appropriate management and sharing of their feelings. This one-credit course is currently available on request.</td>
</tr>
<tr>
<td>SP 252</td>
<td>TEAM SKILLS</td>
<td>1</td>
<td>1</td>
<td>Gives students an understanding of the systems nature of small groups and gives them the skills needed to manage decision-making, leadership and the communication climate of the team setting.</td>
</tr>
<tr>
<td>SP 253</td>
<td>CONFLICT MANAGEMENT</td>
<td>1</td>
<td>1</td>
<td>Gives students an understanding of conflict management and the skills needed to become more successful in the conflict situation.</td>
</tr>
<tr>
<td>SP 255</td>
<td>FREE EXPRESSION AND PUBLIC ASSEMBLY</td>
<td>3</td>
<td>3</td>
<td>Learn and practice civic rights and responsibilities under Federal and State laws pertaining to free expression and public demonstrations.</td>
</tr>
<tr>
<td>SP 270</td>
<td>COMMUNICATING LOVE</td>
<td>3</td>
<td>3</td>
<td>Provides an overview of the bio-psychological roots of romantic/erotic love, a critique of media images of love and offers practical training in communication skills that maintain and enhance long-term love relationships. Recommended preparation: WR 121.</td>
</tr>
<tr>
<td>SP 280</td>
<td>CO-OP WORK EXPERIENCE SPEECH INTERNSHIP</td>
<td>1 to 3</td>
<td>1 to 3</td>
<td>Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Prerequisites: instructor approval.</td>
</tr>
<tr>
<td>SP 298</td>
<td>INDEPENDENT STUDY: SPEECH</td>
<td>1 to 3</td>
<td>1 to 3</td>
<td>Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. P/NP grading. Prerequisites: instructor approval.</td>
</tr>
<tr>
<td>SP 299</td>
<td>SELECTED TOPICS: SPEECH</td>
<td>1 to 3</td>
<td>1 to 3</td>
<td>Explores an area of communication not included in the regular curriculum. Possible topics include gender communication, media issues and relational communication.</td>
</tr>
</tbody>
</table>
COURSE DESCRIPTIONS

STRUCTURAL FIRE SCIENCE

SFS 101 - INTRODUCTION TO EMERGENCY SERVICES
Provides an overview to fire protection and EMS; career opportunities, related fields, philosophy and history, organization and function of public and private agencies, nomenclature, functions. In addition, provides new students a broad overview of college and life success strategies as related to this field.
Credits: 4 Lecture: 4

SFS 102 - FIRE SERVICE SAFETY AND SURVIVAL
This course broadens the scope of the national firefighter life-safety initiatives and emphasizes their importance to firefighters and on up the ranks through management levels. It is designed to create a positive attitude toward firefighter safety; to have the student recognize how serious the firefighter injury and death problem is; to recognize their responsibility for reducing future injuries and deaths; to provide information for improving safety considerations; to demonstrate that most firefighter injuries and deaths are preventable.
Credits: 3 Lecture: 3

SFS 105 - FIRE BEHAVIOR & COMBUSTION I
Explores the theories and fundamentals of how and why fires start, spread and how they are controlled. Prerequisites: department approval. Prerequisites with concurrency: GS105 or CH104 or higher.
Credits: 3 Lecture: 3

SFS 110 - BUILDING CONSTRUCTION FOR FIRE PERSONNEL
Studies building construction with emphasis on how buildings fall when subjected to fire. Case studies used to illustrate points. Studies of roof and wall construction enable the student to predict failure points and adapt fire fighting strategies accordingly. Buildings under construction and those subjected to external forces will also be studied. Field trips take students into the community to study various construction techniques. Recommended preparation: SFS 101, SFS 102.
Credits: 3 Lecture: 3

SFS 112 - PUBLIC EDUCATION AND FIRE PREVENTION
Studies fundamentals of public relations pertaining to fire service including emergency operations, general public appearances, writing news releases, articles and speeches and general media contact. Students work in developing an effective public education campaign for delivery. Audience type and message content is carefully analyzed. Recommended to be taken with WR 121, SFS 101 and SFS 102.
Credits: 3 Lecture: 3

SFS 120 - FIXED SYSTEMS AND EXTINGUISHERS
Studies portable and fixed extinguisher equipment, fire alarm and detection systems, sprinkler systems and standpipes, and special hazard protection systems. Covers extinguishing agents, system design and maintenance procedures. Field exercises expose students to systems discussed in class. Recommended preparation: SFS 101 and SFS 102.
Credits: 3 Lecture: 3

SFS 121 - FIRE LAW
Introduces the modern legal system with emphasis on cases related to fire service. Case law is studied to understand underlying concepts. Reviews case law affecting modern fire service agencies. Explores laws relating to medical treatment of patients, fire protection, codes, emergency response and department activities on the fire ground. Recommended preparation: SFS 101, SFS 102.
Credits: 1 Lecture: 1

SFS 122 - FIRE DEPARTMENT BUDGET
Outlines the budget process as required by Oregon laws to include types of budgets, the process of preparing the budget and classifying expenditures.
Credits: 1 Lecture: 1

SFS 123 - HAZMAT AWARENESS & OPERATIONS
Designed to prepare individuals to safely respond to hazardous materials emergencies. Individuals will learn to analyze an incident; detect the presence of hazardous materials; survey the scene; collect hazard information from the DOT Emergency Response Guidebook; implement actions consistent with standard operating procedures; initiate protective actions and initiate the notification process. Students complete all training and education requirements for Hazardous Materials Awareness and Operations level certification, per National Fire Protection Association (NFPA) Standard 472 and State certification requirements per Oregon Department of Public Safety Standards and Training (DPSST).
Credits: 3 Lecture: 2 Other: 2

SFS 133 - FIRE ENTRY EXAMS
Introduces and prepares student for employment testing in a structural fire agency; beneficial for both initial employment testing and promotional examinations within their agency. Exposure to testing in a variety of methods currently in use in the fire service hiring processes, offers strategies for improving test performance as well as job search skills.
Credits: 3 Lecture: 3

SFS 188 - SPECIAL STUDIES: STRUCTURAL FIRE SCIENCE
Explores topics of current interest in the discipline.
Credits: 1 to 4

SFS 199 - SELECTED TOPICS: SFS
This course is in development.
Credits: 1 to 4

SFS 205 - FIRE BEHAVIOR AND COMBUSTION II
Builds on the foundational knowledge and skills objectives developed in SFS 105, Fire Behavior & Combustion 1 and Firefighter I academy. Due to safety and OSHA requirements, students must be affiliated with a fire department and have passed within the previous year an SCBA Fit test. This course is designed for 2nd year students to be taken the year of graduation. Prerequisites: SFS 105, Firefighter I Academy and department approval.
Credits: 3 Lecture: 2 Lab: 3

SFS 210 - FIRE INVESTIGATION
Provides basic information in fire cause determination. Studies arson detection, protection of point of origin, fire indicators, motives and vehicle fire investigation. Field trips and classroom props aid the student in understanding the science of fire investigation. Prerequisites: department approval. Recommended preparation: SFS 101 and SFS 102.
Credits: 3 Lecture: 3

SFS 212 - FIRE CODES AND ORDINANCES
Introduces the International Fire and Building Code (IFC) and laws promulgated by the Office of the State Fire Marshal relating to fire safety and prevention. Includes overview of administrative provisions and many of the applicable standards in the codes. Students apply the codes to specific situations to illustrate understanding and application of the codes and related laws. Students also identify applicable sections of the codes in response to scenarios presented in the classroom or in the field. Recommended preparation: SFS 101, SFS 102.
Credits: 3 Lecture: 3

SFS 220 - HAZARDOUS MATERIALS
Introduces the National Fire Protection Association (NFPA) Standard 472, Awareness and Operations level certification, per National Fire Protection Association (NFPA) Standard 472 and State certification requirements per Oregon Department of Public Safety Standards and Training (DPSST).
Credits: 1 Lecture: 1

SFS 230 - RESCUE PRACTICES
Explores techniques and applications of specialized rescue practices in modern fire service. Focuses on vehicle rescue, steep-angle rescue and swift-water rescue with basic overviews of ice rescue, electrical rescue and trench rescue techniques. Using modern tools and techniques, students apply classroom learning in several comprehensive and dynamic field exercises. Emergency Medical Technician - Basic training allows students to integrate fire and EMS activities at an emergency rescue scene. Prerequisites: department approval. Recommended to be taken with SFS 101 and SFS 102.
Credits: 3 Lecture: 2 Lab: 3

SFS 232 - FIRE PROTECTION HYDRAULICS AND WATER SUPPLY
This course provides a foundation of theoretical knowledge in conjunction with hands-on labs in order to understand the principles of the use of water in fire protection and to apply hydraulic principles to analyze and to solve water supply problems. Prerequisites: department approval.

209
Recommended preparation: MTH 065 or higher, GS 104, GS 105, SFS 105, and access to engines or affiliation are highly recommended for students’ success in the class.

Credits: 4 Lecture: 3 Lab: 3

SFS 263 - HUMAN BEHAVIOR IN FIRE
Provides fundamental information on human behavior as it relates to fire and mass casualties. Understanding human behavior is important as it relates to building design, evacuation and fire department operations. It is especially important where populations are large or include the disabled or persons having limited mobility. Prerequisites: SFS 101; SFS 102, SFS 110, SFS 112, SFS 120, MTH 060 or higher or minimum placement into MTH 065.

Credits: 3 Lecture: 3

SFS 275 - CAPSTONE: TACTICS & STRATEGIES
Provides a capstone experience to the Structural Fire AAS program with an in-depth analysis of the principles of fire control through the utilization of personnel, equipment and extinguishing agents on the fire ground. Taken in the final term prior to program completion. Prerequisites: department approval.

Credits: 3 Lecture: 3

SFS 288 - SPECIAL STUDIES: STRUCTURAL FIRE
Explores topics of current interest in the discipline.

Credits: 1 to 4

SFS 299 - SELECTED TOPICS: STRUCTURAL FIRE SCIENCE
This course is in development.

Credits: 1 to 4

THEATRE ARTS

TA 141 - ACTING I
Acquaints students with fundamental principles of acting. In-class performance of memorized material required. Grading based primarily on in-class participation. Attendance is mandatory.

Credits: 3 Lecture: 3

TA 142 - ACTING II
Emphasizes in-depth character study and textual analysis through preparation of scenes from modern American plays. Attendance is mandatory. Repeatable for credit. Recommended preparation: TA 141.

Credits: 3 Lecture: 3

TA 143 - ACTING III
Further in-depth character study and scene work. Attendance is mandatory. Repeatable for credit. Recommended preparation: TA 141 and TA 142.

Credits: 3 Lecture: 3

TA 153 - REHEARSAL/PERFORMANCE
Practical application of classroom theory through participation in Magic Circle Theatre and Magic Circle Dance Theatre productions. Credit can be earned in three areas: dance, technical theater and acting. Prerequisites: instructor approval through audition or interview.

Credits: 1 to 3

TA 188 - SPECIAL STUDIES: THEATER
Explores topics of current interest in the discipline.

Credits: 1 to 4

TA 200 - INTRODUCTION TO THEATER
Introduces student to the world of theater. Combines overview of historical facts and theory with contemporary practice. Explores career options in theatrical production.

Credits: 3 Lecture: 3

TA 207 - READINGS IN THEATER
Offers a study of selected plays, loosely grouped by country of origin, theme, era or playwrights. Emphasis placed on texts in performance rather than on literary analysis. Repeatable for credit.

Credits: 3 Lecture: 3

TA 280 - CO-OP WORK EXPERIENCE THEATER
Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Prerequisites: instructor approval.

Credits: 1 to 3

TA 298 - INDEPENDENT STUDY: THEATER ART
Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Prerequisites: instructor approval. Recommended preparation: prior coursework in the discipline.

Credits: 1 to 4

VETERINARY TECHNICIAN

VT 101 - INTRO TO VETERINARY TECHNICIAN
Introduces the role of the veterinary technician within the veterinary health care team, career opportunities for veterinary technicians, the history of veterinary medicine, ethics, common small animal breeds and effective communication techniques within the veterinary teams and with clientele. Prerequisites: BI 101 or BI 211; GS 105 or CH 104; MTH 095, MTH 111 or higher; WR 121 and SP 218. Corequisites: VT 102, VT 103, VT 117.

Credits: 3 Lecture: 3

VT 102 - VETERINARY TERMINOLOGY
Introduces veterinary medical terminology, including medical word parts, common medical terms and a basic knowledge of word construction. Corequisites: VT 101, VT 103, VT 117.

Credits: 3 Lecture: 3

VT 103 - ANIMAL HOSPITAL AND OFFICE PROCEDURES
Introduces veterinary medical records, admitting procedures and record maintenance. Covers basic bookkeeping skills, inventory control measures, marketing and the use of computer software specifically designed for use in a veterinary hospital. Corequisites: VT 101, VT 102, VT 117.

Credits: 2 Lecture: 2.4

VT 108 - SMALL ANIMAL NURSING
Introduces basic techniques necessary for the provision of nursing care to small animals, including small animal restraint, husbandry, behavior, physical examination, medication administration and grooming. Includes kennel duty experience in the care of a variety of companion animals. Prerequisites: VT 101, VT 102, VT 103 and VT 117. Corequisites: VT 110, VT 114, VT 118.

Credits: 4 Lecture: 3 Lab: 3

VT 110 - PARASITOLOGY AND PATHOLOGY
Explores the life cycles, modes of transmission and diseases associated with common parasites of animals. Lab introduces diagnostic procedures and covers identification of parasites using prepared slides and collected specimens. Prerequisites: VT 101, VT 102, VT 103 and VT 117. Corequisites: VT 108, VT 114, VT 118.

Credits: 4 Lecture: 3 Lab: 3

VT 111 - HEMATOLOGY AND URINALYSIS

Credits: 5 Lecture: 4 Lab: 3.6
VT 112 - ADVANCED SMALL ANIMAL NURSING
Covers advanced nursing techniques including parenteral administration of medication, bandaging and wound care, cardiopulmonary resuscitation (CPR), physical rehabilitation, diagnostic sample collection, and vaccination of small animals. Prerequisites: VT 108, VT 110, VT 114 and VT 118. Corequisites: VT 111, VT 113, VT 116. Credits: 4 Lecture: 3 Lab: 3

VT 113 - EXOTIC AND LAB ANIMAL MEDICINE
Provides hands-on experience working with actual animal cases in a clinical veterinary setting. Links prior coursework with off-campus learning experiences providing hands-on experience in anesthesiology, surgical pre-operative, operative and post-operative protocols for routine surgical procedures. Provides hands-on experience in anesthesiology, surgical patient preparation, surgical assistance and dentistry. Prerequisites: VT 200, VT 201, VT 203, VT 208 and VT 212. Corequisites: VT 204, VT 206, VT 209. Credits: 4 Lecture: 2 Lab: 6

VT 203 - LARGE ANIMAL NURSING
Covers common large animal breeds (ruminant, equine, swine and chickens). Introduces techniques necessary for the provision of nursing care to large animals, including restraint, husbandry, behavior, physical examination, medication administration, diagnostic sample collection, grooming, bandaging, nutrition and vaccination. Includes animal husbandry experience in the care of large animals. Prerequisites: VT 111, VT 112, VT 113 and VT 116. Corequisites: VT 200, VT 201, VT 208, VT 212. Credits: 4 Lecture: 3 Lab: 3

VT 204 - DIAGNOSTIC IMAGING

VT 206 - SMALL ANIMAL DISEASES
Covers preventative medicine and diseases of small animals including the public health significance of relevant small animal diseases. Examines the role of the veterinary technician in performing diagnostics, nursing care and client education. Prerequisites: VT 200, VT 201, VT 203, VT 208 and VT 212. Corequisites: VT 202, VT 206, VT 209. Credits: 4 Lecture: 4

VT 208 - ANIMAL NUTRITION
Covers the physics of x-ray photon production, radiation safety, quality control measures, federal and state radiation regulations, film processing, radiographic technique evaluation, positioning of animals and proper identification and storage of radiographic images. Prerequisites: VT 111, VT 112, VT 113 and VT 116. Corequisites: VT 201, VT 203, VT 208, VT 212. Credits: 2 Lecture: 2

VT 212 - VETERINARY MICROBIOLOGY
Explores clinical microbiology and cytology as it relates to veterinary technology. Covers the basic principles of microbial classification, growth and pathogenicity as well as various laboratory methods used in identification of microorganisms. Prerequisites: VT 111, VT 112, VT 113 and VT 116. Corequisites: VT 200, VT 201, VT 203, VT 208. Credits: 3 Lecture: 3

VT 280 - CLINICAL PRACTICUM I
Provides hands-on experience working with actual animal cases in a clinical veterinary setting. Links prior coursework with off-campus learning experiences providing development of increased proficiency of essential skills necessary for a career as a veterinary technician. In this first practicum course, students are matched to two different practicum sites, each for a three-week period. Each student is expected to attend 120 total hours for each three-week period at a clinical site. Prerequisites: VT 202, VT 204, VT 206 and VT 209. Corequisites: VT 281. Credits: 6 Other: 21.6

VT 281 - CLINICAL PRACTICUM II
Provides hands-on experience working with actual animal cases in a clinical veterinary setting. Links prior coursework with off-campus learning experiences providing development of increased proficiency of essential
skills necessary for a career as a veterinary technician. In this second practicum course, students will be matched to a practicum site for a three-week period. Each student is expected to attend 120 total hours for the three-week period at the clinical site. Reflection upon the practicum experiences will occur during the final week of the course. Prerequisites: VT 202, VT 204, VT 206 and VT 209.

Credits: 4 Other: 14.4

WF 200 - S-200 INITIAL ATTACK INCIDENT COMMAND
Designed to meet the training needs of the ICT4. Presented in a lecture/discussion format and supplemented with group exercises. The six instructional units cover: readiness and mobilization; size up, planning and ordering; deployment and containment; administrative requirements; and post-fire evaluation.

Credits: 2 Lecture: 2

WF 201 - NFPA INSTRUCTOR 1
NFPA Instructor 1 is an intensive, instructional methodology program. It addresses the job performance requirement of the National Fire Protection Agency, 1041 Standard for Fire Service Instructor Professional Qualifications and the National Wildfire Coordinating Group. The course prepares students for planning instruction, using a variety of instructional methods, teaching diverse learners and evaluating course outcomes. The course also provides guidelines for addressing the critical issues of safety and the legal issues of training, and it provides opportunities for participants to participate in application activities. P/NP grading.

Credits: 3 Lecture: 3

WF 203 - S-203 INTRODUCTION TO INCIDENT INFORMATION
Provides students with the knowledge and skills they need to serve as public information officers (PIOF). Touches on virtually all aspects of establishing and maintaining an incident information operation, from communicating with internal and external audiences to handling special situations. Format of the course is lecture and exercises with a final simulation.

Credits: 3 Lecture: 3

WF 210 - FI-210 WILDFIRE ORIGIN/CAUSE
The primary purpose of this course is to provide a consistent knowledge and skill base for the wildland fire origin and cause determination investigator (INVF). The concepts taught in this course will help an INVF perform at an acceptable level on a national basis without regard to geographic boundaries. The course is presented by lectures, electronic presentations, field exercises and class discussion.

Credits: 3 Lecture: 3

WF 211 - S-211 PORTABLE PUMPS
This is an instructor-led course intended to be presented at the local level. The course consists of three skill areas: supply, delivery and application of water. Students will be required to demonstrate their knowledge of correct water use, basic hydraulics and equipment care. The field exercise requires set up, operation and maintenance of pump equipment. To receive credit for this course, students must have field work observed and approved, and take a closed-book written final examination. Recommended preparation: WF 100 and WF 101.

Credits: 2 Lecture: 2

WF 215 - S-215 FIRE OPERATIONS IN THE URBAN INTERFACE
This course is designed to assist structure and wildland firefighters who will be making tactical decisions when confronting wildland fire that threatens life, property and improvements, in the wildland/urban interface. Instructional units include interface awareness, size-up, initial strategy and incident action plan, structure triage, structure protection tactics, incident action plan assessment and update, follow-up and public relations, and firefighter safety in the interface. Recommended preparation: WF 100 and WF 101.

Credits: 3 Lecture: 3

WF 219 - S-219 FIRE OPERATIONS
The course introduces the roles and responsibilities of a firing boss (FIRB) and outlines duties of other personnel who may engage firing operations. The course discusses and illustrates common firing devices and techniques. Although comprehensive in nature, the course work is not a substitute for the dynamic fire environment. Prerequisites: department approval.

Credits: 2 Lecture: 2

WF 101 - FIREFIGHTER TYPE II TRAINING
The purpose of this course is to train new firefighters in basic firefighting skills and the basic fire behavior factors that will aid them in the safe and effective control of wildland fires. Students will receive NWCG certification in S-130, S-190, L-180 and S-133.

Credits: 3 Other: 6

WF 103 - SAFETY FOR SURVIVAL
Provides the fundamentals and technical knowledge needed for fire line safety as it pertains to: entrapment avoidance, fire shelter deployment, hazards, injuries and safety issues, mental and physical health, fitness and current issues. Meets the NWCG requirement for RT-130.

Credits: 3 Lecture: 3

WF 111 - TACTICAL DECISION SIMULATIONS
The course uses classroom and simulations to focus on the fire environment and the indicators fireline personnel should recognize in order to anticipate or predict problem fire behavior during fireline operations while utilizing lookouts, communications, escape routes and safety zones. Upon completion of the course and given a Fireline Handbook, Incident Response Pocket Guide (IRPG), and specific problem situations related to fire assignments, student will be provided with the knowledge and practice in decision making necessary to effectively apply tactical decisions making in wildland fire. P/NP grading.

Credits: 2 Lecture: 1 Other: 2

WF 131 - S-131, FIREFIGHTER TYPE I
Firefighter Type 1, S-131, is designed to meet the training needs of the Firefighter Type 1 (FFT1). This course is designed to be interactive in nature. It contains several tactical decision games designed to facilitate learning the objectives and class discussion. Topics include fireline reference materials, communications and tactical decision making.

Recommended preparation: WF 100 and WF 101.

Credits: 2 Lecture: 2

WF 134 - S-134 LOOKOUTS, COMMUNICATION, ESCAPE ROUTES, SAFETY ZONES
Students become engaged in the process of designing their own safety program. The small group exercises will discuss and develop the L, C, E, S, creating a list of performance standards. The entire class will then work together to produce and edit a contract, based on consensus, which guides performance.

Credits: 2 Lecture: 2

WF 188 - SPECIAL STUDIES: WILDLAND FIRE
Explores topics of current interest in the discipline.

Credits: 1 to 4

WF 199 - SELECTED TOPICS: WILDLAND FIRE
This course is in development.

Credits: 1 to 4
WF 230 - S-230 CREW BOSS
Designed to produce student proficiency in the performance of duties associated with the single resource boss position from initial dispatch through demobilization to the home unit. Topics include: operational leadership, preparation and mobilization, assignment preparation, risk management, entrapment avoidance, safety and tactics, offline duties, demobilization and post incident responsibilities.
Credits: 3  Lecture: 3

WF 231 - S-231 ENGINE BOSS
Skill course designed to produce student proficiency in the performance of all duties associated with the single resource engine boss. Topics include tactical use and safety precautions required to establish an effective engine operation on a large incident.
Credits: 1  Lecture: 1

WF 236 - S-236 HEAVY EQUIPMENT BOSS
This is a skill course designed to meet the training needs of a Heavy Equipment Boss on an incident as outlined in the PMS 310-1 and the Position Task Book developed for the position. Primary considerations are tactical use and safety precautions required to establish and maintain an effective dozer operation. Prerequisites: department approval.
Credits: 2  Lecture: 2

WF 244 - S-244 FIELD OBSERVER
Provides students with the necessary skills to perform as a field observer (FOBS) and/or a prescribed fire effects monitor (FEMO). Topics include: identifying and interpreting maps, making map calculations, using observation aids and instruments, performing field observations and communicating information. There will be a daylong field trip.
Credits: 2  Lecture: 2

WF 248 - S-248 STATUS/CHECK-IN RECORDER
This course is designed to introduce students to the tools and techniques used to perform the duties of a status check-in recorder (SCKN). The course provides an overview of what a student can expect if dispatched to an incident. Prerequisites: department approval.
Credits: 2  Lecture: 2

WF 261 - S-261 APPLIED INTERAGENCY INCIDENT BUSINESS MANAGEMENT
This course is designed to provide the prerequisite skills/knowledge necessary to perform the tasks of the entry-level finance position, i.e., commissary manager, personnel time recorder, equipment time recorder, compensation for injury specialist and claims specialist, in the Incident Command System (ICS). It is designed to be taken after completion of Interagency Incident Business Management (S-260).
Credits: 2  Lecture: 2

WF 270 - S-270 BASIC AIR OPERATIONS
Covers aircraft types and capabilities, aviation management and safety, tactical and logistical uses of aircraft, and requirements for helicopter take-off and landing areas. Recommended preparation: WF 131 and WF 134.
Credits: 2  Lecture: 2

WF 281 - L-280 FOLLOWERSHIP/LEADERSHIP
Training course designed as a self-assessment opportunity for individuals preparing to step into a leadership role. There is one day of classroom instruction followed by a day in the field with small teams of students working through a series of problem-solving events (Field Leadership Assessment Course). Topic areas include: leadership values and principles; transition challenges for new leaders; situational leadership; team cohesion factors; ethical decision making.
Credits: 2  Lecture: 2

WF 286 - PACIFIC NORTHWEST ENGINE ACADEMY
Students attending the Pacific Northwest Engine Academy will receive training utilizing a variety of methods and techniques, which will provide information about water handling and will improve engine operation skills. These skills are applicable to both fuels management and fire suppression activities. The student will be instructed using ICS terminology. P/NP grading.
Credits: 3  Lecture: 2  Lab: 3

WF 288 - SPECIAL STUDIES: WILDLAND FIRE
Explores topics of current interest in the discipline.
Credits: 1 to 4

WF 290 - S-290 INTERMEDIATE WILDFIRE BEHAVIOR
This is a classroom-based skills course designed to prepare the prospective fireline supervisor to undertake safe and effective fire management operations. It is the second course in a series that collectively serves to develop fire behavior prediction knowledge and skills. Fire environment differences are discussed as necessary; instructor should stress local conditions. Recommended preparation: WF 131, WF 260 and WF 134.
Credits: 3  Lecture: 3

WF 293 - RX-340 (RX-310) FIRE EFFECTS
Provides the student with the knowledge and skills to recognize basic fire regimes, the results of fire treatment on first order fire and fire effects, and to manipulate fire treatments to achieve desired first order fire effects.
Credits: 3  Lecture: 3

WF 294 - S-300 IC EXTENDED ATTACK
Prepares the student to perform in the role of incident commander, type 3 (ICT3). Presented in a lecture/discussion format and supplemented with group exercises. There are six instructional units that cover information gathering, planning, supporting organization, operations, transitioning and demobilization/administrative requirement.
Credits: 2  Lecture: 2

WF 295 - S-330 TASK FORCE/STRIKE TEAM LEADER
Prepares the student to perform in the role of task force leader (TFLD) or any strike team leader. Examples and exercises are specific to wildland fire suppression. If the student is expected to perform in another risk area, applicable examples and exercises area will be added.
Credits: 3  Lecture: 3

WF 297 - S-339 DIVISION GROUP SUPERVISOR
Prepares student to perform in the role of division/group supervisor. Provides instruction in support of the specific tasks of division/group supervisor, but will not instruct the student in general management/supervision or in the incident command system (ICS). Topics include: division/group management, organizational interaction and division operations.
Credits: 2  Lecture: 2

WF 298 - S-390 FIRE BEHAVIOR CALCULATION
This is an NWCG (National Wildfire Coordinating Group) Certified course. This course is designed to introduce fire behavior calculations by manual methods, using nomograms and the Fire Behavior Handbook Appendix B. Students gain an understanding of the determinants of fire behavior through studying inputs (weather, slope, fuels and fuel moisture). Students also learn how to interpret fire behavior outputs, documentation processes and fire behavior briefing components. Prerequisites: department approval.
Credits: 3  Lecture: 3.2

WF 299 - SELECTED TOPICS: WILDLAND FIRE
This course is in development.
Credits: 1 to 4
WOMEN’S STUDIES

WS 101 - INTRODUCTION TO WOMEN’S AND GENDER STUDIES
Explores the impact of women’s and gender studies in many academic fields. Examines women’s status and achievements, and the issues raised for men and women by feminism and the women’s movement. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

WRITING

WR 060 - RHETORIC AND CRITICAL THINKING I
Introduce concepts of rhetorical reading, thinking and writing as tools for college-level study. Establish an understanding and basic familiarity with key rhetorical concepts, such as audience and purpose, for both reading and writing. Reflect on their reading and writing as processes in order to understand their own practice as readers and writers. Demonstrate familiarity with using MLA conventions for format and citations in writing. Produce at least 1,500 words of revised, final draft copy, including at least one thesis-driven, minimum 750-word academic essay. P/NP grading. Recommended preparation: Minimum placement into WR 060.
Credits: 4 Lecture: 4

WR 065 - RHETORIC AND CRITICAL THINKING II
Develop rhetorical reading, thinking and writing skills as tools for success in reading and writing college level texts. Develop an understanding and basic fluency with key rhetorical concepts, such as audience and purpose, for both reading and writing. Evaluate their reading and writing as processes in order to examine and develop their own practice. Employ MLA conventions for format and citations in writing. Produce at least 2,000 words of revised, final draft copy, including at least one thesis-driven, minimum 1,000-word academic essay. Recommended preparation: WR 060 or minimum placement into WR 065.
Credits: 4 Lecture: 4

WR 095 - BASIC WRITING II
Provides instruction and practice in basic essay structures and development. Students learn effective options for introductions, transitions, body paragraphs and conclusions. Includes brief review of sentence mechanics and paragraphing principles within the context of student’s own writing. Also provides practice and instruction in the writing process, including peer review and analysis. WR 095 is an optional course in the developmental writing sequence for students who need or want additional preparation for WR 121. This course is not suitable for students who place into WR 060 or WR 065. Recommended preparation: WR 065 or minimum placement into WR 121.
Credits: 3 Lecture: 3

WR 098 - WRITING SEMINAR
A companion course to WR 121 for students who place into WR 098. Supports students by incrementally breaking down assignments while building self-efficacy and growth mindset to increase academic success. P/NP grading. Prerequisites: Minimum placement into WR 098. Corequisites: WR 121.
Credits: 2 Lecture: 2

WR 099 - SELECTED TOPICS: WRITING
This course is in development. P/NP grading.
Credits: 1 to 4

WR 121 - ACADEMIC COMPOSITION
WR 121 focuses on rhetorical reading, thinking and writing as a means of inquiry. Students will gain fluency with key rhetorical concepts and utilize these in a flexible and collaborative writing process, reflecting on their writing process with the goal of developing metacognitive awareness. They will employ conventions, including formal citations, appropriate for a given writing task, attending to the constraints of audience, purpose, genre and discourse community. Students will compose in two or more genres. Prerequisites: WR 065 or WR 095 or minimum placement into WR 121.
Credits: 4 Lecture: 4

WR 122 - ARGUMENT, RESEARCH AND MULTIMODAL COMPOSITION
WR 122 continues the focus of WR 121 in its review of rhetorical concepts and vocabulary, in the development of reading, thinking and writing skills, along with metacognitive competencies understood through the lens of a rhetorical vocabulary. Specifically, students will identify, evaluate and construct chains of reasoning, a process that includes an ability to distinguish assertion from evidence, recognize and evaluate assumptions, and select sources appropriate for a rhetorical task. Students will employ a flexible, collaborative, and appropriate composing process, working in multiple genres and utilizing at least two modalities. Prerequisites: WR 121.
Credits: 4 Lecture: 4

WR 170 - DOCUMENTATION
Instruction emphasizes what constitutes plagiarism and how to avoid it by applying college-level documentation practices, using accepted discipline-appropriate academic and professional styles, in research-based writing assignments across the curriculum.
Credits: 1 Lecture: 1

WR 188 - SPECIAL STUDIES: WRITING
Explores topics of current interest in the discipline.
Credits: 1 to 4

WR 199 - SELECTED TOPICS: WRITING
This course is in development.
Credits: 1 to 3

WR 227 - TECHNICAL WRITING
Prepares students to produce instructive, informative and persuasive technical documents. Grounded in rhetorical theory, the course focuses on producing usable, reader-centered content that is clear, concise and ethical. Students will engage in current best practices and work individually and in groups to learn strategies for effective communication in the digital and networked, global workplace. Prerequisites: WR 121.
Credits: 4 Lecture: 4

WR 240 - INTRODUCTION TO CREATIVE WRITING: NONFICTION
Introduces the many forms and purposes of creative nonfiction such as science or nature writing, travel writing, memoir, biography and journalistic essay. Requires individual and collaborative workshop activities to develop skills in drafting and revision. Examines topics, purposes for writing, and elements of craft, including voice, scene, description and structure. Requires creation of a portfolio of works reflecting various stages of their writing process. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

WR 241 - INTRODUCTION TO CREATIVE WRITING: FICTION
Practical study of effective strategies for creating vivid, dramatic stories. Students learn the basic craft of generating conflict and plot, openings that grab the reader, complications that build tension and details that reveal character. Critical reading of published authors, prose craft exercises and responding constructively to other student work are essential learning processes. Recommended preparation: WR 121.
Credits: 4 Lecture: 4

WR 242 - INTRODUCTION TO CREATIVE WRITING: POETRY
Introduces students to the craft of poetry through study of the poetry and notebooks of established writers for writing techniques, forms, styles and work processes and through the writing and submission of approximately one complete poem per week for class discussion and analysis. Recommended preparation: WR 121.
Credits: 4 Lecture: 4
WR 243 - INTRODUCTION TO CREATIVE WRITING: SCRIPTWRITING
Introduces students to dramatic writing for both stage and screen. Essential learning processes in the course include scene and dialogue craft exercises, developing strong characters and viable narrative structures, critical reading of plays, screenplays, and/or teleplays and responding constructively to other student work. Recommended preparation: WR 121.
Credits: 4    Lecture: 4

WR 288 - SPECIAL STUDIES: WRITING
Explores topics of current interest in the discipline.
Credits: 1 to 4

WR 299 - SELECTED TOPICS: WRITING
This course is in development.
Credits: 1 to 4