

# 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. Recommended preparation: CIS 125E. Prerequisites: BA 104, CIS 131, BA 112.  
**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.
- The content in the stated course is **recommended** beforehand for student success in the selected course, but is not required for registration.
- **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 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; gynecology and obstetric terminology; fetal and neonatal disorders and anomalies; terminology relating to psychiatry, anesthesia, 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. Prerequisite: 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. Fulfills program requirements for Medical Assisting. Recommended preparation: BI 122 or BI 233 should be taken prior to or concurrently with AH 113.

**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. Prerequisite: 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 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**

### ANTH 188 - SPECIAL STUDIES: ANTHROPOLOGY

Explores topics of current interest in the discipline.

**Credits: 1 to 3**

### 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 212 - ARCHAEOLOGY FIELD METHODS

Provides an introduction to archaeological field methods as applied to the study of pre-history, including, but not limited to: field inventory, site recording, mapping, archaeological excavation and data/artifact collection, laboratory analysis and documentation/report preparation.

**Credits: 4 Lecture: 2.75 Other: 22.5**

**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. 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, 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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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 to include hands-on PLC programming and ladder logic development.

**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 about self-contained 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**

**APR 231M - METERING ADVANCED I**

This course is designed to instruct third-year apprentices on the subject of advanced metering, including the following: history of metering (past, present and future), review of meter vectoring, polyphase vectoring, self-contained meters, instrument rated meters, instrument transformers (Current and Voltage) and their application. While learning about Primary metering and refining what they have already learned about instrument rated three phase metering.

**Credits: 4 Other: 8**

**APR 232M - METERING ADVANCED II**

This course is designed to instruct third-year Meterperson Apprentices on the subject of advanced fundamentals of metering including: billing rates, demand metering, Kilovolt-Ampere-Reactance (KVAR) and Kilovolt Ampere (KVA) metering, special metering, net metering and pulse metering (pulse weights, pulse initiation, and totalization). Additionally apprentices will learn about different types of meter test equipment, AMI/AMR, Telemetry and Smart grid.

**Credits: 4 Other: 8**

**APR 241 - BUILDING CODES AND INSTALLATION MANUALS**

This course is an overview of the mechanical codes as related to the HVAC industry in commercial and residential applications. In addition, installation manuals will be explored as to proper installation and usage of HVAC equipment. During the term there will be three field trips to visit job sites where students will identify code applications and violations.

**Credits: 4 Other: 8**

**APR 242 - DUCT FABRICATION/DESIGN**

Introduction to duct design, different styles of duct design, and multilevel duct system design. Heat loss, heat gain calculations and instruction on use of duct calculators.

**Credits: 4 Other: 8**

**APR 243 - GENERAL FABRICATION**

This course is the study of the sheet metal trade as it is applied to general-needs metal work. The work studied is that outside of the traditional HVAC and architectural scope as studied in previous terms with a broader base of skills to be learned, such as custom, decorative and artistic finished products.

**Credits: 4 Other: 8**

**APR 244 - PROJECT SUPERVISION**

Introduction to construction management skills as they apply to project supervision.

**Credits: 4 Other: 8**

## ART

**ART 101 - INTRODUCTION TO THE VISUAL ARTS**

Introduces approaches 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**

Students will use 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, value, 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**

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**

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, 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 115.

**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. Not offered every term.

**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, clapping and finishing techniques. Not offered every term.

**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 and texturing methods will also be included. Recommended preparation: ART 157A1. Not offered every term.

**Credits: 2 Lecture: 1 Lab: 3**

#### **ART 157B1 - METALWORK & JEWELRY - COLD 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 rivets, tabs, links and other methods of cold connections. Additional instruction includes developing design, annealing, drilling, sawing, filing, texturing, dapping and finishing techniques. Not offered every term.

**Credits: 2 Lecture: 1 Lab: 3**

#### **ART 157B2 - 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 objects and/or stone settings. Recommended preparation: ART 157B1.

**Credits: 2 Lecture: 1 Lab: 3**

#### **ART 157C1 - JEWELRY - PRECIOUS METAL CLAY 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. Not offered every term.

**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 and cast. Fusing links to weave simple chains and finishing techniques will be included. Not offered every term.

**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 preparation: ART 158B1, ART 157A1. Not offered every term.

**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-packing enamel, adding foils, kiln firing, cold connecting and finishing techniques will be included. Not offered every term.

**Credits: 1 Other: 2**

#### **ART 158C2 - JEWELRY - ENAMELING II**

Builds on the skills learned in ART 158C1. Techniques of champleve, cloisonne, image transfer and fusing the enamel with a torch will be included. Recommended preparation: ART 158C1, ART 157A1. Not offered every term.

**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. Not offered every term.

**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. Not offered every term.

**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. Not offered every term.

**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. Not offered every term.

**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. Not offered every term.

**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 darkroom. 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 painting 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, 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, 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, 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, ART 185 or instructor approval.  
**Credits: 3    Lecture: 1.5    Lab: 4.5**

**ART 188 - SPECIAL STUDIES: ART**

Explores topics of current interest in the discipline.  
**Credits: 1 to 3**

**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. Not offered every term. Recommended preparation: ART 131, 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**

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 prerequisites: 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 prerequisite: 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 prerequisite: 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, ART 122. Not offered every term.  
**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, 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 prerequisites: ART 159, 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 prerequisites: ART 257, 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 is encouraged. Should be taken in sequence. Recommended prerequisites: ART 117, 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. Usually offered Fall and Spring terms.  
**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.  
**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 183 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, 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, 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 prerequisites: ART 131, ART 186 or instructor approval.  
**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 prerequisites: ART 131, 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 prerequisites: ART 131, 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 and/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. Recommended preparation: prior coursework in the discipline. Instructor approval required.  
**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. Usually offered Spring term.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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. Recommended preparation or to be taken with: AUT 106 and MTH 010 or higher.

**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 109, AUT 110 with a grade of "C" or better (or "P").

**Credits: 5 Lecture: 2.5 Lab: 7.5**

### **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. Recommended preparation: AUT 101, AUT 102, AUT 106, AUT 107, AUT 109, AUT 110.

**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. Recommended preparation: AUT 101, AUT 102, AUT 103, AUT 106, AUT 107, AUT 109, AUT 110.

**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. Recommended preparation: AUT 101, AUT 102, AUT 106, AUT 107, AUT 109, AUT 110.

**Credits: 2 Lecture: 1 Lab: 3**

### **AUT 106 - AUTOMOTIVE PROGRAM ORIENTATION**

Introduction to the Automotive program. Provides an understanding of the fundamental principles of automotive shop safety and tool care. Instruction given to the self-paced course program. 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. There will be a required weekly meeting for all enrolled students - announced time during the orientation.

**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. Recommended preparation or to be taken with: AUT 106.

**Credits: 3 Lab: 9**

### **AUT 109 - MECHANICAL SYSTEMS II**

This course will provide a good understanding of the fundamental principles of hand tool names and usage through catalog identification, scan tool introduction and function, based on the Snap-On SolusPro menu and Parameter Identification. Application and resume writing is included to prepare the new student for a job interview in the automotive industry. A self-paced course. Recommended preparation: AUT 106. Corequisites: AUT 101, AUT 106, AUT 110.

**Credits: 1 Lab: 3**

### **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. Recommended preparation or to be taken with: 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. Recommended preparation: AUT 101, AUT 102, AUT 103, AUT 106, AUT 107, AUT 109, AUT 110, AUT 205, MTH 020.

**Credits: 5 Lecture: 3.5 Lab: 4.5**

### **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. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110.

**Credits: 1 Lab: 2**

### **AUT 113 - BASIC ENGINE PERFORMANCE II**

Course is designed to continue the study and apply the theory presented in AUT 112 Basic Engine Performance I. This course will continue with the operation, diagnoses and repair of the carburetion system as it was used in vehicles of the past.

**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 introduce students to focused areas that are required when replacing vehicle components that include a light level of fabrication. (A scheduled self-paced course.) Prerequisites: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110.

Instructor approval required.

**Credits: 3 Lab: 9**

### **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 measure, proper usage of tools and application of repair manuals through actual overhaul of engines. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110, MTH 010 or higher.

**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. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110.

**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. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110.

**Credits: 3 Lecture: 1.5 Lab: 4.5**

### **AUT 204 - STEERING AND SUSPENSION**

Designed to study and apply the theory, operation, diagnoses and repair of the modern suspension and steering systems. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110, AUT 208 and MTH 010 or higher.

**Credits: 3 Lecture: 1.5 Lab: 4.5**

### **AUT 205 - ENGINE PERFORMANCE I**

Studies the diagnosis of driveability problems. Covers engine analysis, cooling and exhaust systems, ignition and fuel management systems. Recommended preparation: AUT 101, AUT 103, AUT 106, AUT 107, AUT 109 and AUT 110.

**Credits: 2 Lecture: 1 Lab: 3**

### **AUT 206 - ENGINE PERFORMANCE II**

Studies diagnosis of driveability 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. Recommended preparation: AUT 101, AUT 102, AUT 103, AUT 104, AUT 106, AUT 107, AUT 109, AUT 110, AUT 111, AUT 205.

**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. Recommended preparation: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110 and MTH 010.

**Credits: 3 Lecture: 1.5 Lab: 4.5**

### **AUT 211 - ASE TEST PREP I**

This self-paced, program-specific course allows the student to study in preparation for the ASE A1-A5 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-A8 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. Prerequisite: 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. Prerequisite: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110. Instructor approval required. Recommended preparation: an additional 24 credits of automotive courses. 4 credits per section (144 hours).

**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. Prerequisite: AUT 101, AUT 106, AUT 107, AUT 109, AUT 110. Instructor approval

required. Recommended preparation: an additional 24 credits of automotive courses. 4 credits per section (144 hours).

**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 101, AUT 106, AUT 107, AUT 109, AUT 110, MTH 020.

**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. Recommended preparation: AUT 101, AUT 102, AUT 106, AUT 107, AUT 109, AUT 110, MTH 020 or higher.

**Credits: 3 Lecture: 1.5 Lab: 4.5**

### **AUT 256 - AUTOMOTIVE 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 101, AUT 106, AUT 107, AUT 109, AUT 110. Instructor approval is required.

**Credits: 2 Lecture: 1 Lab: 3**

### **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 (EUI) 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 101, AUT 106, AUT 107, AUT 109, AUT 110 Instructor approval required.

**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 enhancements 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 advance applications. Prerequisites: AUT 106, AUT 101, AUT 107, AUT 109, AUT 110. Instructor approval is required.

**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 101, AUT 106, AUT 107, AUT 109, AUT 110. Instructor approval required.

**Credits: 4 Lecture: 2 Lab: 6**

### **AUT 280 - HYBRID ELECTRIC VEHICLES I**

A study of Hybrid Electric Vehicles (HEV) and Electric Vehicles (EV). 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 101, AUT 106, AUT 107, AUT 109, AUT 110. Instructor approval required.

**Credits: 4 Lecture: 2 Lab: 6**

### **AUT 281 - HYBRID ELECTRIC VEHICLES II**

A study of Hybrid Electric Vehicles (HEV) and Electric Vehicles (EV) 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 101, AUT 106, AUT 107, AUT 109, AUT 110. Instructor approval required.

**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.

**Credits: 1 Lab: 3.2**

**AV 115 - PRIVATE PILOT - HELICOPTER**

Covers fundamentals of flight, flight operations, aviation weather, performance, navigation, aircraft systems, aeronautical publications, FAA regulations, flight planning, radio procedures, meteorology and human factors. Comprehensive course that prepares students for the FAA Private Pilot airman knowledge exam. Recommended preparation: MTH 020.

**Credits: 5 Lecture: 5**

**AV 117 - HELICOPTER FUNDAMENTALS**

This course covers fundamentals of helicopter flight, flight operations, helicopter performance, navigation, helicopter systems, aeronautical publications, helicopter flight maneuvers, flight planning, radio procedures, meteorology and human factors. Recommended preparation: MTH 020.

**Credits: 3 Lecture: 3**

**AV 150 - AERODYNAMICS**

An in-depth study of aerodynamics, beginning with a brief history of the development of flight and flight theory. The physics of lift, drag, weight and thrust are related to airfoil and aircraft design and operational characteristics. Aircraft stability and control are related to aircraft performance and safety. Students will demonstrate their knowledge of aerodynamics through projects in which they predict aircraft performance. Recommended preparation: MTH 085, MTH 111 or higher.

**Credits: 4 Lecture: 4**

**AV 188 - SPECIAL STUDIES: AVIATION**

Explores topics of current interest in the discipline.

**Credits: 1 to 5**

**AV 199 - SELECTED TOPICS: AVIATION**

This course is in development.

**Credits: 1 to 8**

**AV 200 - AVIATION LAW**

This course offers an introductory analysis of legal concepts related to the aviation industry, including aircraft operations, airports, fixed based operators (FBOs), contracts, insurance and liability, regulatory statutes and case law. The historical development of aviation law in the United States is included.

**Credits: 3 Lecture: 3**

**AV 201 - AIRPORT MANAGEMENT**

This course is a study of the development of airports and the functions and responsibilities of airport management. This course provides an historical background and studies the roles of various governmental agencies in the management and regulation of airports.

**Credits: 3 Lecture: 3**

**AV 204 - ADVANCED AIRCRAFT SYSTEMS**

Encompasses a detailed study of aircraft systems and structures and enables the student to progress into heavier, more complex single and multi-engine aircraft. Aircraft in current use by industry will be studied with an emphasis placed on operations, including emergencies. Applicable FAR and Minimum Equipment Lists, will be studied. Recommended preparation: AV 104.

**Credits: 4 Lecture: 4**

**AV 208 - METEOROLOGY II**

Focuses on application of meteorology theory and the availability, understanding and use of weather products. Emphasis is placed on maximizing aircraft performance and minimizing exposure to weather hazards. Includes examining the weather forecasting models, detailed use and interpretation of graphic weather products, access to telephone

and internet weather briefing sites and utilization of weather products. Recommended preparation: AV 108 or instructor approval.

**Credits: 4 Lecture: 4**

**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. Recommended preparation: AV 110 and/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. Recommended preparation: AV 115 and/or FAA 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. Recommended preparation: AV 110 and/or FAA Private Pilot Certificate.

**Credits: 4 Lecture: 4**

**AV 222A - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane-certified flight instructors (CFI) with ratings for single engine land, multiengine land and instrument airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule. Instructor approval required.

**Credits: 1 Lab: 3.2**

**AV 222B - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot Course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land and instrument airplane. Flight, ground, and simulator training fees apply. See Aviation program director for current fee schedule. Instructor approval required.

**Credits: 1 Lab: 3.2**

**AV 222C - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land and instrument airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule. Instructor approval required.

**Credits: 1 Lab: 3.2**



**AV 222D - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land and instrument airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule. Instructor approval required.  
**Credits: 1 Lab: 3.2**

**AV 222E - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land (MEI) and instrument (CFII) airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.  
**Credits: 1 Lab: 3.2**

**AV 222F - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land (MEI) and instrument (CFII) airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.  
**Credits: 1 Lab: 3.2**

**AV 222G - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land (MEI) and instrument (CFII) airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.  
**Credits: 1 Lab: 3.2**

**AV 222H - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land (MEI) and instrument (CFII) airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.  
**Credits: 1 Lab: 3.2**

**AV 222I - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors

(CFI) with ratings for single engine land, multiengine land (MEI) and instrument (CFII) airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

**AV 222J - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land (MEI) and instrument (CFII) airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

**AV 222K - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land (MEI) and instrument (CFII) airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

**AV 222M - AIRPLANE FLIGHT LAB**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating in single engine and multiengine airplanes. Professional Pilot students will be prepared to become airplane certified flight instructors (CFI) with ratings for single engine land, multiengine land (MEI) and instrument (CFII) airplane. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**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. Recommended preparation: AV 115 and/or FAA Private Pilot Certificate.

**Credits: 4 Lecture: 4**

**AV 227A - HELICOPTER FLIGHT LAB SERIES I**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series I pathway trains pilots in compact, lightweight helicopters. There is a pilot weight restriction of 210 lbs. due to the power limited nature of the aircraft. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

**AV 227B - HELICOPTER FLIGHT LAB SERIES I**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series I pathway trains pilots in compact, lightweight helicopters. There is a pilot weight restriction of 210



program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228B - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228C - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228D - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228E - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228F - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228G - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots

in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228H - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228I - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228J - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 228N - HELICOPTER FLIGHT LAB SERIES II**

The Professional Pilot flight labs provide ground, simulator and flight instruction and training for students desiring careers as professional pilots in the air transportation industry. The Series II pathway trains pilots in helicopters with no pilot weight restriction. The Professional Pilot course includes certification training for the commercial pilot certificate with instrument rating. Professional Pilot students will be prepared to become certified flight instructors (CFI) with the instrument (CFII) helicopter rating. Flight, ground and simulator training fees apply. See Aviation program director for current fee schedule and lab scheduling. Instructor approval required.

**Credits: 1 Lab: 3.2**

#### **AV 230 - MULTIENGINE PILOT**

Ground instruction of aeronautical skills and knowledge applicable to the private multiengine pilot certification in light twins. The course may also be taken by those pilots who have a commercial single engine rating to obtain an additional rating for commercial multiengine. Emphasis is on engine failure, multiengine aerodynamics, minimum controllable airspeed, propeller feathering, V-speeds, flight planning, decision-making, human factors and crew resource management. Recommended preparation: AV 110 and/or FAA Private Pilot Certificate.

**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. The external load phase covers the basic skills of flying with an external longline attached to the aircraft. The night vision goggle (NVG) phase will introduce the student to a new realm of flying safely at night, and will be completed using an Internet based FAA approved Part 141 training syllabus and classroom instruction. Students will also be introduced to the unique aspect of overwater operations. NVG course licensing fee applies. See Aviation program director for current course fee.

**Credits: 4 Lecture: 4**

**AV 246 - AVIATION SAFETY**

A detailed introduction into aspects of aviation safety, intended to promote flight safety in the general aviation and training environment. Topics include risk management, pilot psychology, human factors, accident trends, analysis of accident reports and safety survival.

**Credits: 3 Lecture: 3**

**AV 250 - CERTIFIED FLIGHT INSTRUCTOR-AIRPLANE**

Provides the flight instructor applicant with fundamental concepts and practice for successful flight instruction at the recreational, private and commercial pilot level. Elements include fundamentals of instruction, developing lesson plans for private pilot and commercial pilot syllabus, designing curriculum, creating objective evaluation and grading criteria, and practical application in presenting technical material in an interactive classroom setting. Two FAA airman knowledge tests are required to obtain the CFI certificate, and a third is recommended. See Aviation program director for current fees. Recommended preparation: AV 220 or FAA Commercial Pilot Certificate and Instrument Rating.

**Credits: 5 Lecture: 5**

**AV 255 - CERTIFIED FLIGHT INSTRUCTOR-HELICOPTER**

Teaches techniques of flight and ground instruction, analysis of maneuvers, aircraft performance and federal aviation regulations applicable to flight instructors. Practice instructing will be required. Student will prepare for the FAA Fundamentals of Instruction (FOI), CFI Helicopter and Advanced Ground Instructor (AGI) exams. See Aviation program director for current fee schedule. Recommended preparation: AV 225 and/or FAA Commercial Pilot Certificate.

**Credits: 5 Lecture: 5**

**AV 271 - INTRODUCTION TO UNMANNED AERIAL SYSTEMS**

This course introduces students to the history of Unmanned Aerial Systems (UAS) and surveys current UAS platforms, sensors, terminology, challenges to integrating unmanned systems into the national airspace system, operational theory, and the Federal Aviation Administration (FAA) certificate of authorization (COA) process. Instructor approval required.

**Credits: 4 Lecture: 2 Other: 4**

**AV 272 - UNMANNED AERIAL SYSTEMS (UAS) OPERATIONS**

Surveys current UAS platforms, sensors, and terminology. Explores integration and application of UAS resources in United States Airspace. Focuses on building and executing simulated operations in a noncombative environment. Recommended preparation: AV 271.

**Credits: 5 Other: 10**

**AV 273 - UNMANNED AERIAL SYSTEMS OPS MAINTENANCE**

Progression to higher level simulation and mission planning/execution. Includes a transition from the classroom setting to field operations for actual launches, recoveries and maintenance of Unmanned Aerial Systems. Recommended preparation: AV 271. Prerequisite: AV 272.

**Credits: 5 Other: 10**

**AV 288 - SPECIAL STUDIES: AVIATION**

Explores topics of current interest in the discipline.

**Credits: 1 to 5**

**AV 299 - SELECTED TOPICS: AVIATION**

This course is in development.

**Credits: 1 to 8**

## BAKING AND PASTRY ARTS

**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 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, meringues, 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, meringues, 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**

In this baking foundations class students will have the opportunity to learn basic principles and techniques involved in the production of breads and yeast risen doughs, laminate doughs and pies and tarts. Lecture and lab topics will include: the 12 stages of yeast dough production, continuing discussion on product identification and selection, wheat based flours, baker percentages, gluten development, lean straight doughs, soft crusted breads, basic laminate doughs. Students will have opportunities for hands-on learning in all of these topics. Emphasis in this course will be given to Tuckman’s Group Development Model on the “storming” stage. Prerequisites: C or better in BAK 110.

**Credits: 4 Other: 8**

**BAK 170 - BAKING AND PASTRY FOUNDATIONS III**

In this course, students will have the opportunity to learn basic principles and techniques involved in the production of quick breads and dessert foundation sauces, mixing and baking cake layers and assembling classic cakes. Students will obtain a first aid/CPR certification. Lecture topics will include menu planning with consideration of food and labor cost as well as balancing flavors and textures in desserts. Emphasis in this course



will be given to Tuckman's Group Development Model on the "norming" stage. Prerequisites: "C" or better in BAK 110.

**Credits: 4 Other: 8**

### **BAK 180 - CUSTARDS AND FROZEN DESSERTS**

Preparation techniques and production skills for a variety of custards, puddings, Bavarians and mousses, still-frozen and churn-frozen desserts, ice creams, granitas, sorbet and sherbet production and presentations. Prerequisites: "C" or better in 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 9**

### **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 to produce decorations that can embellish other desserts or artistic showpieces for display. Students will learn techniques such as tempering chocolate, use of various types of molds, making cut-out decorations, utilizing transfer sheets, that will be applied to showpieces. Students are introduced to various sugar techniques including pulled sugar such as ribbons and flowers, blown sugar to create three-dimensional shapes, spun, piped, bubble, and poured sugar and airbrushing techniques to create a variety of showpieces. Students will use a given theme upon which they must build a sugar as well as a chocolate showpiece. Prerequisite: BAK 110 or CUL 110.

**Credits: 4 Other: 8**

### **BAK 220 - WEDDING CELEBRATION AND SPECIALTY CAKES**

In this course, students learn the history of celebration cakes, such as the wedding cake, and how to make British and American-style celebration cakes, including baking, decoration and assembly work. Students will bake sponge cakes, create buttercream fillings, make gum-paste flowers, royal icing piped decorations and rolled fondant. Students will then produce wedding and celebration cakes incorporating all these elements, from design, baking and assembly to covering and decorating. Prerequisites: BAK 110 or CUL 110.

**Credits: 4 Other: 8**

### **BAK 235S - CLASSICAL FRENCH PASTRIES**

In this course, students learn to produce a wide variety of classic and modern French cakes or "entremets" suitable for large or small-scale productions using the latest assembling techniques and cost-effective production methods. These cakes will be highlighted with decorations such as silk screens, printed logos and chocolate and sugar decorations. Students will utilize updated methods of traditional French recipes using fresh ingredients. Students' cakes in this course will represent a variety of textures and flavors. Also taught will be classic French tarts, giving further practice to different elements in pastry such as different types of crusts, doughs and fillings, and will present new opportunities for combining those elements in cakes and tarts. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Prerequisites: "C" or better in CUL 140 or BAK 140.

**Credits: 4 Other: 8**

### **BAK 240 - THE CRAFT OF ARTISAN BREADS**

This course gives students the chance to learn the principles and techniques of preparing multigrain breads, sourdoughs, bagels, pretzels, holiday or seasonal breads and flat breads. Special emphasis will be placed on regional breads and breads of the world, handling grains (such as soakers) for specialty breads, mixing, shaping and finishing specialty breads and learning innovative baking methods. Emphasis in this course

will be given to Tuckman's Group Development Model on the "forming" stage. Prerequisites: "C" or better in CUL 110 or BAK 110.

**Credits: 4 Other: 8**

### **BAK 245S - ADVANCED SUGAR DECOR AND CHOCOLATE SCULPTING**

In this course students are taught a variety of chocolate and sugar decorations and sculpting techniques to produce decorations that can embellish other desserts or artistic showpieces for display. They will learn techniques such as applying chocolate colors with a spray gun, use of various types of molds, making cut-out decorations and silk screens, that will be applied to showpieces. Students are introduced to various sugar techniques such as pastillage, saturated sugar, pulled sugar such as ribbons and flowers, blown sugar to create three-dimensional shapes, spun, piped, bubble, straw, and poured sugar, and airbrushing techniques to create a variety of showpieces. Students will use a given theme upon which they must design and build a sugar as well as a chocolate showpiece. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Prerequisites: "C" or better in BAK 210.

**Credits: 4 Other: 8**

### **BAK 250 - PETIT FOURS, CANDIES AND CLASSICAL MIGNARDISE**

In this course students will learn how to make individual mini French pastries and petits fours such as the traditional éclair, fruit and lemon tartlettes, macaroons and madeines. This course will allow students to practice many different types of elements used in French pastry such as pastry cream, buttercream, glazes, cream-based fillings, fruit-based fillings, chocolate-based fillings and doughs. Students will also learn how to present a beautiful display of their petits fours. Students learn how to make sugar confectioneries, such as pâte de fruit (fruit pastes) in a variety of flavors, guimauve (marshmallow), praliné, caramels with salted butter, chocolate caramels, nougats, lollipops and gummies. Students will also learn how to properly package their candies and how to display them. Emphasis in this course will be given to Tuckman's Group Development Model on the "forming" stage. Prerequisites: "C" or better in 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 280 - BAKING AND PASTRY ARTS INDUSTRY INTERNSHIP**

This course serves as a 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 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 Baking and Pastry Arts. Prerequisites: "C" or better in 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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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; 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 - SS: BIOLOGY

Explores topics of current interest in the discipline.

**Credits: 1 to 6**

### BI 205 - SCIENTIFIC TERMINOLOGY:

#### LATIN AND GREEK 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. Prerequisite: BI 211 with a "C" or better.

**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. Prerequisite: BI 211 with a "C" or better.

**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. Prerequisite: WR 065 or WR 095 with a "C" or better, or Reading or Writing placement test scores that place the student 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. Prerequisite: BI 231 with a grade of "C" or better.

**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. Prerequisite: BI 232 with a "C" or better.

**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. Prerequisite: Completion of WR 065 or higher with a "C" or better or placement testing in WR 095 or higher.

**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. Instructor approval required.

**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**

## BOTANY

### BOT 203 - GENERAL BOTANY

Surveys flowering plant families by identification of local flora and the use of taxonomic keys. Studies floral morphology, history and development of classification and systematics. Recommended preparation: BI 103 or BI 212.

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

## 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. Prerequisite: "C" or better in MTH 060, MTH 060 equivalency met, or appropriate placement exam score.

**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. Prerequisite: MTH 060 or higher.

**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. Prerequisite: BA 111.

**Credits: 3 Lecture: 3**

### BA 113 - APPLIED ACCOUNTING III

Continuation of Applied Accounting II. Provides students with an in-depth, more detailed background of specific areas of accounting so that they will be able to effectively deal with most accounting situations as they relate to all business forms. Prerequisite: 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. Prerequisite: 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 recommended 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. Recommended preparation: completion of most Level I and Level II classes from the AAS degree. Instructor approval required.

**Credits: 1 to 3**

### 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. Instructor approval required.

**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 regard 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**

**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 either 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 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, 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 in 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.

**Credits: 4 Lecture: 4**

**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. May be repeated once. Instructor approval required.

**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 the student 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 113, BA 206, BA 220, 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.

Prerequisite: MTH 095 or MTH 111 or higher, or math placement test score that places the student into MTH 111 or above. Not designed for science majors.

**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. Prerequisite: CH 104 or equivalent, passed with a "C" or better. Not designed for science majors.

**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. Prerequisite: CH 105 or equivalent, completed with a "C" or better.

**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. Prerequisite: MTH 111, 112, 113, or 251 or higher or math placement test score that places the student above MTH 111.

**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. Prerequisite: CH 221 with a "C" or better.

**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. Prerequisite: CH 222 with a "C" or better.

**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**

The first course of a three-course sequence in introductory Mandarin Chinese language and culture class. The course begins with an introduction to the sound system of Mandarin Chinese and moves on to basic skills in listening, speaking, reading and writing. The course will focus particular attention to pronunciation and students will begin to identify and write a limited number of Chinese characters.

**Credits: 4 Lecture: 4**

**CHN 102 - MANDARIN CHINESE II**

The second course of a three-course sequence in introductory Mandarin Chinese language and culture class. The course aims at further developing all fundamental language skills (listening, speaking, reading and writing) in communicative context. Many aspects of everyday Chinese culture will be introduced to expand cultural awareness and understanding. In addition to improving pronunciation, students will learn to read and write short passages utilizing approximately 100 - 150 characters about simple everyday activities. Recommended preparation: CHN 101 or instructor approval.

**Credits: 4 Lecture: 4**

**CHN 103 - MANDARIN CHINESE III**

The third course of three-course sequence in introductory Mandarin Chinese language and culture class. The course aims at expanding on effective communicative skills in both the written and spoken language and understanding the practices and products of native Chinese culture. The course will focus particular attention to handling uncomplicated social situations and will expand on writing and reading to meet a number of practical everyday needs. Recommended preparation: CHN 102 or instructor approval.

**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 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. Recommended preparation: CHN 103 and CHN 110 or instructor approval.

**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. Recommended preparation: CHN 201 or instructor approval.

**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. Recommended preparation: CHN 202 or instructor approval.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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. Pass/No pass 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. Pass/No pass 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 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, 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 125A1 - AUTOCAD 1**

First course in a two-term sequence introducing AutoCAD software as a drafting tool. Instruction will be given in file handling, basic command function, drafting techniques, presentation and plotting. Architectural and mechanical applications will be used in lab exercises to demonstrate AutoCAD commands. Work will be completed with AutoCAD.

Recommended preparation or recommended to be taken with: CIS 120.

**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 125DW - INTRODUCTION TO DREAMWEAVER**

Explores the skills necessary to become an Adobe Certified Associate (ACA) in web authoring using Adobe Dreamweaver. Outcomes include an overall understanding of Dreamweaver as well as setting project requirements and identifying, building and evaluating rich communication elements. Recommended preparation: CIS 120.

**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, CIS 131.

**Credits: 4 Lecture: 3 Other: 2**

**CIS 125FL - INTRODUCTION TO FLASH**

Explores the skills necessary to become an Adobe Certified Associate (ACA) in interactive media using Adobe Flash. Outcomes include an overall understanding of Flash as well as setting project requirements and identifying, building and evaluating rich media elements. Recommended preparation: CIS 120.

**Credits: 4 Lecture: 3 Other: 2**

**CIS 125G - PHOTOSHOP**

Covers the learning objectives as outlined by Adobe to become an Adobe Certified Associate (ACA) in visual communication using Adobe Photoshop. Outcomes include an overall understanding of Photoshop as well as setting project requirements, identifying design elements, manipulating images and evaluating digital images. Recommended preparation: CIS 120.

**Credits: 4 Lecture: 3 Other: 2**

**CIS 125I - ADOBE ILLUSTRATOR**

This class is consistent with objectives for the Adobe Certified Associate (ACA) in graphic design & illustration and will provide instruction in drawing, editing and layout techniques using Adobe Illustrator. Students are introduced to the basic illustrator tools, composition rules and complete vector-based projects such as simple illustrations, logotype, posters and postcards. Recommended preparation: CIS 120.

**Credits: 4 Lecture: 3 Other: 2**

**CIS 125V - VISIO**

This course is an introduction to Microsoft Visio, a vector-based illustration tool. Students will learn fundamental skills while creating several types of basic diagrams including workflows, flowcharts, organizational charts, directional maps, network and floor plans. Recommended preparation: CIS 120.

**Credits: 4 Lecture: 3 Other: 2**

**CIS 125WA - WEB ANIMATION**

Explores the tools and technologies used to create vector and bitmap web animations, as well as how to create interactivity in rich web content. Class topics include: keyframe and path-based motion graphics, vector vs. bitmap images, programming interactivity for rollover buttons, special effects and sound. The course will also cover the principles of two dimension animation and its uses on the web. Students will make effective computer animations that can be marketed and delivered through the web. Recommended preparation: CIS 120.

**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. Prerequisite: 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**

Expands 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. Prerequisite: 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 webpages. Students learn basic program design and construction techniques. Prerequisite: CIS 122 or instructor approval. Recommended preparation: CIS 195 and CIS135DB.

**Credits: 4 Lecture: 3 Other: 2**

**CIS 135A1 - AUTODESK REVIT 1**

Introduces fundamental aspects of architectural drafting with AutoDESK Revit software. Covers drafting of residential and light commercial buildings, sections and elevations, schedules, design layouts, details and working drawings. Recommended preparation: CIS 125A1.

**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 125A2.

**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**

This course is an introduction to engineering graphics as used for the communication of concepts in design and manufacturing. Practical applications using solid modeling software will be used to capture design intent and to generate engineering drawings. Adherence to industrial standards and formats will be maintained.

**Credits: 4 Lecture: 3 Other: 2**

**CIS 135S2 - SOLIDWORKS 2**

This course continues the discussion of engineering graphics as used for the communication of concepts in design and manufacturing. Practical applications using solid modeling software will be used in comprehensive assemblies, working drawing sets, sheet metal modeling, weldments, content reuse, functional design and assembly simulation. Adherence to industrial standards and formats will be maintained.

**Credits: 4 Lecture: 3 Other: 2**

**CIS 140 - A+ ESSENTIALS I**

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. Corequisite: 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 CompTIAs 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. Corequisite: 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. Prerequisite: 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, 1Pv4 and 1Pv6 static and dynamic routing, OSPFv2 and OSPFv3, DHCP and DNS for 1Pv4 and 1Pv6, NAT, and access-lists for 1Pv4 and 1Pv6. The lecture/lab environment allows the student the opportunity to practice skills learned throughout the term. Prerequisite: 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 curricula, 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. Prerequisite: 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, CIS145.

**Credits: 4 Lecture: 3 Other: 2**

**CIS 188 - SPECIAL STUDIES I**

Explores topics of current interest in the discipline.

**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.

**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, 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. Instructor approval required.

**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. Recommended preparation: CIS 133JS. Prerequisite: CIS 133P.  
**Credits: 4    Lecture: 3    Other: 2**

### **CIS 235 - IT IN BUSINESS**

Uses advanced software features in Word, Excel, PowerPoint and Access to solve and analyze business problems using integration of the applications in a business environment. Recommended preparation: CIS 120 and CIS 131.  
**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, CIS 135DB.  
**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 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. Prerequisite: 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. Recommended preparation: CIS 279L. Prerequisite: CIS 179.  
**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. Prerequisite: CIS 279SC.  
**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. Prerequisite: 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 a student's 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 (a minimum of 33 clock hours of work for each credit hour earned). Instructor approval required.  
**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. Prerequisite: CIS 154C or CCNA certification.  
**Credits: 4    Lecture: 3    Other: 2**

### **CIS 284EH - ETHICAL HACKING**

Using Linux operating system, this course will prepare the student in network penetration testing methodologies to help businesses discover and mitigate security weaknesses. Students will learn techniques such as: packet sniffing, port scanning, Google hacking, web application attacks, buffer overflow attacks, password attacks, exploits, the Metasploit framework, tunneling and port redirection and a wide variety of software security tools and methods. Prerequisite: CIS 279L.  
**Credits: 4    Lecture: 3    Other: 2**

### **CIS 288 - SPECIAL STUDIES II**

Explores topics of current interest in the discipline.  
**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.  
**Credits: 1 to 4**

**CIS 299 - SELECTED TOPICS: CIS**

This course is in development.

**Credits: 1 to 7**

## 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 and MTH 095 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/review several basic programming constructs: 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. Prerequisite: CS 161; Prerequisite with concurrency: MTH 231. Corequisite: MTH 231.

**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. Prerequisite: 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 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 student 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. Instructor approval required.

**Credits: 1 to 12**

**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 U.S.'s, 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 U.S.'s criminal justice system. This course examines the best and most recent research on patterns of criminal behavior and victimization, police practices, court processing and sentencing, the death penalty and correctional programs, while making every effort to incorporate discussion of all major race groups found in

the United States. Additionally, this course will outline the current federal regulations regarding cultural competence in professional practice.

**Credits: 4 Lecture: 4**

### **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 U.S. 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. Equips 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 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. Recommended preparation: sophomore standing, a minimum of 12 credit hours completed in criminal justice courses. Instructor approval required

**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) Instructor approval required. Prerequisite: CJ 280.

**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). Instructor approval required. Prerequisite: CJ 281.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

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## **CULINARY ARTS**

### **CUL 090 - APPLIED MATH FOR CULINARY ARTS**

In this course, students will learn mathematics critical to the discipline of Culinary Arts and Baking and Pastry Arts. The list of topics to be covered includes the following: metric system of measurement, unit conversion, yield testing and percentages, calculating food and beverage costs, recipe scale and conversions, and kitchen ratios. Also this course will include basic algebraic concepts with culinary applications, basic statistics and graphing, and graphing in a rectangular coordinate system. Most of the material within this course will be sourced from the course textbook; however, some material will be introduced in class in the form of labs and interactive learning activities that relate directly to the discipline. Instruction will be provided by the Mathematics department in cooperation with a Cascade Culinary Institute chef instructor. Prerequisite: MTH 020 with a "C" grade or above or placement exam score that places the student in MTH 060 or above.

**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**

This course enables the student to implement and uphold national food and safety standards. The primary focus of the course is to highlight what causes foodborne illnesses and how to prevent them. Students will learn how to handle foodborne illness outbreaks and emergencies. This class is the basis for any job in the hospitality industry. Students will complete the National Restaurant Association Educational Foundation (NRAEF) ServSafe final examination and receive a certificate as part of this course.

**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**

Execute classical knife cuts at an accelerated rate with increased accuracy. Exposure to advanced terminology, flavor profiling and development, and ratio usage will serve as themes within this course. Emphasis will be placed upon food science principles and how they relate with the systematic process of the primary cooking techniques, station organization, workflow and overall time management. Proper use of commercial equipment and understanding of ingredients, measurement, formulas and building individual confidence within a professional kitchen will aid in constructing a sound foundation of basic skills. Competency-based learning activities include the preparation of classical mother

sauces, contemporary sauces, vegetables, grains and eggs. Sanitation and safety, professionalism, organization and the competency-based learning activities serve as the primary function of the student's educational experience. Prerequisite: CUL 110.

**Credits: 4 Other: 8**

### **CUL 170 - CULINARY FOUNDATIONS III**

This course builds on the techniques and principles demonstrated in both the Culinary Foundations I and II courses. Basic knife skills will continue to be exercised as an integrated learning activity within each competency. Within this course, knife skills and cooking technique at a repetitive level is designed to build student confidence and skill via repetition. Utilization of sound step-by-step processes as it relates to the primary techniques will be highly emphasized within this course. Flavor profiling and pairing are further discussed and applied. Students will have the opportunity to develop skills in the identification, butchery and fabrication used in cooking of a variety of meat, poultry and seafood products. Small sauce production and the preparation of vegetables, grains, legumes and pastas are emphasized within this course. Students will apply modern composition and presentation techniques utilized in the restaurant industry. Prerequisite: CUL 140.

**Credits: 4 Other: 8**

### **CUL 180 - MODERN GARDE MANGER**

Preparation of classical and modern cold food preparations, salads or other smaller plates. Within the context of this course, garde manger represents an introduction to the cold kitchen. Students will learn how to prepare canapés, hot and cold hors d'oeuvres, appetizers, salads, sandwiches and a diversity of forcemeats; the role of garnishes, food preservation and ice sculpture centerpiece skill development. Students will also learn contemporary styles of presenting food for a buffet setting. Prerequisite or concurrency: CUL 140.

**Credits: 4 Other: 8**

### **CUL 188 - SPECIAL STUDIES CULINARY ARTS**

Explores topics of current interest in the discipline.

**Credits: 9**

### **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 and put previously learned skills into practice in the College's dining room. This course will emphasize 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. Prerequisite: CUL 140 or BAK 140.

**Credits: 5 Lecture: 2 Lab: 9**

### **CUL 220 - INTERNATIONAL CUISINE AND GLOBAL FLAVOR PROFILING**

Traces common global ingredients used in many regional dishes. It combines lecture, demonstration, production and presentation as the means to explore other cultures through the understanding of global culinary heritages. The attitudes and tastes of the more global and knowledgeable customers sets a greater expectation of balance in a professional culinarian's repertoire. Students examine food in the context of culture, geography, history and the influences cuisines have had on each other. Prerequisite: CUL 140.

**Credits: 4 Other: 8**

### **CUL 225 - APPLIED HARVESTING AND FOOD PRESERVATION PRINCIPLES**

This course is intended to serve 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.

**Credits: 4 Other: 8**

### **CUL 230 - CULINARY NUTRITION AND APPLIED TECHNIQUES OF HEALTHY COOKING**

Serves as an introduction to viewing nutrition through the lens of food and cooking. Emphasis will be placed upon the relationship between the preparation of flavorful food and its impact upon the body. Current dietary guidelines, along with the function of nutrients within the body, will be discussed. Modern healthy cooking techniques will be executed in the lab portion of this course with the intent to expose students to meeting the nutritional needs and requests of health conscious diners. Exposure to menu and recipe design will be covered, as students will learn how to reengineer classical recipes and present healthful and flavorful alternatives. Prerequisite: CUL 140 or BAK 140.

**Credits: 4 Other: 8**

### **CUL 235S - FARM-TO-TABLE AND SUSTAINABLE CUISINE PRACTICES**

Serve 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. Prerequisite: CUL 200.

**Credits: 4 Other: 8**

### **CUL 240 - BUTCHERY**

This course will introduce students to the subject of meats and their application in foodservice operations. Through lectures, demonstrations, hands-on activities and reviews, students will learn about the muscle and bone structure of beef, veal, pork, lamb, game, poultry and specialty meats, fabrication methods for sub-primal and foodservice cuts, and proper tying and trussing methods. Lectures will introduce meat inspection, quality and yield grading, costing and yield testing, purchasing specifications, and basic information concerning the farm-to-table trail. Discussions will include preferred cooking methods for all meats, proper knife selection and butchery equipment. Sanitation and safety standards will be stressed throughout. Prerequisite: CUL 170.

**Credits: 4 Other: 8**

### **CUL 245S - MODERNIST CUISINE AND THE EVOLUTION OF COOKING**

This course introduces students to the scientific investigation of cooking from the ground-breaking work of Nicholas Kurti through today's leading proponents, Grant Achatz, Ferran Adria and Heston Blumenthal. Techniques of specification, thermal immersion, liquid nitrogen for flash freezing, hydrocolloids for thickening and gelling will be applied in the kitchen to a variety of foods. Food pairing methods will be reviewed 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. Prerequisite: 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**

Culinary Arts AAS students facilitate the food production and service of the student-operated restaurant within the Cascade Culinary Institute. The food items are prepared using techniques and knowledge learned in all classes taken during their culinary education. Students are evaluated on the skills needed to support the service of a fine dining meal: 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 designed to serve as an expression of all the competencies learned within the program, and to provide a final opportunity for assessment and instructor evaluation of student skill sets prior to graduation. As a practical final, students are evaluated on the skills needed to create a fine dining banquet for local patrons within the student-operated restaurant. Culinary Arts students produce the banquet twice during the term, once for faculty evaluation and review, which is integrated into the student operated restaurant service. The second buffet serves as a showcase intended to include family and community members. All students must create and present a cost analysis, nutrition analysis, production schedule and recipe book as part of the final buffet. Prerequisites: CUL 170 or BAK 170, 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. Prerequisite: CUL 140.

**Credits: 6 Other: 20**

### **CUL 298 - INDEPENDENT STUDY: CULINARY**

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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: Choose either 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 furthers 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 - INTRODUCTION TO DENTAL OFFICE MANAGEMENT**

Covers key competencies related to office practices and administrative responsibilities of the dental assistant as identified by the American Dental Association. Covers dental record preparation and maintenance, applicable computer applications, legal issues, general office management principles and professionalism in the dental office. Provides related instruction in computation. Teaches cover letter and resume writing, interviewing skills and HIPAA regulations. See DA 131 for third term Dental Assisting program prerequisites. Corequisites: DA 131, DA 160, DA 182, DA 191.

**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 prerequisites. Corequisites: DA 120, DA 130, DA 135, DA 151, DA 190.

**Credits: 1 Lecture: 1**

**DA 182 - DENTAL SEMINAR II**

Seminar 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. Student will also prepare for the Dental Assisting National Board (DANB) General Chairside Exam. See DA 131 for third term Dental Assisting program prerequisites. 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. 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. Prerequisite: 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: 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 3**

#### 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 recommended 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 recommended to be taken with: WR 121 and MTH 065.

**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 restructure of global economies; economic development and problems of developing nations. Prerequisite: 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. Prerequisite: 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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

## EDUCATION

#### ED 112 - CHILDREN'S LITERATURE & 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 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 eight 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 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 EARLY CHILDHOOD EDUCATION**

Introduces communication skills needed to enhance partnerships between families, schools and communities in early childhood education. Three hours of supervised weekly field placement required.

**Credits: 3 Lecture: 2 Other: 3**

**ED 172 - LANGUAGE AND LITERACY IN EARLY CHILDHOOD EDUCATION**

Covers language and literacy development as it relates to early childhood education. Also covers the history of literacy development, the family's role, how young children learn to read and write, using books with children, concepts of print, comprehension, differing abilities in literacy development and the role of observation and assessment. Three hours of supervised weekly field placement required. Recommended preparation: ED 140.

**Credits: 3 Lecture: 2 Other: 3**

**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 EDUCATION**

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 3**

**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 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 250 - ADVANCED CURRICULUM DEVELOPMENT & TEACHING METHODS IN EARLY CHILDHOOD EDUCATION**

Compares and contrasts various teaching methods for children ages three to eight 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.

**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. Recommend preparation: "C" or higher in ED 261.

**Credits: 3 Other: 9**

**ED 265 - CHILDREN AT RISK**

Issues of child abuse are presented from the multidisciplinary perspectives of education, criminal justice and psychology. Topics covered include definition 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 five 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 adapted 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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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**

Prepares the EMT 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 EMTs, anatomy and physiology, medical emergencies, trauma, special considerations for working in the prehospital setting, and providing patient transportation. Required prior to registration: pass a criminal background check and provide current HealthCare provider CPR card and vaccination records. Completion of WR 060 or higher or a placement testing score of 66 or higher. Completion of MTH 020 or higher or placement score of 75 or higher. Instructor approval required.

**Credits: 5 Other: 10**

**EMT 152 - EMERGENCY MEDICAL TECHNICIAN PART B**

Prepares the EMT 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 EMTs, anatomy and physiology, medical emergencies, trauma, special considerations for working in the prehospital setting and providing patient transportation. Required prior to registration: current HealthCare provider CPR card and vaccination records and EMT 151 from COCC within one academic year. Instructor approval required.

**Credits: 5 Other: 10**

**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 background check, and complete clinical site required immunizations to enroll in 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 pre-hospital 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. Successfully complete EMT 163 with a C+ or better with in the current or previous academic year at COCC.

**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**

This is a mandatory introductory course for all students seeking to enter the EMS degree program. This course is also very helpful for those students wishing to have a successful career in emergency services. This will offer tools that are essential in the daily activity as a firefighter, law enforcement officer or EMT. This course includes a broad-based overview of the elements that make up a safe and successful emergency response.

**Credits: 2 Other: 4**

**EMT 188 - SPECIAL STUDIES:****EMERGENCY MEDICAL TECHNICIAN**

Explores topics of current interest in the discipline.

**Credits: 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: 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. Students 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 required.

**Credits: 4**

**EMT 280A - PARAMEDIC CO-OP WORK EXPERIENCE**

This is a one 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 field 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. Department approval required.

**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 four 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 four credits of CWE for completion of the Paramedicine 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 and EMT 295. Department approval required.

**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 four 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 four credits of CWE for completion of the Paramedicine 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 and EMT 295. Department approval required.

**Credits: 3**

**EMT 288 - SPECIAL STUDIES:  
EMERGENCY MEDICAL TECHNICIAN**

Explores topics of current interest in the discipline.

**Credits: 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. Corequisite: 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. Corequisite: EMT 290.

**Credits: 3 Other: 10.8**

**EMT 292 - PARAMEDIC PART II**

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 with a grade of "C" or better. Corequisite: 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 with a grade of "C" or better. Corequisite: 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 with a grade of "C" or better. Corequisite: 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 with a grade of "C" or better. Corequisite: 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 required.

**Credits: 1 Other: 2**

**EMT 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. Department approval required.

**Credits: 1 Other: 2**

**EMT 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. Department approval required.

**Credits: 1 Other: 2**

**EMT 299 - SELECTED TOPICS:  
EMERGENCY MEDICAL TECHNICIAN**

This course is in development.

**Credits: 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, Thevenin and Norton equivalent circuits, maximum power transfer, operational amplifiers, inductance, capacitance and transient response of RL and RC. Recommended preparation: PH 202/212, 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, Thevenin's and Norton's equivalent circuits, sinusoidal steady-state power calculation and balanced three-phase circuits. Recommended preparation: ENGR 201, 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, PH 201/211.

**Credits: 4 Lecture: 3 Lab: 2**

**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, MTH 252.

**Credits: 4 Lecture: 3 Lab: 2**

**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: MTH 252, ENGR 211.

**Credits: 4 Lecture: 3 Lab: 2**

**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: 2**

**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: 2**

**ENGLISH & LITERATURE****ENG 104 - INTRODUCTION TO LITERATURE: FICTION**

Explores human purposes, literary structures, cultural values and rich varieties of the short story and the novel. Close reading, interpretation and evaluation of selected works of fiction, with attention to authors' contexts, creative process, narrative elements (such as theme, character, plot, point of view, setting, symbol and style) and reader responses. 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**

**ENG 108 - WESTERN WORLD LITERATURE: MIDDLE AGES**

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.

**Credits: 4 Lecture: 4**

**ENG 109 - WESTERN WORLD LITERATURE: MODERN**

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.

**Credits: 4 Lecture: 4**

**ENG 188 - SPECIAL STUDIES: LITERATURE**

Explores topics of current interest in the discipline.

**Credits: 1 to 4**

**ENG 199 - SELECTED TOPICS: LITERATURE**

This course is in development.

**Credits: 1 to 4**

**ENG 201 - SHAKESPEARE**

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.

**Credits: 4 Lecture: 4**

**ENG 202 - SHAKESPEARE**

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.

**Credits: 4 Lecture: 4**

**ENG 204 - SURVEY BRITISH LITERATURE I**

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.

**Credits: 4 Lecture: 4**

**ENG 205 - SURVEY BRITISH LITERATURE II**

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.

**Credits: 4 Lecture: 4**

**ENG 212 - AUTOBIOGRAPHY**

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.

**Credits: 4 Lecture: 4**

**ENG 221 - INTRODUCTION TO CHILDREN'S LITERATURE**

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.

**Credits: 4 Lecture: 4**

**ENG 232C - TOPICS IN AMERICAN LITERATURE: CONTEMPORARY FICTION**

In-depth study of several works of contemporary (late 20th/21st century) American fiction. Recommended preparation: WR 121.

**Credits: 4 Lecture: 4**

**ENG 232M - TOPICS IN AMERICAN LITERATURE: LITERATURE & MEDICINE**

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.

**Credits: 4 Lecture: 4**

**ENG 250 - INTRODUCTION TO FOLKLORE AND MYTHOLOGY**

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.

**Credits: 4 Lecture: 4**

**ENG 253 - SURVEY AMERICAN LITERATURE I**

Reading and interpretation of writings from the diverse cultures which inhabited, colonized or developed the U.S. 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.

**Credits: 4 Lecture: 4**

**ENG 254 - SURVEY AMERICAN LITERATURE II**

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.

**Credits: 4 Lecture: 4**

**ENG 256 - FOLKLORE AND U.S. POPULAR CULTURE**

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.

**Credits: 4 Lecture: 4**

**ENG 260 - INTRODUCTION TO WOMEN WRITERS**

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.

**Credits: 4 Lecture: 4**

**ENG 288 - SPECIAL STUDIES: LITERATURE**

Explores topics of current interest in the discipline.

**Credits: 1 to 4**

**ENG 299 - SELECTED TOPICS: LITERATURE**

This course is in development.

**Credits: 1 to 4**

## ETHNIC STUDIES

**ES 199 - SELECTED TOPICS: ETHNIC STUDIES**

Selected topics in Ethnic Studies.

**Credits: 1 to 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 Chican@/Latin@ communities. Recommended preparation: WR 121.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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

Enhances student enjoyment and understanding of film through exploring the cinematic languages of acting, directing cinematography and narrative. Recommended preparation: WR 121.

**Credits: 3 Lecture: 3**

### 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**

## FISH & WILDLIFE

### 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. Instructor approval required.

**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**

### FW 251 - WILDLIFE CONSERVATION

Introduces fundamentals of wildlife ecology and management and their role in wildlife conservation. Examines history of wildlife management, current issues and case examples in wildlife conservation. Recommended preparation: WR 121.

**Credits: 3 Lecture: 3**

## FOODS & NUTRITION

### FN 225 - HUMAN NUTRITION

In-depth introduction to the science of nutrition, stressing characteristics of nutrients and their food sources. Examines digestion, absorption and metabolism of nutrients. Includes individualized diet analysis and current-interest topics including weight management and some disease therapies. Emphasis is placed on use of scientific research criteria for evaluation of current nutrition articles.

**Credits: 4 Lecture: 4**

## FORESTRY

### FOR 100 - FORESTRY PROGRAM ORIENTATION

Provides students with an orientation to the Forest Resources Technology program. The course is designed to give students knowledge and tools to succeed in the Forest Resources AAS, the natural resources work force and in an academic career beyond COCC. The course is required of all students seeking the Forest Resources Technology AAS degree, and is highly recommended for students in the Wildland Fire program.

**Credits: 1 Lecture: 1**

### FOR 110 - WILDLAND FIRE SCIENCE I

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.

**Credits: 2 Lecture: 1 Lab: 3**

### FOR 111 - FORESTRY PERSPECTIVES

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.

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

### FOR 126 - FIELD STUDIES PACIFIC NW FORESTS

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.

**Credits: 1 Lab: 3**

### FOR 127 - PLANTS OF THE PACIFIC NORTHWEST

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.

**Credits: 1 Lab: 3**

### FOR 130 - CHAINSAW USE AND MAINTENANCE

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.

**Credits: 2 Lecture: 1 Lab: 3**

### FOR 180 - CO-OP WORK EXPERIENCE FORESTRY

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.

**Credits: 1 to 7**

### FOR 188 - SPECIAL STUDIES: FORESTRY

Explores topics of current interest in the discipline.

**Credits: 1 to 3**

### FOR 195 - WILDERNESS CONCEPTS

Introduction to concepts of wilderness and wilderness management principles. Introduction to the history of wilderness and the National Wilderness Preservation System.

**Credits: 2 Lecture: 2**

### FOR 199 - SELECTED TOPICS: FORESTRY

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. Prerequisite: instructor approval. Maximum of three credits may be applied to degree.

**Credits: 1 to 5**

#### **FOR 208 - SOILS: SUSTAINABLE ECOSYSTEMS**

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.

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

#### **FOR 209 - FIRE ECOLOGY AND EFFECTS**

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.

**Credits: 3 Lecture: 2 Lab: 3**

#### **FOR 210 - WILDLAND FIRE SCIENCE II**

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.

**Credits: 2 Lecture: 1 Lab: 3**

#### **FOR 211 - SUPERVISION AND LEADERSHIP**

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.

**Credits: 3 Lecture: 3**

#### **FOR 215 - FOREST RESOURCE CAPSTONE**

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. Instructor approval required.

**Credits: 3 Lecture: 1.5 Lab: 4.5**

#### **FOR 230A - MAP, COMPASS AND GPS**

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.

**Credits: 3 Lecture: 2 Lab: 2**

#### **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, FOR 237. Recommended preparation: MTH 086 or higher, FOR 235, FOR 236.

**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 plant 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, 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**

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 a sequence of FOR 271, FOR 272 and FOR 273. Recommended preparation: FOR 271, FOR 272 and FOR 235.  
**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**

Designed for beginners. Emphasizes active communication in French. Develops students' basic skills in listening, reading, writing and speaking. Should be taken in sequence. This course is for students who have no experience with French. Students who have previously learned French should contact the instructor for advice on which class to take.  
**Credits: 4    Lecture: 4**

**FR 102 - FIRST YEAR FRENCH II**

Continues the development of reading, writing, listening and speaking skills. Students are expected to have completed FR 101 material, and are encouraged to review FR 101 concepts and vocabulary prior to class. Recommended preparation: FR 101, one year of high school French, or instructor approval. Course should be taken in sequence. Students who have previously learned French should contact the instructor for advice on which class to take.  
**Credits: 4    Lecture: 4**

**FR 103 - FIRST YEAR FRENCH III**

Continues the development of reading, writing, listening and speaking skills. Students are expected to have completed FR 102 material, and are encouraged to review the concepts of FR 101 and FR 102 prior to class. Successful completion of this sequence (FR 101-103) prepares students for entry into second-year level at COCC or any other university. Recommended preparation: FR 102, two years of high school French, or instructor approval. Students who have previously learned French should contact the instructor for advice on which class to take.  
**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, three years of high school French, or instructor approval.  
**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 201, four years of high school French, or instructor approval.  
**Credits: 4    Lecture: 4**

**FR 203 - SECOND YEAR FRENCH III**

Continues the work of FR 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, regionalisms and argot; class taught mostly in French. Course should be taken in sequence. Recommended preparation: FR 202 or equivalent, one year of IB, AP French in high school, 4+ years of French, or instructor approval.  
**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, equivalent, 2 years of high school French, or instructor approval.  
**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, 3+ years of high school French, or instructor approval.  
**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, 4+ years of French, or instructor approval.  
**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.  
**Credits: 1 to 4**

## GENERAL SCIENCE

**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: Placement into WR 065 or higher.

**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: writing placement test score that places the student in 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. Evaluates 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. Evaluates 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. Usually offered Winter term.

**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 265 - 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. Usually offered Fall and Winter terms.

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

**GEOG 266 - ARC GIS**

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. Usually offered Fall term. Recommended preparation or to be taken with GEOG 265.

**Credits: 5 Lecture: 4 Other: 2**

### **GEOG 267 - GEODATABASE DESIGN**

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. Usually offered Spring term. Recommended preparation: GEOG 266.

**Credits: 5 Lecture: 4 Other: 2**

### **GEOG 270 - MAP INTERPRETATION AND DESIGN**

Looks at the world of maps. How to design, interpret and critique many forms of maps. Recommended preparation: MTH 060 or equivalent.

**Credits: 4 Lecture: 4**

### **GEOG 272 - 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 273 - SPATIAL DATA COLLECTION**

Provides the skills to collect location information for the purpose of integration with a Geographic Information System. The focus is on proper utilization of Global Positioning System (GPS) receivers and data collection. Usually offered Fall term. 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 275 - GIS CAPSTONE**

Culmination GIS project. Students are presented with a set of criteria and perform all steps necessary to complete the project including: project planning, designing and developing a GIS database, data collection and editing, performing spatial analysis, creating maps, generating reports and presenting of project output. See instructor for details. Usually offered Spring term. Recommended preparation: GEOG 285 or instructor approval.

**Credits: 5 Lecture: 4 Other: 2**

### **GEOG 278 - PHYSICAL GEOGRAPHY-LANDFORMS AND WATER**

Introduction to the science of landforms and the processes that form them, including both internal and external processes, and how these processes interact and form a system. The course will survey different landform types, such as fluvial, Aeolian, glacial, volcanic, coastal, karst, and periglacial landforms and identify where, on a global basis, these landforms are likely to occur.

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

### **GEOG 279 - PHYSICAL GEOGRAPHY-WEATHER AND CLIMATE**

This course is an introduction to the sciences of meteorology and climatology. The focus of study for the meteorology section of the course will be on the troposphere, which is the layer of the atmosphere closest to the earth. The last portion of the course will study climatic classification and the relationship of climate with natural vegetation and human activity.

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

### **GEOG 280 - CO-OP WORK EXPERIENCE GIS**

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. Instructor approval required.

**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. Usually offered Winter term. Recommended preparation: CIS 122 or instructor approval.

**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. Usually offered Winter term. Recommended preparation: GEOG 266 or instructor approval.

**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. Usually offered Spring term. 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. Usually offered Spring term. Recommended preparation: GEOG 266 or instructor approval.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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, one year of high school German, or instructor approval.

**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, two years of high school German, or instructor approval.

**Credits: 4 Lecture: 4**

### **GER 188 - SPECIAL STUDIES: GERMAN**

Explores topics of current interest in the discipline.

**Credits: 1 to 4**

### **GER 201 - SECOND YEAR GERMAN I**

Continues, after GER 103, with the development of reading, writing, listening and speaking skills. Focuses on subordinating conjunctions, reflexive pronouns and verbs in the accusative and dative, genitive, adjective endings, and comparisons. Class begins with a review of GER 101, GER 102 and GER 103. Recommended preparation: GER 103, three years of high school German, or instructor approval.

**Credits: 4 Lecture: 4**

### **GER 202 - SECOND YEAR GERMAN II**

Continues with the development of reading, writing, listening and speaking skills. Focuses on the concepts of adjectives used as nouns, the simple past tense, past perfect tense, expressing wishes and expectations, the future tense, relative clauses, negations using *nicht*, *noch nicht*, *noch kein(e)*, and *nicht mehr*, verbs with fixed prepositions, *da-* and *wo-* compounds, and the subjunctive. Recommended preparation: GER 201, four years of high school German, or instructor approval.

**Credits: 4 Lecture: 4**

### **GER 203 - SECOND YEAR GERMAN III**

Continues with the development of reading, writing, listening and speaking skills. Focuses on the concepts of subjunctive I and II, expressing opinions, indirect discourse in present and past subjunctive I, the passive voice and the impersonal use of *man*, present participles, review of GER 202 grammar and vocabulary. Recommended preparation: GER 202, four years of high school German, or instructor approval.

**Credits: 4 Lecture: 4**

### **GER 298 - INDEPENDENT STUDY: GERMAN**

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

### **GER 299 - SPECIAL STUDIES: GERMAN**

This course is in development.

**Credits: 1 to 4**

## **HEALTH & HUMAN PERFORMANCE**

### **HHP 100 - INTRODUCTION TO PUBLIC HEALTH**

Covers basic elements of public health and complex ethical and political issues. Open to all COCC students who want to know more about the field of public health, what it is, how it's organized and how it works. Requirement for OSU-Cascades Exercise Science (EXSS) majors and is equal to H100 at OSU. Meets health requirements for AAOT degree and serves as an elective for any degree or certificate. Recommended Preparation: WR 065 or higher.

**Credits: 4 Lecture: 4**

### **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 185AB - ADVANCED BASEBALL

Allows students to learn and understand the rules and strategy of advanced baseball and to learn to communicate with teammates on the field, demonstrating sportsmanship. Helps improve the student overall physical conditioning, game strategies and master situational drills. Students will learn the philosophy of the game and be expected to implement assignments in game situations.

**Credits: 1 Lab: 3**

### HHP 185BA - BARRE BODY

Combines ballet & Pilates fundamentals with motivating music to improve fitness through use of ballet or body barres. 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 Lab: 3**

### HHP 185BB - SNOWBOARDING I

For beginning snowboarders. Students will learn the fundamentals of snowboarding with qualified instructors. Equipment must be provided by the student.

**Credits: 1 Lab: 3**

### HHP 185BC - SNOWBOARDING II

For intermediate to advanced snowboarders. Students will be provided instruction to enhance their current skill level. Equipment must be provided by the student.

**Credits: 1 Lab: 3**

### HHP 185BE - SNOWBOARDING III COMPETITIVE FREESTYLE RIDING

Focuses on freestyle techniques for advanced riders. Emphasis of instruction is on freestyle maneuvers, including straight airs, 180's, 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 Lab: 3**

### HHP 185BF - BASKETBALL

Accommodates all skill levels of basketball and will focus on fundamentals of the game as well as team play.

**Credits: 1 Lab: 3**

### HHP 185BJ - BRAZILIAN JUJITSU

Modified version of traditional Japanese Jujitsu and martial art sport that focuses on gaining a dominant position over your opponent. Students will learn proper techniques, using leverage, sparring and self-defense drills to gain self-confidence.

**Credits: 1 Lab: 3**

### HHP 185BS - SWIMMING I: SWIM FITNESS & TECHNIQUE

Swim Fitness and Technique helps student feel safe and comfortable in the water for at least 10 minutes at a time, incorporating and refining swimming strokes.

**Credits: 1 Lab: 3**

### HHP 185BW - BOOT CAMP FOR WOMEN

Introduction to exercises that improve cardiovascular endurance, muscular strength and flexibility in a supportive team atmosphere. Focus on improving strength and aerobic fitness, utilizing interval training, core strength, plyometrics, running, games and weights.

**Credits: 1 Lab: 3**

### HHP 185CD - 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. It is an energetic class integrating several dance styles (i.e., West African, Dance Hall, Hip-Hop) to a variety

of beats and rhythms from around the world. Cultural experience will also be taught which will benefit the mind, body and soul. This class is designed for all levels.

**Credits: 1 Lab: 3**

### HHP 185CF - CORE FUSION

Using the most effective strengthening exercises of yoga, Pilates and group fitness, this class is designed to fatigue the core with emphasis on the upper and lower abdominals, the obliques, the back, quadriceps, hamstrings, glutes and triceps.

**Credits: 1 Lab: 3**

### HHP 185CT - CIRCUIT TRAINING

General, core and cardio. Traditional circuit training class for total body conditioning that includes interval training using various equipment and core circuit training using equipment that emphasizes core-area workout.

**Credits: 1 Lab: 3**

### HHP 185CY - CYCLING: STUDIO AND MOUNTAIN

Two types of cycling modes are offered at varying times throughout the year: indoor studio cycling, and mountain biking which will include local trail systems.

**Credits: 1 Lab: 3**

### HHP 185DA - AEROBIC DANCE I

Kickboxing class incorporating traditional aerobic moves along with some resistance and abdominal training. Turbokick provides cross-training incorporating noncontact, martial arts aerobic exercises.

**Credits: 1 Lab: 3**

### HHP 185DB - AEROBIC DANCE II-BENCH/STEP

Step bench, intervals. Traditional step bench and step class which has a combination of both cardio and strength exercises and routines. Part of each class will be dedicated on the mat, emphasizing core-area workout.

**Credits: 1 Lab: 3**

### HHP 185DC - AEROBIC DANCE III-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 Lab: 3**

### HHP 185DD - DANCERCISE

High-energy class emphasizing dance movements including jazz, contemporary and salsa styles.

**Credits: 1 Lab: 3**

### HHP 185GL - GOLF

Held at local golf courses and is taught by local pro instructors. Instruction of all skill levels will be accommodated.

**Credits: 1 Lab: 3**

### HHP 185IM - INTERMEDIATE MOUNTAIN BIKING

This course is designed to build upon fundamental mountain bike skills. Trail etiquette and basic nutrition will be reviewed. Intermediate bike maintenance and advanced riding techniques will be introduced. Rides will take place on local trails. Previous mountain biking experience is necessary.

**Credits: 1 Lab: 3**

### HHP 185JG - JOGGING

Focuses on improving running skills through various running activities. Students will run at both on and off campus sites.

**Credits: 1 Lab: 3**

### HHP 185KA - KI AIKIDO

Introduces the martial art of Aikido, a form of self-defense and non-fighting. It is based upon coordination of mind and body, not only in throwing, but also in the art of falling (ukemi). Can accommodate all levels.

**Credits: 1 Lab: 3**

**HHP 185KB - ADVANCED KI-AIKIDO**

More closely explains the martial arts of Aikido and its application to daily life. Basic concepts taught in beginning Ki Aikido will continue and are now an expectation. Recommended preparation: HHP 185KA.

**Credits: 1 Lab: 3**

**HHP 185KR - TRADITIONAL JAPANESE SHOTOKAN KARATE**

Beginner class on Traditional Japanese Shotokan Karate with application of basic techniques includes blocks, kicks, punches, strikes and body movements. This course will introduce the student to the philosophy, discipline and techniques of a traditional Asian martial art from experienced instructors and lay the foundation for future development in martial arts.

**Credits: 1 Lab: 3**

**HHP 185MS - MASTERS SWIMMING**

This course is designed to strengthen swimming stroke skills to the advanced level, to introduce advanced concepts of fitness swimming and to prepare the student for lifetime participation in swimming and racing if desired. Students will attend organized masters swim team practices. Previous swimming experience expected.

**Credits: 1 Lab: 3**

**HHP 185PB - STAND UP PADDLE BOARDING**

General introduction into the world of stand-up paddle boarding. This group-class, designed for all levels, teaches the fundamentals of stand-up paddle boarding with a qualified instructor. It will introduce skills for proper paddling technique, safety considerations and trip planning. Participants should be comfortable in and around the water. Equipment provided.

**Credits: 1 Lab: 3**

**HHP 185RC - ROAD CYCLING**

This course is designed to develop fundamental road cycling skills. Road etiquette, basic nutrition, bicycle maintenance and other fitness related information will be addressed. Rides will begin and end on campus and will take place on surrounding roads. Previous cycling experience is not necessary, but a basic level of fitness will help. Offered as needed.

**Credits: 1 Lab: 3**

**HHP 185RG - BEGINNING RUGBY**

This is an activity course designed to familiarize the student with the rules, skills, strategy, fitness level and basic concepts of modern Rugby Union Football. The class will equip the student to be an informed Rugby participant.

**Credits: 1 Lab: 3**

**HHP 185SA - SKI ALPINE I**

For beginning downhill skiers. Students will learn the fundamentals of skiing with qualified instructors. Equipment must be provided by the student.

**Credits: 1 Lab: 3**

**HHP 185SB - SKI ALPINE II**

For intermediate to advanced skiers. Students will be provided instruction to enhance their current skill level. Equipment must be provided by the student.

**Credits: 1 Lab: 3**

**HHP 185SF - SOFTBALL**

Focuses on fundamental skill development and team play for all levels of players.

**Credits: 1 Lab: 3**

**HHP 185SH - STRETCH AND RELAXATION**

Introduces students to progressive stretching activities, including the value of stretching to the overall relaxation process.

**Credits: 1 Lab: 3**

**HHP 185SK - SKI CONDITIONING-NORDIC**

General performance. Two levels of conditioning: a general course for all types of groomed and off-track Nordic skiing and a performance for improving fitness and technique for racing and groomed skiing.

**Credits: 1 Lab: 3**

**HHP 185SL - SAND VOLLEYBALL**

Accommodates all skill levels of sand volleyball and will focus on skill building, team play and conditioning.

**Credits: 1 Lab: 3**

**HHP 185SR - SOCCER**

Focuses on fundamental skill development and team play for all levels of players.

**Credits: 1 Lab: 3**

**HHP 185SS - SOCCER ADVANCED**

Geared toward students demonstrating a high skill level. Recommended preparation: HHP 185SR.

**Credits: 1 Lab: 3**

**HHP 185ST - PILATES**

Familiarizes students with the awareness of core flexibility and strength, relative muscle groups and joint actions of the core. Provides 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 Lab: 3**

**HHP 185SU - PILATES - ALL LEVELS**

Includes a brief review of Pilates fundamentals or proper spine alignment, elongation, thoracic breath and core control, including the use of appropriate Pilates equipment. Class sequence of Pilates exercises with appropriate modifications for all fitness levels.

**Credits: 1 Lab: 3**

**HHP 185SW - SWIMMING FUNDAMENTALS**

Basic swim instruction for individuals with limited to no 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 Lab: 3**

**HHP 185SX - SKI X-COUNTRY I**

For beginning cross-country skiers with little or no experience. Students will learn the fundamentals of skate-skiing with a qualified instructor. Skate equipment must be provided by the student.

**Credits: 1 Lab: 3**

**HHP 185SY - SKI X-COUNTRY II**

Focus on skate-skiing for intermediate to advanced skiers. Students will improve technique and overall fitness required for groomed-trail skiing or racing. Skate equipment must be provided by student. Offered as needed.

**Credits: 1 Lab: 3**

**HHP 185TA - TENNIS I**

Focuses on skill development for beginning tennis players. Students will learn through various drills and court games.

**Credits: 1 Lab: 3**

**HHP 185TB - TENNIS II**

Geared toward students with intermediate or advanced tennis skills. Should be able to demonstrate prior experience. Recommended preparation: HHP 185TA.

**Credits: 1 Lab: 3**

**HHP 185TF - TOTAL FITNESS**

High intensity and very demanding class. Geared toward improving overall fitness.

**Credits: 1 Lab: 3**

**HHP 185TI - TAI CHI/QIGONG**

Introduces the basic techniques of Tai Chi Yang style simplified form and three Qigong exercises, as well as theories and concepts for better health and relaxation through meditation in movement. Can accommodate all levels.

**Credits: 1 Lab: 3**



**HHP 185TJ - TAI CHI/QIGONG-INTERMEDIATE**

Introduces Tai Chi Chaun Yang Style 48 form and several additional Qigong exercises for continued health and relaxation through meditation in movement, at the intermediate level. Course encourages students to incorporate daily practice into their schedules and to practice together in study groups. Recommended preparation: HHP 185TI Offered as needed.  
**Credits: 1 Lab: 3**

**HHP 185TK - TAE KWON DO**

Improves cardiovascular endurance, muscular strength and flexibility. Includes: self-defense, social, etiquette and cultural introduction of dojang.  
**Credits: 1 Lab: 3**

**HHP 185TR - 10K RUNNING**

10K training is designed to increase individual endurance through running specific workouts, strength, form work, nutrition and specific needs of each student. Previous running experience is helpful. Offered as needed.  
**Credits: 1 Lab: 3**

**HHP 185VC - VOLLEYBALL ALL LEVELS**

Focuses on fundamental skill development and team play for beginning students and continuing students who want to enhance their skill level.  
**Credits: 1 Lab: 3**

**HHP 185VD - 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 Lab: 3**

**HHP 185WA - PROGRESSIVE WALKING**

A group class designed to prepare and progressively maintain health and fitness at a target heart rate through walking.  
**Credits: 1 Lab: 3**

**HHP 185WE - WATER AEROBICS**

Introduces water aerobics which improves cardiovascular endurance, muscular strength and flexibility.  
**Credits: 1 Lab: 3**

**HHP 185WN - WILDERNESS TRAINING**

Classes under the HHP 185WN Wilderness Training course number include the following: Wilderness Training Beginning, Orienteering, Hiking and Backpacking, Snowshoeing, Beginning Rock Climbing, Intermediate Rock Climbing and Back Country Skiing. Recommended preparation for Intermediate Rock Climbing: Beginning Rock Climbing or instructor approval. See the footnote in the class schedule for further course descriptions.  
**Credits: 1 Lab: 3**

**HHP 185WT - 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 Lab: 3**

**HHP 185WW - WILDERNESS TRAINING: WATER**

Rafting I, Rafting II, Kayaking I, Kayaking II.  
**Credits: 1 Lab: 3**

**HHP 185YA - INTERMEDIATE YOGA**

Appropriate for any student who has a yoga background and is familiar with basic yoga postures, breathing and intentions. Self-exploration is enhanced through the introduction of variations of alternative movements to basic poses such as arm balances. Following a dynamic warm-up, students will participate in a flow-type session with quick movements to increase heart rate. Deep stretch and shavasana will conclude each class. Students will often work in pairs on advanced postures.  
**Credits: 1 Lab: 3**

**HHP 185YB - YOGA FOR ATHLETES**

Designed for anyone (novice to advanced) who aspires to utilize the benefits of yoga to boost their athletic performance in any sport.

Although not required, it may be helpful to have had an introductory course prior to this class. A dynamic, flow-style of Vinyasa practice linking breath and movement with modifications emphasizing safety and anatomical clarity. The practice will utilize traditional asanas (poses) to build a foundation for a robust athletic yoga tool. The importance of strength will be equally emphasized with Yin like deep-style stretching. Rest and recovery will be given equal time with an introduction to the benefits of restorative practice utilizing props (bolsters).  
**Credits: 1 Lab: 3**

**HHP 185YG - YOGA**

Introduces the basic techniques of yoga incorporating a wide range of yoga styles. Classes vary according to instructor offerings, which include Ashtanga, Hatha, Vinyasa, Yin, Restorative and Kundalini.  
**Credits: 1 Lab: 3**

**HHP 185YH - YOGA ALL LEVELS**

Appropriate for all levels. Modification and additional variation in postures for students wanting a more challenging practice, using a blend of different yoga styles.  
**Credits: 1 Lab: 3**

**HHP 185YI - YOGA/PILATES BLEND**

Focuses on a blend of two modalities, with the flexibility of yoga and core strength training of Pilates.  
**Credits: 1 Lab: 3**

**HHP 185YJ - YOGA VINYASA RISING**

Vinyasa Rising is a dynamic flow of yoga linking breath and movement for a strengthening cardio practice set to rock and popular music. Emphasis is on Ashtanga Yoga in the tradition of Sri Jayakumar Swamysree from the University of Mysore, India. A combination of Vinyasa, Vini and Ashtanga styles of yoga styles will be taught.  
**Credits: 1 Lab: 3**

**HHP 185YK - GENTLE YOGA**

This course is a gentle and restorative flow of yoga designed to heal and strengthen the body; includes various forms of breath work, postures for a more restful sleep, injury recovery, and therapeutic yoga for back and shoulders. The class will also be geared toward relaxing the mind and body, adding flexibility and allowing quiet moments during the yoga practice.  
**Credits: 1 Lab: 3**

**HHP 185ZU - 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 Lab: 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 understand and critically assess the health care delivery system, its components and the challenges created by its structure. The health care system will be considered from the perspective of patients, hospitals, doctors and health plans. This course is one of the four pre-Public Health core courses offered.  
**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. Offered as needed.

**Credits: 1 Lecture: 1**

### **HHP 212A - CPR-AMERICAN HEART ASSOCIATION HEALTHCARE PROVIDER**

Basic Life Support Healthcare Providers course teaches the skills of CPR for victims of all ages (including ventilation with a barrier device, a bag-mask device and oxygen), use of an automatic external defibrillator (AED) and relief of foreign-body airway obstruction in responsive and nonresponsive victims. The course is designed for health care providers who care for patients in a wide variety of settings, both in and out of hospital. Through the American Heart Association (AHA). Course meets the Allied Health and Nursing standards. In order to receive the AHA Healthcare Provider with Basic Life Support Certification card, one must pass a written exam and be able to physically perform all skills required for CPR.

**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. Offered as needed.

**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. Prerequisite: 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 BLS 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. Offered as needed.

**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 & HCP CPR**

The course will be devoted entirely to the instruction of First Aid & CPR. Immediate and temporary care for a wide variety of injuries, illnesses, conditions and events will be taught. Students will learn the skills of CPR for victims of all ages (including ventilation with a face shield, pocket mask and a bag-mask device), use of an automated external defibrillator (AED), and relief of choking. Both one- and two-person CPR will be taught as well as compression-only CPR. The practical exam will consist of individual hands-on testing. Upon successful completion of course (>80% on the three written exams and >80% on the practical exam), students will receive a National Safety Council Standard First Aid card valid for three years and an American Heart Association (AHA) Health Care Provider (HCP) Basic Life Support (BLS) (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, & 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: WR 065 or higher and HHP 260 or BI 231.

**Credits: 3 Lecture: 3**

**HHP 260 - ANATOMICAL KINESIOLOGY**

This is an introduction to the science of human movement (kinesiology). The class 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: WR 065 or higher and BI 231.

**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: WR 065 and MTH 020 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 fad diets, 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**

Farmer 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 a 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. Recommended preparation: complete a minimum of three exercise science classes. Instructor approval required.

**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. Recommended preparation: complete a minimum of three EXSS classes with a "C" grade or better prior to taking a practicum and must be approved for enrollment by an HHP/Exercise Science advisor before registering.

**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. Instructor approval required. Recommended prior to registration: 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 recommended to be taken with: WR 065 and MTH 020 or higher.

**Credits: 3 Lecture: 3**

**HHP 298 - INDEPENDENT STUDY: HHP**

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

**HHP 299 - SELECTED TOPICS: HHP**

Health topics requiring advanced level of critical thinking, writing and/or other skills.

**Credits: 1 to 3**

**HEALTH INFORMATION TECHNOLOGY****HIT 103 - HEALTH INFORMATION SYSTEMS AND PROCEDURES**

Health Information Systems and Procedures is a course designed to provide the student with a fundamental knowledge of health information delivery and information systems, functions of the health record and the skills necessary to integrate theoretical knowledge with application functions. Lab includes application of health care procedures via the AHIMA web-based virtual lab or equivalent electronic software. Students are required to pass a criminal history check prior to enrolling in HIT 103. Offered Fall term only. Prerequisites: AH 111, CIS 120, WR 121.

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

**HIT 104 - HEALTH DATA CONTENT/STRUCTURE**

Utilization and application of health care data content (health record analysis) with special emphasis on mechanics of physician's orders, clinical lab tests, diagnostic and treatment modalities, pharmacology and an overview of applicable consent and confidentiality principles. Lab will include application of health care procedures via the AHIMA web-based virtual lab or equivalent electronic software. Enrollment limited to HIT majors. Instructor approval required.

**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. Offered Spring term online. 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. Instructor approval required.

**Credits: 3 Lecture: 3**

**HIT 180 - HIPAA MANAGEMENT**

Presents a medical-legal foundation with respect to HIPAA (Health Insurance Portability and Accountability Act), federal legislation enacted in 1996. HIPAA encompasses the privacy, security and electronic transaction standards for maintaining and transmitting protected health information. This course is designed to provide a basis for understanding the impact this legislation imposes on the health care industry and on health information management. Offered online and face-to-face. Students (online and face-to-face) 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.

**Credits: 2 Lecture: 2**

**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. Offered Spring term. Recommended preparation or recommended to be taken with: AH 111, AH 112, BI 231, BI 232, BI 233, HIT 103, HIT 104, HIT 184. Instructor approval required.

**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.

**Credits: 1 to 4**

**HIT 193 - DIRECTED PRACTICE I**

In the realm of health information management, this is a course in which students report to a health care facility and experience planned activities in the environment of the actual workplace. Provision for technical experiences is an integral component of curricula. Provides for lecture preparation and application of classroom and laboratory objectives in a supervised affiliation site in Oregon, typically. Performed under leadership of 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 of actual clinical and 20 hours of preparatory instruction. Offered Summer term between the first and second year. Required prior to registration: successful completion of first-year HIT curriculum.

**Credits: 2 Other: 6**

**HIT 199 - SELECTED TOPICS:****HEALTH INFORMATION TECHNOLOGY**

This course is in development.

**Credits: 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. Offered Fall term. Required prior to registration: successful completion of first-year HIT curriculum. Instructor approval required.

**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 application/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. Required prior to registration: successful completion of first-year HIT curriculum. Instructor approval required.

**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. Prerequisite: completion of first-year HIT program curriculum; enrollment limited to second-year HIT majors. Instructor approval required.

**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. Required prior to registration: successful completion of first-year HIT curriculum. Instructor approval required.

**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. Offered Winter term. Required prior to registration: successful completion of first-year HIT curriculum. Instructor approval required.

**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. Required prior to registration: successful completion of first-year HIT curriculum. Instructor approval required.

**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 coding classification. Required prior to registration: successful completion of first-year HIT curriculum. Instructor approval required.

**Credits: 6 Lecture: 3 Lab: 6**

### HIT 284 - CLASSIFICATION AND REIMBURSEMENT SYSTEMS

Applies advanced coding principles with application based on legislative developments. Emphasizes merger of clinical and financial data for patient care reimbursement. Focuses on specialized coding pertinent to the Prospective Payment System including HCPCS coding. Explores alternate coding systems and extensive application of CPT coding system. Recommended prior to registration: ICD-10-CM coding skills. Required prior to registration: successful completion of first-year HIT curriculum. Instructor approval required.

**Credits: 4 Lecture: 4**

### 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. Instructor approval required.

**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. Corequisite: HIT 272. Instructor approval required.

**Credits: 2 Lecture: 2**

### HIT 288 - SPECIAL STUDIES: HEALTH INFORMATION TECHNOLOGY

Explores topics of current interest in the discipline.

**Credits: 1 to 3**

### HIT 293 - DIRECTED PRACTICE II

In the realm of health information management, this is a course in which students report to a health care facility and experience planned activities in the environment of the actual workplace. Provision for technical experiences is an integral component of curricula. Provides for application of classroom and laboratory objectives in supervised affiliation sites in Oregon, typically. Performed under leadership of a registered record administrator or accredited record technician. Fulfills 60 of the 120 total DP clinical hours for the program. Total of 40 clinical hours plus 20 preparatory instruction hours are distributed in the curriculum at various points of program completion. Offered Summer term following graduation. Required prior to registration: successful completion of first- and second-year HIT curriculum.

**Credits: 2 Other: 6**

### HIT 294 - RHIT EXAM PREPARATION

Helps prepare students for the National RHIT Examination. Students will review core curriculum identified by AHIMA as essential domains of learning and take practice exams to familiarize them with the types of questions and formats they will encounter when taking the national exam. Offered Summer term. Required prior to registration: completion of the Health Information Technology AAS degree.

**Credits: 1 Lecture: 1**

### HIT 295 - CCA EXAM PREPARATION

This course is designed for graduates of the HIT Program to prepare them to take the national credential exam for Certified Coding Associate. The HIT Advisory Committee and local employers have indicated that potential entry-level coders will be required to obtain this credential within six months after hire. This course will provide support for student success in the workplace. Offered Summer term. Instructor approval required.

**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. Required prior to registration: successful completion of first-year HIT curriculum. Instructor approval required.

**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. May be repeated once.

**Credits: 1 Lecture: 1**

### HIT 298 - INDEPENDENT STUDY: HIT

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

### HIT 299 - SELECTED TOPICS: HIT

This course is in development.

**Credits: 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 recommended 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 the 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 3**

**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 recommended 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 recommended 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 recommended to be taken with: WR 121.

**Credits: 4 Lecture: 4**

**HST 225 - U.S. 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 recommended 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 recommended 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 recommended 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 recommended 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**

Introduces the intellectual, political and cultural history of 20th century European history. Studies significant events in a European context, identifying the historical setting and significance of major occurrences in Europe, such as fascism, world war, communism and decolonization. Recommended preparation or recommended to be taken with: WR 121, LIB 127.

**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. Instructor approval required.

**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 recommended 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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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**

This introductory course provides an overview of the hospitality and tourism industry, its growth and development, industry segments and their distinguishing characteristics, trends and current concerns. Students are introduced to career opportunities and the employability skills needed to succeed in specific hospitality fields.

**Credits: 4 Lecture: 4**

**HM 106 - LODGING MANAGEMENT**

Covers principles of managing lodging operations. Explores current operational practices of lodging operations throughout the world. Discusses management functions related to front office, housekeeping, marketing, reservations, maintaining customer accounts, laws affecting lodging operations and typical service problems. Students will go on field trips to learn about different kinds of lodging operations throughout the state.

**Credits: 3 Lecture: 3**

**HM 130 - HOSPITALITY INDUSTRY SUPERVISION AND PRINCIPLES OF LEADERSHIP**

This course introduces the student to the skills needed to be an effective leader within the hospitality industry. Class topics will include communicating effectively, planning, organizing, goal setting, supervising teams, decision-making, equal opportunity, performance standards, motivation and performance evaluations. Students will also analyze cases, and role-play and become familiar with solving problems that relate to the industry. Students will examine the skills needed for effective leadership, the ethical dilemmas of leadership, the foundation and context of moral choice, the moral implication of decision making, and the impact upon staff morale, personal integrity and citizenship.

The purpose of the course is to develop an understanding of the student's own leadership style and how that will influence the student's transition into the workforce and future career goals. Lastly students will combine the two aspects of organizational behavior - the research and its applications - to understand how they improve the functioning of organizations and the satisfaction of the people who work within them.

**Credits: 4 Lecture: 4**

**HM 150 - PROCUREMENT, INGREDIENT IDENTIFICATION AND FOOD COST CONTROL**

This course provides students an overview to the principles of cost control, product yield tests, vendor relations and procurement, and an introduction to ingredient identification and tasting. Lectures focus on the design and implementation of cost control measures and effective purchasing procedures. Students will be exposed to a basic understanding of profit and loss statements and how to track cost as it relates to the flow of food. In the lab portion of this course, students will also have the opportunity to place, receive and store food orders, conduct quality assurance on all food items and execute an electronic end-of-month inventory utilizing advanced scanning technology. As an applied learning activity, students will be directly involved in the issuing of all course ingredient and supply requisitions. Lastly this course will serve as an opportunity for industry vendors to speak with students, conduct ingredient tastings and provide updates regarding modern industry practices. Prerequisite: CUL 090.

**Credits: 3 Lecture: 1 Lab: 6**

**HM 160 - WINE AND SPECIALTY BEVERAGE MANAGEMENT AND SERVICE**

This course incorporates theoretical and practical information about the organization of a beverage program within the overall operation of a hospitality business. Topics to be covered include the legal and moral responsibilities that come with the sale of alcoholic beverages, purchasing

and marketing. Information on distillation, brewing, mixology and non-alcoholic beverage service will also be presented. Emphasis will be placed on cost control measures for beverages, inventory and sanitation laws and practices. Students will develop the skills to prepare and serve spirits, beer, coffee and tea.

**Credits: 3 Lecture: 3**

### HM 190 - CONTEMPORARY DINING ROOM SERVICE OPERATIONS, ETIQUETTE AND GUEST RELATIONS

Expose students to the importance of service, sanitation and appearance in a real-life dining room setting. The students will experience styles of service including à la carte, reception, banquet and deluxe buffet. Other topics include covering the primary guidelines for service, guest relations, etiquette and proper phone use. Students will also be exposed to a diversity of restaurant management systems to include Micros, the restaurant Point of Sale (POS) and expediting system; OpenTable.com reservation management system, Card-at-Tableside wireless payment system, and ShiftNote.com; the internal restaurant communication system. Students will also learn about the different dining room staff positions and how they relate with the overall restaurant operation and guest experience. Proper management of tabletop flatware, china and glassware combined with table set-up will also be covered. Students will also create service experience assignments analyzing the difference between good and bad service. Students will receive the following industry certifications in this course: OLCC Alcohol Service Permit, FDRP Dining Room Associate and Wine Steward Associate Certificates, Oregon Q-Service Certificate, Spotcheck Allergen Certification Certificate and the American Red Cross First Aid/CPR/AED Certification.

**Credits: 5 Lecture: 2 Lab: 9**

### HM 210 - MENU COMPOSITION AND ANALYSIS

Analyze menu design and effectiveness for a diversity of local restaurant establishments. Topics to be covered include standardized recipes and cost cards, understanding the income statement and profit and loss statements, nutritional aspects of menu planning and design, and menu configuration. Students will analyze and critique industry menus and create menus from the perspective of concept, clarity, cost, price and efficiency. Students will also 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 conduct presentations to the Elevation staff as to how to make perspective design and offering improvements. Prerequisite: CUL 090.

**Credits: 3 Lecture: 3**

### HM 240 - HOSPITALITY LAW

This course will acquaint the student with a managerial framework for well-founded operating decisions. Specific attention will be paid to 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 will also cover an introduction to general business law dealing with torts and contracts. Issues concerning travel law will be included. Recommended preparation: WR 121, HM 101.

**Credits: 4 Lecture: 4**

### HM 275 - MIXOLOGY AND BEVERAGE OPERATIONS

Students will have hands-on experience creating a wide variety of classic and everyday mixed drinks in a standard bar setting. Topics to be covered include 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. Required prior to registration: Oregon Liquor Control Commission (OLCC) Server Permit. Instructor approval required.

**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 relate 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.

**Credits: 6 Other: 20**

### HM 290 - CAREER SUCCESS AND E-FOLIO PRESENTATION

Serves as a culmination of the students' academic career at Cascade Culinary Institute. The goal of this course is to empower students as they transition across the threshold to the hospitality industry workforce and give them the tools to find and secure quality employment. During this course, students will finalize their CCI E-Folio to include: updated, effective resumes, cover letters, reference letters, photos of projects and dishes prepared by the student, any class projects, final assignments and certificates received during their study at CCI and a 2-5 minute video of the student preparing/plating/decorating an item while expressing their culinary knowledge and understanding of technique. The class will meet weekly to discuss: professionalism, career opportunities, networking, volunteerism, planning and expectations, goal setting and interview techniques. Awarding of the ACF Certified Culinarian/Certified Pastry Culinarian Certificates will take place in this course to AAS degree completers. Instructor approval required. Prerequisite: CUL 170.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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. Department approval required.

**Credits: 2 Lecture: 2**

### 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.

**Credits: 1 to 3**

### 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. Instructor approval required.

**Credits: 1 Other: 2**

### HD 191 - OLI LEADERSHIP SKILLS II

HD 191 is the second in a three-quarter series. Building upon the foundation of leadership and teamwork considered in a cultural context, high school students explore issues of personal responsibility, strategies for advocacy and organizing, and opportunities for developing intercultural awareness. Interaction with college mentors expands to focus on the college challenges, requirements, tools for success and the application process. Instructor approval required.

**Credits: 1 Other: 2**

### HD 192 - OLI LEADERSHIP SKILLS III

HD 192 is the third in a 3-quarter series. It provides high school students with opportunities to explore and attain skills in leadership, teamwork, communication and conflict resolution. Interaction with college mentors prepares students of varying races and ethnicities to embrace post-secondary education as a viable option. Instructor approval required.

**Credits: 1 Other: 2**

### HD 199 - SELECTED TOPICS: HUMAN DEVELOPMENT

This course is in development.

**Credits: 1 to 4**

### HD 298 - INDEPENDENT STUDY: HUMAN DEVELOPMENT

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

## HUMAN SERVICES/ADDICTIONS STUDIES

### HS 101 - ORIENTATION TO HUMAN SERVICES

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.

**Credits: 3 Lecture: 3**

### HS 161 - ETHICS FOR HUMAN SERVICES

Covers principles and issues of professionalism and ethics in human services. Students will explore how to set and maintain professional boundaries. Relates abstract ethical principles to tangible examples and will offer a practical framework for analyzing ethical issues. Prerequisites: HS 101, MTH 031 or higher and choose one of WR 121, WR 122 or WR 227.

**Credits: 4 Lecture: 4**

### HS 162 - EFFECTIVE HELPING SKILLS I

Introductory course for people interested in pursuing a career in the helping professions or who may be working in a helping role now. Students practice basic interviewing skills, learn to create a helping climate and organize and conduct an informational interview. Introduces students to basic interaction, referral, interviewing and listening skills. Prerequisites: HS 101, MTH 031 or higher and choose one of WR 121, WR 122 or WR 227.

**Credits: 4 Lecture: 4**

### HS 180 - HIV, AIDS AND ADDICTIONS

Provides a thorough investigation of HIV/AIDS epidemic and expectations of professionals in dealing with it. Covers epidemiology, HIV/AIDS related policy, effects of chemical dependency and chemical use in promoting the spread of HIV infection, routes of exposure to the virus and the manner in which various populations are infected and treated. Guidelines and directives for counseling individuals who are HIV seropositive and those at high risk for HIV infection.

**Credits: 2 Lecture: 2**

### HS 199 - SELECTED TOPICS: HUMAN DEVELOPMENT

**Credits: 1 to 4**

### HS 200 - ADDICTIVE BEHAVIOR

Provides a broad overview of the field of addictions through a look at the issues and treatments involved. Includes history, prevention regarding alcohol, drugs, nicotine, eating disorders, depression and relapse prevention. Recommended preparation or recommended to be taken with: WR 121.

**Credits: 3 Lecture: 3**

**HS 201 - FAMILIES AND ADDICTIONS**

Designed for people who are training to become chemical dependency counselors or for current counselors who are seeking to increase their knowledge base. Focuses on basic theory, technique and experience in doing family therapy with families of addicts. Primary models of family therapy used will be systemic and structural. Recommended preparation or recommended to be taken with: WR 121.

**Credits: 3 Lecture: 3**

**HS 205 - YOUTH AND ADDICTIONS**

Provides a beginning knowledge of child/adolescent development and results in an understanding of the effects of substance abuse on that development. Covers the signs of substance abuse and addiction, describes assessment, treatment, prevention philosophies, protocols and models, describes recovery and covers relapse prevention and the signs of relapse in young people. Recommended preparation: WR 121.

**Credits: 3 Lecture: 3**

**HS 206 - GROUP COUNSELING SKILLS FOR HUMAN SERVICES**

Provides strategies from accepted and culturally appropriate models for facilitating group counseling with clients with a variety of disorders including substance abuse. Focuses on the ethical use of groups as an effective therapeutic intervention. Addresses leadership behaviors, group formation, group stages; common and difficult therapeutic problems also addressed.

**Credits: 4 Lecture: 4**

**HS 208 - MULTICULTURAL ISSUES IN HUMAN SERVICES**

Highlights the impacts of cultural differences on both client and human service provider. Examines the major categories of diversity, heritage, biases and stereotypes and how these might impact client treatment. Identifies cultural expectations that may lead to value imposition.

Examines how knowledge of diversity issues can be essential to the counselor in communications, treatment planning and implementation. Prerequisites: HS 101, MTH 031 or higher and choose one of WR 121, WR 122 or WR 227.

**Credits: 4 Lecture: 4**

**HS 209 - INTRODUCTION TO PSYCHOLOGICAL TRAUMA: THEORY AND PRACTICE**

Introduction to 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. Introduces crisis management strategies in the context of a trauma informed practice. Provides a framework for crisis recognition/response and intervention for people experiencing trauma symptoms. Students will analyze as well as practice using a trauma informed framework designed for multiple settings. Utilizes trauma informed and wellness informed approaches. Recommended preparation: WR 121.

**Credits: 4 Lecture: 4**

**HS 210 - DUAL DIAGNOSIS**

Introduces clinical presentation and management of dually diagnosed chemical abusers. The complex interplay of psychiatric illness and substance abuse in clients with depression, anxiety, schizophrenia, as well as other conditions, will be explored. Students will become familiar with diagnostic criteria as well as chemical dependency. Treatment strategies for addressing the needs of the dually diagnosed will be presented. 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 I (CADC) 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 must 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 the 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 INTERNSHIP 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 internship 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 (CADC) 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 (CADC) exam.

**Credits: 4 Lecture: 1 Other: 9**

### HS 293 - PRACTICUM IN HUMAN SERVICE III

This third-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 (CADC) 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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

### HS 299 - SELECTED TOPICS: HUMAN SERVICES

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 Gaudi'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

Introductory survey of the immigrant experience in the United States as reflected in literature, autobiography and film. Recommended preparation: WR 121.

**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, song, art and advertising. 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, television, comics 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**

## 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. Recommended preparation: IT 101, one year of high school Italian, or instructor approval. Course should be taken in sequence. 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. Students are expected to have completed IT 102 material, and are encouraged to review the concepts of IT 101 and 102 prior to class. Recommended preparation: IT 102, two years of high school Italian, or

instructor approval. Course should be taken in sequence. 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 prerequisite: IT 103 or equivalent. Should be taken in sequence. May not be offered every year.

**Credits: 4 Lecture: 4**

**IT 202 - SECOND YEAR ITALIAN II**

Continues the work of IT 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 prerequisite: IT 201 or equivalent. Should be taken in sequence. May not be offered every year.

**Credits: 4 Lecture: 4**

**IT 203 - SECOND YEAR ITALIAN III**

Continues the work of IT 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 prerequisite: IT 202 or equivalent. Should be taken in sequence. May not be offered every year.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

**IT 299 - SELECTED TOPICS: ITALIAN**

This course is in development.

**Credits: 4**

## JOURNALISM

**J 188 - SPECIAL STUDIES: JOURNALISM**

Explores topics of current interest in the discipline.

**Credits: 1 to 3**

**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. Recommended prerequisite or recommended to be taken with: J 216.

**Credits: 1 Lab: 3**

**J 216 - REPORTING I**

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 or instructor approval.

**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 or instructor approval.

**Credits: 3 Lecture: 3**

**J 280 - JOURNALISM PRACTICUM**

Community work experience in journalism (may include internships in local media).

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

**J 299 - SELECTED TOPICS: JOURNALISM**

This course is in development.

**Credits: 1 to 4**

**KIKSHT****KIK 101 - FIRST YEAR KIKSHT NATIVE LANGUAGE I**

Beginning Kiksht introduces students to the Kiksht language of the Wasco people. The first term will introduce students to alphabet characters, sounds and simple phrases. One of the techniques used to learn the language will be Total Physical Response© (TPR), which is an adopted method used by indigenous language teachers to hear and respond to verbal commands in the target language.

**Credits: 4 Lecture: 4**

**KIK 102 - FISRT YEAR KIKSHT NATIVE LANGUAGE II**

Beginning Kiksht introduces students to the Kiksht language of the Wasco people. The second term will build on student knowledge of alphabet characters, sounds and phrases. One of the techniques used to learn the language will be Total Physical Response© (TPR), which is an adopted method used by indigenous language teachers to hear and respond to verbal commands in the target language.

**Credits: 4 Lecture: 4**

**KIK 103 - FISRT YEAR KIKSHT NATIVE LANGUAGE III**

Beginning Kiksht introduces students to the Kiksht language of the Wasco people. The third term will focus on developing student ability to communicate meaningful phrases in predictable and culturally appropriate settings with particular attention to introducing students to verb affixes indicating aspect and tense. One of the techniques used to learn the language will be Total Physical Response© (TPR), which is an adopted method used by indigenous language teachers to hear and respond to verbal commands in the target language.

**Credits: 4 Lecture: 4**

**KIK 298 - INDEPENDENT STUDY: KIKSHT**

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

**LIBRARY & INFORMATION SKILLS****LIB 100 - INTRODUCTION TO FINDING INFORMATION**

Students will learn how to find, evaluate and responsibly use web-based and other information resources for college level research. This course is for those who want an introduction to information resources and research skills.

**Credits: 1 Lecture: 1**

**LIB 127 - INFORMATION RESEARCH SKILLS**

Library 127 teaches college-level research and information skills including finding and accessing resources in physical and digital formats; developing topics and research strategies; learning and applying advanced search techniques; exercising critical thinking to evaluate information and using the internet as a research tool.

**Credits: 3 Lecture: 3**

**LIB 199 - SPECIAL TOPICS: LIBRARY**

This course is in development.

**Credits: 1 to 3**

**LIB 227 - MAPPING INFORMATION WORLD**

This course familiarizes students with the world of information and research. Students become familiar with various issues related to the "information society" as well as the world of research. Specifically, the course addresses the impact of information in our lives, the life cycle and characteristics of information as it transforms in different publication formats, use and selection of information tools based on the nature of research need, the explosion and implications of web 2.0 technology and ethical issues in the use of information with specific reference to issues of plagiarism and proper citation.

**Credits: 1 Lecture: 1**

**LIB 299 - SPECIAL TOPICS: LIBRARY**

This course is in development.

**Credits: 1 to 3**

**MANUFACTURING****MFG 100 - MANUFACTURING 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.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**Credits: 2 Lecture: 2**

#### **MFG 110 - MANUFACTURING PROCESSES I**

Overview of manufacturing theory and manual operation of machine tools. Includes safety, using hand tools, bandsaw, drill press, lathe and milling machine operations. Recommended preparation: MFG 100 and instructor approval.

**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 practice. Recommended preparation: MFG 100 and instructor approval.

**Credits: 3 Lab: 9**

#### **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. Recommended preparation: MFG 100 and instructor approval.

**Credits: 3 Lab: 9**

#### **MFG 115 - DESIGN PROCESSES I**

Introduction to computer-aided manufacturing. Includes interpretation and construction of technical drawings and technical sketching. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**Credits: 3 Lab: 9**

#### **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. Recommended preparation: MFG 100 and instructor approval.

**Credits: 2 Lab: 6**

#### **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. Instructor approval required.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Instructor approval required.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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 operations and G & M programming. Recommended preparation: MFG 100 and instructor approval.

**Credits: 2 Lab: 6**

**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. Recommended preparation: MFG 100 and instructor approval.

**Credits: 2 Lab: 6**

**MFG 238 - OPTICAL COMPARATOR**

Optical comparator operations. Includes operation of H-14 metrology controller, stage set-up and fixturing, inspection of rectangular and round workpieces. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**Credits: 2 Lab: 6**

**MFG 242 - PROGRAMMABLE LOGIC CONTROLLERS I**

Introduction to programmable logic controller programming. Includes ladder logic, sealing circuits and event sequencing. Recommended preparation: MFG 100 and instructor approval.

**Credits: 2 Lab: 6**

**MFG 243 - INDUSTRIAL SENSORS**

Study of mechanical, electronic and proximity sensor applications found in a typical manufacturing environment. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Instructor approval required.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100, CIS 135S1 and instructor approval.

**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 fixturing. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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, fixturing and welding-related topics. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**Credits: 2 Lab: 6**

**MFG 283 - GTAW II**

Gas tungsten arc welding. Includes machine set-up for fillet and groove welds on plain carbon steel, aluminum, stainless steel tubing and plate in all positions. Recommended preparation: MFG 100 and instructor approval.

**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". Recommended preparation: MFG 100 and instructor approval.

**Credits: 2 Lab: 6**

**MFG 285 - GTAW III**

Gas tungsten arc welding. Includes machine set-up, groove welds on plain carbon, aluminum and stainless steel pipe in all positions. Recommended preparation: MFG 100 and instructor approval.

**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". Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**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. Recommended preparation: MFG 100 and instructor approval.

**Credits: 1 Lab: 3**

**MFG 291 - CERTIFICATION TEST PREPARATION NIMS I**

Testing materials preparation for Level One NIMS Certification Testing. Includes materials test workpiece preparation, set-up, testing and evaluation activities. Recommended preparation: MFG 100 and instructor approval.

**Credits: 1 Lab: 3**

## MASSAGE THERAPY

**LMT 101 - INTRODUCTION 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: minimum placement scores resulting in WR 121 placement or completion of WR 065 or higher, placement into MTH 020 or completion of MTH 010 or higher and completion of one of 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. Prerequisite: 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. Prerequisite: LMT 118.

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

**LMT 128 - KINESIOLOGY IV**

This is the last of a four part series of kinesiology for massage therapists. A study of the muscles that will include attachments, actions, nerves and the boney landmarks. Palpation skills will be emphasized. Prerequisite: LMT 124.

**Credits: 3 Lecture: 2 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: minimum placement scores resulting in WR 121 placement or completion of WR 065 or higher, placement into MTH 020 or completion of MTH 010 or higher and completion of one of 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**

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 and 122 or BI 231 and 232.

**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, LMT 170.

**Credits: 4 Lecture: 2.5 Lab: 4.5**

**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 is incorporated. Prerequisites: LMT 118, 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 complementary healing techniques. Prerequisites: minimum placement scores resulting in WR 121 placement or completion of WR 065 or higher; placement into MTH 020 or completion of MTH 010 or higher; and completion of one of 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: minimum placement scores resulting in WR 121 placement or completion of WR 065 or higher, placement into MTH 020 or completion of MTH 010 or higher and completion of one of 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. Prerequisite: LMT 150.

**Credits: 3 Lecture: 1 Lab: 6**

**LMT 188 - SPECIAL STUDIES: LICENSED MASSAGE THERAPY**

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: 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.

**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: 1 Other: 2**

**LMT 217 - AROMATHERAPY II**

Advanced exploration of the essential oils examined in Aromatherapy I and utilization in a massage therapy session. Prerequisite: LMT 216.

**Credits: 1 Other: 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. Prerequisites: LMT 130, 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. Prerequisite: LMT 226.

**Credits: 2 Lecture: 1 Other: 2**

**LMT 228 - THAI FOOT REFLEXOLOGY**

Students will practice Thai reflexology routines, pressure points and techniques that combine to make a unique foot massage like those enjoyed throughout Thailand.

**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.

**Credits: 1 Other: 2**

**LMT 231 - THAI MASSAGE CLINIC**

Students will practice traditional Thai bodywork techniques and sequences on the general public during the supervised clinic. Prerequisite: LMT 226.

**Credits: 2 Lecture: 1 Lab: 3**

**LMT 240 - NEUROMUSCULAR TREATMENTS-TRUNK**

This is advanced myofascial coursework that focuses on the treatment of specific injuries and conditions using massage therapy neuromuscular treatment protocols.

**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. Prerequisite: 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, 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. Prerequisite: LMT 255.

**Credits: 3 Other: 6**

**LMT 257 - CHINESE MEDICINE THEORY**

Chinese Medicine Theory will provide a deeper understanding of Eastern/Asian foundational elements and the application of the elements as it relates to therapeutic massage therapy and bodywork. Prerequisite: LMT 155.

**Credits: 3 Lecture: 2 Other: 2**

**LMT 258 - SHIATSU CLINIC**

Students will practice Shiatsu bodywork techniques on the general public during the supervised clinic. Prerequisite: LMT 255.

**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.

**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. Prerequisite: 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. Prerequisite: LMT 265.

**Credits: 2 Lecture: 1 Lab: 3**

**LMT 270 - CLINICAL ASSESSMENTS**

This is a nontreatment 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. Prerequisite: LMT 145.

**Credits: 1 Other: 2**

**LMT 288 - SPECIAL STUDIES: LICENSED MASSAGE THERAPY**

Specific coursework related to massage therapy. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

**Credits: 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: LICENSED MASSAGE THERAPY**

Selected topics related to massage therapy. Recommended preparation: Massage Therapy certificate, LMT, or other related health care professional.

**Credits: 7**

## 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 or equivalent.

**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.

**Credits: 2 Lecture: 2**

**MTH 031 - HEALTH CARE MATH**

Designed for students majoring in Addiction Studies, Massage Therapy, Health Information Technology, among others. Includes topics from pre-algebra and descriptive statistics. MTH 031 is not designed to serve as a prerequisite to MTH 060. Recommended preparation: MTH 010.

**Credits: 3 Lecture: 3**

**MTH 058 - MATH LITERACY I**

Presents mathematics in context. 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 placement score into MTH 020 or higher.

**Credits: 4 Lecture: 4**

**MTH 060 - ALGEBRA I**

Introduction to algebra, integers, rational and real numbers, algebraic expressions, linear equations and inequalities in one and two variables, and systems of equations and inequalities. Recommended preparation: MTH 020 or equivalent.

**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, CAD 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 equivalent.

**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 to develop and analyze a complex, real-world application and submit a technical report detailing the results. A graphing calculator is required. TI-83 or TI-84 recommended. Recommended preparation: MTH 085 or equivalent.

**Credits: 4 Lecture: 4**

**MTH 095 - INTERMEDIATE ALGEBRA**

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. Recommended preparation: MTH 065 or equivalent. Graphing calculator required; a large percentage of the course will be learned using it. TI-83 or TI-84 recommended.

**Credits: 4 Lecture: 4**

**MTH 098 - MATH LITERACY II**

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. Prerequisite: MTH 058. There is no placement directly into MTH 098.

**Credits: 4 Lecture: 4**

**MTH 099 - SELECTED TOPICS: MATHEMATICS**

Offers selected topics in mathematics for courses generally available only once. Topics and credits to be arranged.

**Credits: 1 to 4**

**MTH 105 - MATH IN SOCIETY**

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. Prerequisite: MTH 095 or MTH 098, MTH 095 or MTH 098 equivalency met, appropriate placement exam score, or instructor approval.

**Credits: 4 Lecture: 4**

**MTH 111 - COLLEGE ALGEBRA**

Introduces graphs and functions (linear, quadratic, polynomial, rational, exponential and logarithmic) using a graphing calculator. First term of a precalculus sequence for science students. Recommended preparation: MTH 095 or equivalent. Graphing calculator required. TI-83 or TI-84 recommended.

**Credits: 4 Lecture: 4**

**MTH 112 - TRIGONOMETRY**

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. Recommended preparation: MTH 111 or equivalent. Graphing calculator required. TI-83 or TI-84 recommended.

**Credits: 4 Lecture: 4**

**MTH 113 - TOPICS IN PRECALCULUS**

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. Recommended preparation: MTH 112 or equivalent. Graphing calculator required. TI-83 or TI-84 recommended.

**Credits: 4 Lecture: 4**

**MTH 188 - SPECIAL STUDIES: MATHEMATICS**

Explores topics of current interest in the discipline.

**Credits: 1 to 3**

**MTH 198 - PRACTICUM IN MATHEMATICS**

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.

**Credits: 2 Lecture: 1 Other: 3**

**MTH 199 - SELECTED TOPICS: MATHEMATICS**

Offers selected topics in mathematics for courses generally available only once. Topics and credits to be arranged.

**Credits: 1 to 4**

**MTH 211 - FUNDAMENTALS OF ELEMENTARY MATHEMATICS I**

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 or equivalent.

**Credits: 4 Lecture: 4**

**MTH 212 - FUNDAMENTALS OF ELEMENTARY MATHEMATICS II**

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 or equivalent.

**Credits: 4 Lecture: 4**

**MTH 213 - FUNDAMENTALS OF ELEMENTARY MATHEMATICS III**

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.

**Credits: 4 Lecture: 4**

**MTH 231 - DISCRETE MATHEMATICS**

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.

**Credits: 4 Lecture: 4**

**MTH 241 - CALCULUS FOR MANAGEMENT/SOCIAL SCIENCE**

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. Recommended preparation: MTH 111. Graphing calculator required. TI-83 or TI-84 recommended.

**Credits: 4 Lecture: 4**

**MTH 243 - INTRODUCTION TO PROBABILITY AND STATISTICS I**

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. Recommended preparation: MTH 111 (for those needing MTH 241 or MTH 251), MTH 105, or instructor approval. Graphing calculator required. TI-83 or TI-84 recommended.

**Credits: 4 Lecture: 4**

**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. Graphing calculator required. TI-83 or TI-84 recommended. Prerequisites: MTH 243 or MTH 243 equivalency or instructor approval.

**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. Graphing calculator required. TI-83 or TI-84 recommended. Computer literacy recommended. Recommended preparation: MTH 112, MTH 113 or equivalent or instructor approval.

**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. Graphing calculator 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. Graphing calculator required. TI-83 or TI-84 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. Graphing calculator required. TI-83 or TI-84 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. Graphing calculator 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. Graphing calculator required. TI-83 or TI-84 recommended. Recommended preparation: MTH 253.

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

## 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 Commission on Accreditation of Allied Health Education Programs (CAAHEP) and the Medical Assisting Educational Review Board (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, vision screening 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, WR 121. Corequisites: MA 111.

**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 CAAHEP and the 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, 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 CAAHEP and the MAERB. Includes concepts related to coding, billing, accounting, insurance, electronic medical records, practice management systems, office management and administrative communication. Prerequisites: MA 110, MA 111. Corequisites: MA 120.

**Credits: 5 Lecture: 2 Other: 6**

### MA 137 - APPLICATION OF PROFESSIONAL MEDICAL ASSISTING

Final medical assisting lecture and lab class focusing on skills related to specialty practice, office management, national exam passage and job acquisition. Topics include assisting with specialty exams, pandemic response, management tools and specialty-specific diagnostic procedures and treatments. Students will prepare resumes and practice job interview skills. National exam material is reviewed. Prerequisites: MA 110, MA 111, MA 120, MA 121, MA 140, MA 150. Corequisites: MA 147.

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

### MA 140 - NUTRITION, CPR AND FIRST AID FOR MEDICAL ASSISTANTS

This class is designed to cover key competencies for medical assistants related to nutritional interventions and office-based emergencies as identified by the CAAHEP and the MAERB. Students have the opportunity to obtain provider level CPR and first aid cards that meet Medical Assistant program requirements during the course of this class. Prerequisite with concurrency: MA 110.

**Credits: 3 Lecture: 1 Other: 4**

### MA 147 - MEDICAL ASSISTANT PRACTICUM I

The clinical practicum is a required, supervised, unpaid learning experience, which takes place on site at a prearranged clinical facility. It provides students with the opportunity to perform clearly identified competencies within the clinical setting. Students must have a total of five clinical credits. A minimum of 160 hours in the clinical setting is required. Students must be available during all potential weekday hours indicated in the class schedule to attend practicum as placements become available. Students must be able to provide transportation to sites in Central Oregon. Students must have updated adult/infant/child CPR and First Aid cards as well as updated background checks and immunization required by practicum sites. Instructor approval required. See MA 137 for prerequisites. Corequisites: MA 137.

**Credits: 5 Other: 16**

### MA 150 - PHARMACOLOGY FOR MEDICAL ASSISTANTS

This course introduces medical assistant students to the general principles of pharmacology as required by the standards adopted by the American Association of Medical Assistants (AAMA) and the CAAHEP. Drugs are discussed in the context of drug classes, mechanics of action, disease types and body systems. The goal is to provide medical assistants with sufficient background information so that they will be able

to play a key role avoiding errors, as well as a basic understanding of pharmacologic categories and factors affecting drug kinetics. Prerequisite with concurrency: MA 110.

**Credits: 3 Lecture: 3**

### MA 199 - SELECTED TOPICS: MEDICAL ASSISTANT

This course is in development.

**Credits: 1 to 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**

### 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: MS 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: MS 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**

### **MUS 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**

### **MUS 299 - SELECTED TOPICS: MILITARY SCIENCE**

This course is in development.

**Credits: 4 Lecture: 4 Lab: 12 Other: 12**

## MUSIC

### **MUS 101 - MUSIC FUNDAMENTALS**

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. 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**

### **MUS 111 - MUSIC THEORY IA**

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 or equivalent. Recommended to be taken with: MUS 114.

**Credits: 3 Lecture: 3**

### **MUS 112 - MUSIC THEORY IB**

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**

### **MUS 113 - MUSIC THEORY IC**

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**

### **MUS 114 - MUSICIANSHIP IA**

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**

### **MUS 115 - MUSICIANSHIP IB**

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 112. Recommended preparation: MUS 114.

**Credits: 2 Lecture: 2**

### **MUS 116 - MUSICIANSHIP IC**

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 113. Recommended preparation: MUS 115.

**Credits: 2 Lecture: 2**

### **MUS 123 - OPERA PERFORMANCE**

Study, rehearsal and performance of operas for vocalists, instrumentalists and production technicians. An audition is required before enrollment. May be repeated, no limit. Not offered every year.

**Credits: 1 Other: 3**

### **MUS 131 - PIANO CLASS I**

Teaches fundamentals of piano performance in a class format.

**Credits: 2 Lecture: 2**

### **MUS 132 - PIANO CLASS II**

Teaches fundamental piano skills in a class format.

**Credits: 2 Lecture: 2**

### **MUS 133 - PIANO CLASS III**

Teaches fundamental piano skills in a class format.

**Credits: 2 Lecture: 2**

### **MUS 134 - VOICE CLASS I**

Teaches fundamentals of vocal performance in a class format.

**Credits: 2 Lecture: 2**

### **MUS 135 - VOICE CLASS II**

Teaches fundamental vocal skills in a class format.

**Credits: 2 Lecture: 2**

### **MUS 136 - VOICE CLASS III**

Teaches fundamental vocal skills in a class format.

**Credits: 2 Lecture: 2**

### **MUS 137 - CLASS GUITAR I**

Teaches fundamentals of guitar performance in a class format.

**Credits: 2 Lecture: 2**

### **MUS 138 - CLASS GUITAR II**

Teaches fundamental guitar skills in a class format.

**Credits: 2 Lecture: 2**

### **MUS 139 - CLASS GUITAR III**

Teaches fundamental guitar skills in a class format.

**Credits: 2 Lecture: 2**

### **MUS 161 - JAZZ IMPROVISATION**

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. Not offered every year. May be repeated, no limit.

**Credits: 2 Lecture: 2**

### **MUS 188 - SPECIAL STUDIES: MUSIC**

**Credits: 1 to 3**

### **MUS 194 - BIG BAND JAZZ**

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**

### **MUS 195 - CONCERT BAND**

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**

**MUS 196 - SYMPHONY**

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**

**MUS 197 - CASCADE CHORALE**

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**

**MUS 197A - COLLEGE CHOIR**

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**

**MUS 199 - SELECTED TOPICS: MUSIC**

This course is in development.

**Credits: 1 to 3**

**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. Not offered every term.

**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 113. Recommended to be taken with: MUS 214.

**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 212. Recommended to be taken with: MUS 216.

**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 IIC**

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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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. Instructor approval required. Not offered every year. May be repeated, no limit.

**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. 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. Instructor approval required. Not offered every year. May be repeated, no limit.

**Credits: 2 Lecture: 2**

### MUP 171 - APPLIED PIANO

Private lessons provide individual instruction in techniques of performance for voice, guitar, keyboard and all standard string, woodwind, brass and percussion instruments. Instructor's permission and additional fee required. Contact the department chair or administrative assistant for additional information. May be repeated, no limit.

**Credits: 1 Other: .5**

### MUP 174 - APPLIED VOICE

**Credits: 1 Other: .5**

### MUP 175 - APPLIED VIOLIN

**Credits: 1 Other: .5**

### MUP 176 - APPLIED VIOLA

**Credits: 1 Other: .5**

### MUP 177 - APPLIED CELLO

**Credits: 1 Other: .5**

### MUP 178 - APPLIED BASS

**Credits: 1 Other: .5**

### MUP 180 - APPLIED GUITAR

**Credits: 1 Other: .5**

### MUP 181 - APPLIED FLUTE

**Credits: 1 Other: .5**

### MUP 182 - APPLIED OBOE

**Credits: 1 Other: .5**

### MUP 186 - APPLIED TRUMPET

**Credits: 1 Other: .5**

### MUP 187 - APPLIED FRENCH HORN

**Credits: 1 Other: .5**

### MUP 188 - APPLIED TROMBONE

**Credits: 1 Other: .5**

### MUP 271 - APPLIED PIANO

Private lessons provide individual instruction in techniques of performance for voice, guitar, keyboard and all standard string, woodwind, brass and

percussion instruments. Additional fee required. Contact the department chair or administrative assistant for additional information. May be repeated, no limit. Instructor approval required.

**Credits: 1 Other: .5**

### MUP 274 - APPLIED VOICE

**Credits: 1 Other: .5**

### MUP 276 - APPLIED VIOLA

**Credits: 1 Other: .5**

### MUP 277 - APPLIED CELLO

**Credits: 1 Other: .5**

### MUP 280 - APPLIED GUITAR

**Credits: 1 Other: .5**

## NURSING

### NUR 088 - SPECIAL STUDIES: NURSING

Allows nursing students to pursue 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 longterm 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 Level 2 Nursing Assistant in Acute Care. 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 an acute-care facility. To enroll in the course, students must hold a current, unencumbered Oregon CNA 1 certificate, hold a current Healthcare Provider CPR card, pass a criminal history check, and meet immunization and TB test requirements. Department approval required.

**Credits: 6 Lecture: 4 Lab: 3 Other: 3**

### NUR 106 - NURSING I

Introduces basic concepts of nursing practice including nursing process, critical thinking, therapeutic communication, grief, loss and cultural considerations. Students will have the opportunity to begin learning about patients with altered states of health. Students will become familiar with the major drug classifications and develop working knowledge of pharmacological principles. Lab skills focus on a core set of beginning level nursing skills in the areas of physical assessment and wound care management. The clinical practicum provides students with the opportunity to apply knowledge and clinical skills to the adult patient with basic nursing care needs. First term of the Practical Nursing sequence and of the Nursing program. Requires admission to the Nursing program.

**Credits: 12 Lecture: 7 Lab: 6 Other: 9**



**NUR 107 - NURSING II**

Continues to introduce the knowledge and skills that are necessary in providing nursing care to individual patients experiencing an altered state of health. The clinical lab focuses on developing skills in the areas of medication administration and urinary catheterization. The clinical practicum provides students with the opportunity to apply knowledge and clinical skills to the adult patient with medical-surgical nursing needs. Second term of the PN sequence and the Nursing program. Requires admission to the Nursing program.

**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. Students will transfer pharmacological knowledge and concepts of safe, patient medication administration to the Learning Resource Center and clinical setting. The clinical skills lab provides a comprehensive assessment of the student's 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. Requires admission to the Nursing program.

**Credits: 11 Lecture: 6 Lab: 3 Other: 12**

**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 critical thinking and caring interventions toward individuals and their significant others. Clinical skills lab focuses on the development of higher-level clinical skills and decision making in regards to intravenous medication, fluid therapy and assessment skills. Clinical practicum provides the students with an opportunity to provide holistic, individualized nursing care for complex medical-surgical patients and mentally ill clients. Fourth term of the Nursing program, first term of the RN sequence. Requires completion of the first-year Nursing program or admission with advanced placement.

**Credits: 11 Lecture: 6 Lab: 4.5 Other: 10.5**

**NUR 207 - NURSING V**

Focuses on the concepts of community-based nursing care of individuals and significant others, care of the critically ill patient, as well as maternal child care of the high risk childbearing family. The nursing curriculum continues to expand on the role of the RN and to promote critical thinking and clinical decision making. Students further develop their skills in patient teaching, patient care planning and patient care management skills. Clinical skills lab provides students with opportunities to simulate the care of complex, acutely ill patients. The clinical practicum focuses on applying the nursing process to provide and direct holistic, individualized patient care. Students are provided additional experiences in community-based and mental health clinical settings. Fifth term of the Nursing program, second term of the RN sequence of the program. Requires admission to the Nursing program.

**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. The holistic, individualized needs of the individual and family are the focus for collaborative care management decisions. Theoretical concepts of quality management, legal and ethical issues, leadership and management of care; and nursing care of patients with life-threatening conditions are addressed in relation to clinical 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 includes a capstone case study presentation. Sixth term of the Nursing program, third term of the RN sequence. Requires admission to the Nursing program.

**Credits: 9 Lecture: 4 Other: 15**

**NUR 218 - BASIC EKG**

Basic three-lead electrocardiograph interpretation. Open to Allied Health, Exercise Science/Kinesiology 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. Requires admission to the Nursing program, status as a certified nursing assistant and approval from the Nursing department work experience coordinator.

**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. Requires admission to the Nursing program, LPN status and approval from the Nursing department work experience coordinator.

**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 4**

**NUR 298 - INDEPENDENT STUDY: NURSING**

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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 is a foundation course and a recommended prerequisite to outdoor leadership program courses. Prerequisite: WR 065.

**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 are also reviewed, along with how to use each of these critical pieces of safety gear. Field time is spent practicing transceiver search techniques (single and multiple burial), snowpack assessment (through a 'Test-pit Plus'), 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 or instructor approval.

**Credits: 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 or instructor approval.

**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 pivotal role in outdoor leadership. Recommended preparation or recommended 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. Open to all and counts as an elective for Outdoor Leadership students.

**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: 3 Lecture: 2 Other: 2**

**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 is a foundation course and recommended preparation to 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 255, OL 263, 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 255, OL 263, 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. Recommended preparation: complete a minimum of three OL classes with at "C" grade or better prior to taking a practicum and must be approved for enrollment by an HHP/Outdoor Leadership advisor before registering.  
**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 Lecture: 1.5 Lab: 4.5**

### **OL 294CA - CANOE PROGRAM INSTRUCTION AND GUIDING**

Introduces students to guiding, teaching and leading flat and moving water canoe programs. May also be introduced (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, OL 273.  
**Credits: 3 Lecture: 2 Other: 4**

### **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, OL 273.  
**Credits: 3 Lecture: 1 Lab: 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, OL 273.

**Credits: 3 Lecture: 1.5 Lab: 4.5**

### **OL 294WG - WHITEWATER 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 171, OL 271, OL 273.

**Credits: 3 Lecture: 1.5 Lab: 4.5**

### **OL 298 - INDEPENDENT STUDY: OUTDOOR LEADERSHIP**

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.  
**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: choose either WR 065, WR 095, or higher or placement into WR 121 and MTH 058 or MTH 065 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: PHM 100, PHM 101, PHM 120. Corequisites: PHM 130, 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 that 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 that 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. Prerequisites: PHM 110, PHM 130, 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 Pharmacy Seminar Course (PHM 181). A satisfactory evaluation must be

submitted by your preceptor that you have successfully exhibited skills in a hospital (institutional) pharmacy. Corequisites: PHM 181, PHM 191.

**Credits: 4 Other: 12**

**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. Corequisites: PHM 181, PHM 190.

**Credits: 4 Other: 12**

## 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 or equivalent skills.

**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 or equivalent skills.

**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 Math placement scores that place a student in MTH 105, WR 121 or equivalent skills.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.  
**Credits: 1 to 4**

## PHYSICS

**PH 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, 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, 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 3**

**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 a study 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 recommended 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: WR121

**Credits: 4 Lecture: 4**

### PS 280 - 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. Instructor approval required.

**Credits: 1 to 3**

### PS 298 - INDEPENDENT STUDY: POLITICAL SCIENCE

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

### PS 299 - SELECTED TOPICS: POLITICAL SCIENCE

This course is in development.

**Credits: 4 Lecture: 4 Lab: 12 Other: 12**

## PSYCHOLOGY

### 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. This course is considered a human relations component.

**Credits: 3 Lecture: 3**

### PSY 188 - SPECIAL STUDIES: PSYCHOLOGY

Explores topics of current interest in the discipline.

**Credits: 1 to 3**

### PSY 199 - SELECTED TOPICS: PSYCHOLOGY

This course is in development.

**Credits: 1 to 4**

### 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: placement scores that allow enrollment into college-level reading.

**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: placement scores that allow enrollment into college level reading.

**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: placement scores that allow enrollment into college level reading.

**Credits: 4 Lecture: 3 Lab: 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: placement scores that allow enrollment into college-level reading and PSY 201 or PSY 202.

**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: placement scores that allow enrollment into college-level reading.

**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: placement scores that allow enrollment into college-level reading, 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: placement scores that allow enrollment into college-level reading.

**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: placement scores that allow enrollment into college-level writing.

**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: placement scores that allow enrollment into college level reading.

**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: placement scores that allow enrollment into college-level reading.

**Credits: 4 Lecture: 4**

### 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. Instructor approval required.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**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 can not 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, SOC 201 or instructor approval.

**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, SOC 201 or instructor approval.

**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, SOC 201 or instructor approval.

**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**

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.  
**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 contrasted with the verb *ser*), 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 professions, verbs with changes in the first person (*yo*), *saber/conocer*, body parts, reflexive verbs, adverbs of time and frequency, sports and outdoor activities, the preterite tense (including regular, stem-changing, and irregular verbs), food vocabulary, *por/para*, vocabulary related to meals and table settings and direct object pronouns. Students are encouraged to review the concepts of SPAN 101 and SPAN 102 prior to class. Recommended preparation: SPAN 102, two years of high school Spanish or instructor approval.  
**Credits: 4 Lecture: 4**

**SPAN 188 - SPECIAL STUDIES: SPANISH**

Explores topics of current interest in the discipline.  
**Credits: 1 to 4**

**SPAN 199 - SELECTED TOPICS: SPANISH**

This course is in development.  
**Credits: 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, three years of high school Spanish or instructor approval.  
**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, nature and the environment. Recommended preparation: SPAN 201, four years of high school Spanish or instructor approval.  
**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 present perfect, 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, four years of high school Spanish or instructor approval.  
**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 recommended to be taken with: SPAN 203 or instructor approval.  
**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 recommended to be taken with: SPAN 203 or instructor approval.  
**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 recommended to be taken with: SPAN 203 or instructor approval.  
**Credits: 3 Lecture: 3**



**SPAN 288 - SPECIAL STUDIES: SPANISH**

Explores topics of current interest in the discipline.

**Credits: 1 to 4**

**SPAN 298 - INDEPENDENT STUDY: SPANISH**

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

**SPAN 299 - SELECTED TOPICS: SPANISH**

This course is in development.

**Credits: 1 to 4**

## SPEECH

**SP 111 - FUNDAMENTALS OF PUBLIC SPEAKING**

Emphasizes enhancing the relationship between speaker and audience through the content, organization and delivery of short oral presentations. Helps relieve student speech anxiety.

**Credits: 4 Lecture: 4**

**SP 114 - ARGUMENTATION AND CRITICAL DISCOURSE**

Explores theories of argumentation. Students will develop skills of inquiry and advocacy through oral and written discourse, including critical analysis and rules of evidence. Students will also practice planning, constructing and delivering persuasive arguments in a variety of extemporaneous formats. Through this course, students will learn how to more effectively influence others as well as raise their awareness of others trying to influence them.

**Credits: 3 Lecture: 3**

**SP 115 - INTRODUCTION TO INTERCULTURAL COMMUNICATION**

Explores the influence of cultural differences in communication styles and social values and their impact on work, family, legal and economic systems.

**Credits: 4 Lecture: 4**

**SP 188 - SPECIAL STUDIES: SPEECH**

Explores topics of current interest in the discipline.

**Credits: 1 to 3**

**SP 199 - SELECTED TOPICS: SPEECH**

This course is in development.

**Credits: 1 to 3**

**SP 218 - INTERPERSONAL COMMUNICATION**

Promotes enhanced personal and work relationships by presenting the theoretical concepts and practical skills used in effective one-to-one communication.

**Credits: 3 Lecture: 3**

**SP 219 - SMALL GROUP COMMUNICATION**

Provides theory and practice in teamwork, leadership and conflict management through participation in small group situations. The emphasis will be on task-oriented, decision-making groups.

**Credits: 4 Lecture: 4**

**SP 220 - GENDER COMMUNICATION**

Introduces students to the differences between masculine and feminine communication styles and gives them the tools to manage those differences. Also reviews how communication is used to create, structure and maintain gender identities in a variety of contexts.

**Credits: 3 Lecture: 3**

**SP 230 - INTRODUCTION TO THE RHETORIC OF FILM**

Introduces students to the visual and aural languages of moving pictures (film and video) and gives them the tools necessary to analyze the social impact of both overt persuasion (in propaganda and commercials)

and covert persuasion (in entertainment). Films that manage audience perceptions of race, class, gender, religion and the environment will be discussed. Recommended preparation: WR 121.

**Credits: 3 Lecture: 3**

**SP 234 - INTRODUCTION TO VISUAL RHETORIC**

Analyzes the power of visual communication and persuasion, including composition, color and content, and how such concepts produce both overt and covert influence on the ideas, attitudes and behaviors of others. Recommended preparation: WR 121.

**Credits: 3 Lecture: 3**

**SP 241 - MEDIA, COMMUNICATION, SOCIETY**

Analyzes the social and cultural impact of media, including broadcast, print, film and digital communication. Also examines careers and entrepreneurship in selected areas of media. Recommended preparation: WR 121.

**Credits: 4 Lecture: 4**

**SP 242 - INTRODUCTION TO AUDIO BROADCASTING AND PODCASTING**

Learn audio production for broadcast or podcast. Create original PSAs and news-stories while developing on-air and pre-recorded audio delivery techniques.

**Credits: 4 Lecture: 4**

**SP 250 - LISTENING**

Gives students a deeper understanding of and more practical skills in listening to increase understanding and to help others.

**Credits: 1 Lecture: 1**

**SP 251 - EMOTIONAL INTELLIGENCE**

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.

**Credits: 1 Lecture: 1**

**SP 252 - TEAM SKILLS**

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.

**Credits: 1 Lecture: 1**

**SP 253 - CONFLICT MANAGEMENT**

Gives students an understanding of conflict management and the skills needed to become more successful in the conflict situation.

**Credits: 1 Lecture: 1**

**SP 254 - FREE EXPRESSION AND PUBLIC ASSEMBLY**

Learn and practice civic rights and responsibilities under Federal and State laws pertaining to free expression and public demonstrations.

**Credits: 1 Lecture: 1**

**SP 270 - COMMUNICATING LOVE**

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.

**Credits: 3 Lecture: 3**

**SP 280 - CO-OP WORK EXPERIENCE SPEECH INTERNSHIP**

Provides experience in which students apply previous classroom learning in an occupational setting. Credits depend on the number of hours worked. P/NP grading. Instructor approval required.

**Credits: 1 to 3**

**SP 298 - INDEPENDENT STUDY: SPEECH**

Individualized, advanced study to focus on outcomes not addressed in existing courses or of special interest to a student. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

**SP 299 - SELECTED TOPICS: SPEECH**

Explores an area of communication not included in the regular curriculum. Possible topics include gender communication, media issues and relational communication.

**Credits: 1 to 3**

## 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 and to demonstrate that most firefighter injuries and deaths are preventable.

**Credits: 3 Lecture: 3**

**SFS 105 - FIRE BEHAVIOR AND COMBUSTION I**

Explores the theories and fundamentals of how and why fires start, spread and how they are controlled. Department approval required. Prerequisite with concurring: GS 105 or CH 104 or higher.

**Credits: 3 Lecture: 3**

**SFS 110 - BUILDING CONSTRUCTION FOR FIRE PERSONNEL**

Studies building construction with emphasis on how buildings fail 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 SFS 101, SFS 102, WR 121.

**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, 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: STRUCTURAL FIRE SCIENCE**

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 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 second year students to be taken the year of graduation. Department approval required. Required prior to registration: Firefighter I Academy. Prerequisite: SFS 105.

**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. Department approval required. Recommended preparation: SFS 101, 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 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. Department approval required. Recommended to be taken with SFS 101, 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. Department approval required. 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 placement into MTH 065.

**Credits: 3 Lecture: 3**

### **SFS 275 - CAPSTONE: TACTICS AND 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. Department approval required.

**Credits: 3 Lecture: 2 Other: 2**

### **SFS 288 - SPECIAL STUDIES: STRUCTURAL FIRE SCIENCE**

Explores topics of current interest in the discipline.

**Credits: 1 to 3**

### **SFS 299 - SELECTED TOPICS: STRUCTURAL FIRE SCIENCE**

This course is in development.

**Credits: 1 to 4**

## THEATER ARTS

### **TA 101 - INTRODUCTION TO THEATRE**

**Credits: 3 Lecture: 3**

### **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, 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. Required prior to registration: 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 3**

### **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. Instructor approval required.

**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. Recommended preparation: prior coursework in the discipline. Instructor approval required.

**Credits: 1 to 4**

## VETERINARY TECHNICIAN

### **VT 101 - INTRODUCTION 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, 111 or higher, SP 218, WR 121. 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, VT 117 with a grade of "C" or better. 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, VT 117 with a grade of "C" or better. Corequisites: VT 108, VT 114, VT 118.

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

**VT 111 - HEMATOLOGY AND URINALYSIS**

Covers laboratory techniques of hematology, serum chemistry and urinalysis. Also explores special commercial laboratory test procedures. Prerequisites: VT 108, VT 110, VT 114, VT 118 with a grade of "C" or better. Corequisites: VT 112, VT 113, VT 116.

**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, VT 118 with a grade of "C" or better. Corequisites: VT 111, VT 113, VT 116.

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

**VT 113 - EXOTIC AND LAB ANIMAL MEDICINE**

Provides an overview of the anatomy and physiology, the care and handling, and diseases of common laboratory and exotic small animals. Covers the principles of lab animal use in research with an emphasis on animal welfare. Prerequisites: VT 108, VT 110, VT 114, VT 118 with a grade of "C" or better. Corequisites: VT 111, VT 112, VT 116.

**Credits: 3 Lecture: 2 Lab: 3**

**VT 114 - PHARMACEUTICAL MATH**

Covers pharmacological mathematics, including drug dosage calculations and fluid calculations. Introduces prescription terminology and labeling. Prerequisites: VT 101, VT 102, VT 103, VT 117 with a grade of "C" or better. Corequisites: VT 108, VT 110, VT 118.

**Credits: 3 Lecture: 3**

**VT 116 - PHARMACOLOGY**

Explores pharmacological principles, including classes, mechanisms and side effects of drugs used in veterinary medicine. Prerequisites: VT 108, VT 110, VT 114 and VT 118 with a grade of "C" or better. Corequisites: VT 111, VT 112, VT 113.

**Credits: 4 Lecture: 4**

**VT 117 - VETERINARY ANATOMY & PHYSIOLOGY I**

This is the first of two courses covering the structure and function of animal bodies and the anatomical and physiological differences between selected species. Examines body organization, cellular biology, histology and gross anatomy and physiology of the integumentary, skeletal, muscular and nervous systems. Concurrent labs include the use of skeletons, models, virtual anatomy tools and dissection of cadavers. Corequisites: VT 101, VT 102, VT 103.

**Credits: 6 Lecture: 4 Lab: 6**

**VT 118 - VETERINARY ANATOMY & PHYSIOLOGY II**

This is the second of two courses covering the structure and function of animal bodies and the anatomical and physiological differences between domestic species. Continues the study of the interrelationship of organ systems, including the endocrine, reproductive, cardiovascular, lymphatic, digestive, respiratory and urinary systems. Prerequisites: VT 101, VT 102, VT 103, VT 117 with a grade of "C" or better. Corequisites: VT 108, VT 110, VT 114.

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

**VT 188 - SPECIAL STUDIES: VETERINARY TECHNICIAN**

Special studies for veterinary technician.

**Credits: 1 to 4**

**VT 200 - RADIATION SAFETY**

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, VT 116 with a grade of "C" or better. Corequisites: VT 201, VT 203, VT 208, VT 212.

**Credits: 2 Lecture: 2**

**VT 201 - ANESTHESIOLOGY AND SURGERY TECHNIQUES**

Covers the principles and practices of veterinary anesthesia and surgical assistance. Prerequisites: VT 111, VT 112, VT 113, VT 116 with a grade of "C" or better. Corequisites: VT 200, VT 203, VT 208, VT 212.

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

**VT 202 - SURGICAL NURSING AND DENTISTRY**

Covers common dental problems and dental prophylaxis. Explores 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 with a grade of "C" or better. 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, VT 116 with a grade of "C" or better. Corequisites: VT 200, VT 201, VT 208, VT 212.

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

**VT 204 - DIAGNOSTIC IMAGING**

Covers the operation and use of fixed, portable and dental x-ray machines; the care and development of films; radiographic positioning of animals; and evaluation of radiographic technique. Explores additional diagnostic imaging modalities, such as ultrasound, MRI, CT and endoscopy. Prerequisites: VT 200, VT 201, VT 203, VT 208, VT 212 with a grade of "C" or better. Corequisites: VT 202, VT 206, VT 209.

**Credits: 3 Lecture: 2 Lab: 3**

**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, VT 212 with a grade of "C" or better. Corequisites: VT 202, VT 204, VT 209.

**Credits: 4 Lecture: 4**

**VT 208 - ANIMAL NUTRITION**

Covers the basic principles of nutrition, the development of nutrition protocols based on the life stage and health status of the patient and explores special prescription diets used in veterinary medicine. Prerequisites: VT 111, VT 112, VT 113, VT 116 with a grade of "C" or better. Corequisites: VT 200, VT 201, VT 203, VT 212.

**Credits: 2 Lecture: 2**

**VT 209 - LARGE ANIMAL DISEASES**

Covers preventative medicine and diseases of large animals including the public health significance of relevant large 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, VT 212 with a grade of "C" or better. Corequisites: VT 202, VT 204, VT 206.

**Credits: 3 Lecture: 3**

**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, VT 116 with a grade of "C" or better. Corequisites: VT 200, VT 201, VT 203, VT 208.

**Credits: 4 Lecture: 3 Lab: 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, VT 209 with a grade of "C" or better. 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, VT 209 with a grade of "C" or better.

**Credits: 4 Other: 14.4**

### VT 288 - SPECIAL STUDIES VETERINARY TECHNICIAN

Special studies for veterinary technician.

**Credits: 4**

### VT 299 - SPECIAL TOPICS VETERINARY TECHNICIAN

Special topics for veterinary technician.

**Credits: 4 Lecture: 4 Lab: 12 Other: 8**

## WILDLAND FIRE

### 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 decision making in wildland fire.

**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, 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: 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.

**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, 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, 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. Department approval required.

**Credits: 2 Lecture: 2**

**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. Department approval required.

**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 day-long 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. Department approval required.

**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 positions, 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, 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 and 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.

**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 134, WF 260.

**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**

Meets the training needs of the 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. Department approval required.

**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

First course in a two-course series of instruction in developmental writing and reading. The writing process is examined from invention to final draft; reading instruction includes vocabulary development, distinguishing between ideas and evidence, and summarizing. Students read, analyze and evaluate texts of varying lengths that show each stage of the process. The course focuses on expository essays. Recommended preparation: placement test scores that place the student in WR 060.

**Credits: 4 Lecture: 4**

### WR 065 - RHETORIC AND CRITICAL THINKING II

Second course in a two-course series of instruction in developmental writing and reading. Students will study one long text and shorter selections from varying points of view representing the three major academic disciplines of humanities, science, and social science. Mirroring the reading and writing skills used in college, students read and write about the primary ways of thinking across the disciplines. Recommended preparation: placement test scores that place the student in WR 065, or a grade of "C" or better in WR 060.

**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: placement test scores that place a student in WR 121, or a grade of "C" or better in WR 065.

**Credits: 3 Lecture: 3**

### WR 099 - SELECTED TOPICS: WRITING

This course is in development.

**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. Prerequisite: WR 065 or WR 095 or a placement test score placing student in 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. Prerequisite: 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 3**

### WR 199 - SELECTED TOPICS: WRITING

This course is in development.

**Credits: 1 to 3**

### WR 227 - TECHNICAL WRITING

This transfer course emphasizes forms of writing appropriate in the workplace rather than academic essays. This course addresses the following topics: evaluation of audiences, writing situations and sources, document design, research processes, visual aids all contributing to a major research project. Prerequisite: a grade of "C" or better in WR 121.

**Credits: 4 Lecture: 4**

### WR 240 - INTRODUCTION TO CREATIVE WRITING: NONFICTION

Introduces students to writing creative nonfiction, adapting the personal essay to multiple purposes, such as science or nature writing, travel writing, memoir, biography and journalistic essay. Prose craft exercises, critical reading of published authors and responding constructively to other student work are essential learning processes. 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: MAGAZINE WRITING

Explores topics of current interest in the discipline.

**Credits: 1 to 3**

### WR 299 - SELECTED TOPICS: WRITING

This course is in development.

**Credits: 1 to 4**