Chapter 6 – Course Descriptions

ACCOUNTING (ACCT)

ACCT 2 INTRODUCTION TO FINANCIAL ACCOUNTING – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course is the study of accounting as an information system, examining why it is important and how it is used by investors and creditors to make decisions. The course coverage includes the accounting information system and the recording and reporting of business transactions with a focus on the accounting cycle, the application of generally accepted accounting principles, classified financial statements, and financial statement analysis. It also includes issues related to asset, liability, and equity valuation, revenue and expense recognition, cash flow, internal controls, and ethics. This course may be offered in a distance education format.

ACCT 4 INTRODUCTION TO MANAGERIAL ACCOUNTING – 3 Units
Prerequisite: A grade of C or higher in ACCT 2 (CAN BUS 2)
Advisory: A grade of C or higher in MATH 101 or Math Placement Level 3 or higher.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course is the study of the use and reporting of accounting data for managerial planning, cost control, and decision making purposes. The course includes broad coverage of concepts, classifications, and behaviors of costs. Topics include cost systems, the analysis and use of cost information, cost-volume-profit analysis, contribution margin, profit planning, standard costs, relevant costs, and capital budgeting. This course may be offered in a distance education format.

ACCT 97 SPECIAL TOPICS IN ACCOUNTING – .5-2 Units (PINP Option)
Class Hours: 9-36 lecture total

This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in accounting. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

ACCT 98 SPECIAL LAB TOPICS IN ACCOUNTING – .5-2 Units (PINP Option)
Class Hours: 27-108 lab total

This course is designed to give students an opportunity to explore a variety of topics dealing with changing topics/knowledge in accounting. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

ACCT 101 BASIC ACCOUNTING I – 3 Units
Class Hours: 54 lecture/18 lab total (when offered in the Distance Education format, hours will total 180)

A beginning course based on the double-entry bookkeeping system with an emphasis on a procedural approach. Topics include: accrual, cash, and modified cash basis of accounting; the accounting cycle, transaction analysis (rules of debits and credits), journalizing, posting, worksheets, preparation of financial statements, adjusting, closing, and reversing entries; combination journal; petty cash; bank reconciliations; special journals, accounts receivable, accounts payable; and basic payroll procedures. The course culminates with the student keeping a set of books using special journals for a small merchandising sole proprietorship for the last month of the fiscal year. This course is not transferable to a four-year college or university. This course may be offered in a distance education format.

ACCT 102 BASIC ACCOUNTING II – 3 Units
Prerequisite: A grade of C or higher in ACCT 101 or ACCT 2
Class Hours: 54 lecture/18 lab total (when offered in the Distance Education format, hours will total 180)

A continuation of ACCT 101 maintaining the procedural approach. Topics include: accounting for notes payable, notes receivable, inventories, fixed assets, partnerships, corporations, long-term debt, and cash flows. The course culminates with the student keeping a manual set of books for a small merchandising partnership for the last month of the fiscal year. This course is not transferable to a four-year college or university. This course may be offered in a distance education format.

ACCT 103 PC ACCOUNTING – 2 Units
Prerequisite: A grade of C or higher in ACCT 101 or ACCT 2
Advisory: Ability to type 25 wpm strongly recommended
Class Hours: 18 lecture/18 lab total (when offered in the Distance Education format, hours will total 108)

Accounting on microcomputers emphasizes the major areas of a computerized accounting system. This course provides the student with hands-on opportunity to determine procedure, analyze transaction, enter data and print reports and financial statements related to the General Ledger, Depreciation, Accounts Receivable, Accounts Payable, Payroll, Financial Statement Analysis and Inventory Control. This course may be offered in a distance education format.

ACCT 104 PAYROLL ACCOUNTING – 2 Units
Prerequisite: A grade of C or higher in ACCT 101 or ACCT 2; and BUAD 106 or Math Placement Level 3 or higher.
Advisory: A grade of C or higher in OAS 64
Class Hours: 36 lecture/18 lab total (when offered in the Distance Education format, hours will total 126)

Payroll Accounting emphasizes the methods of computing wages and salaries, the methods of keeping records, and the preparation of government reports. This course is designed to provide training in the complexities of payroll accounting for vocational purposes. This course may be offered in a distance education format.

ACCT 194 INCOME TAX – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)

A basic course in income tax law intended to acquaint students with provisions of State and Federal Income Tax Law. It is designed for individuals or the small business owner wanting to become better acquainted with the handling and processing of income tax returns and recent tax laws and developments. This course may be offered in a distance education format.

ADAPTIVE STUDIES (ADAP)

ADAP 100 COLLEGE SUCCESS FOR STUDENTS WITH DISABILITIES (formerly SPED 100) – 3 Units (PINP Option)
Advisory: A grade of C or higher in ENGL 250 or English Placement Level 2 or higher
Class Hours: 54 lecture total

Introduction and practice of college study skills and techniques to enhance student success. Emphasis of this course will be on self-assessment for the student who has a disability, as well as information dissemination. Topics to be discussed will include study skills, college support services and programs, disability awareness, personal goals, the college experience, and career exploration. Discussion will also include legal aspects of disability.

ADAP 101 ADAPTIVE ASSESSMENT AND COMPUTING (formerly SPED 101) – 1 Unit (PINP Option)
Class Hours: 54 lab total

Adaptive Assessment and Computing is designed for students with learning disabilities that desire more understanding of the adaptive tools available for use with computer technology. After being individually assessed for learning disabilities and adaptive computer needs, each student will be learning ways of tailoring the computer to more effectively manage their specific learning disability. This course may be repeated three times for a total of four enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ADAP 102 ORIENTATION TO COLLEGE – 1 Unit (PINP Option)
Class Hours: 18 lecture total

An orientation to college that is tailored to the unique needs of students with disabilities. Introduction of educational programs, student services, and learning resources, along with full orientation to Disabled Students Programs and Services is covered. The laws and policies guiding the inclusion of students with disabilities in post-secondary education will be covered. In the one-unit format, students will complete formal educational plans and explore options for transfer education or job placement. This course may be repeated three times for a total of four enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ADAP 200 PREPARATION FOR COLLEGE – 3 Units (PINP Option)
Advisory: A grade of C or higher in ENGL 250 or English Placement Level 2 or higher
Class Hours: 36 lecture/54 lab total

Introduction and orientation to college including completion of all applications and forms, thorough review of college catalog, college services, and student rights and responsibilities. Emphasis of this course will be on self-assessment for the student who has a disability including learning styles, personal strengths and weaknesses, and goal-setting. Additional topics to be discussed will include legal aspects of disability in college and work settings, reasonable accommodations and strategies for success, disability awareness, and college visitation. This course may be repeated three times for a total of four enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ADAP 210 CAREER PLANNING AND DEVELOPMENT – 1 Unit (PINP Option)
Class Hours: 18 lecture total

This course is designed as a career development and planning option for transitioning students who have disabilities. The content of the course is designed to assist students in the processes of 1) Finding a career that coincides with their individual interests and talents, 2) Matching personality assets to
career characteristics, 3) Training in the researching of career choices and employment opportunities, 4) Matching vocational skills to career choices, 5) Developing and initiating an education/career plan consisting of goals and options, 6) Identifying educational opportunities available to attain career goals, 7) Identifying the impact of paid work upon SSI and SSDI.

ADAP 240 ADAPTIVE DRAWING AND PAINTING (form. SPED 240/240AD) – 1-2 Units (P/NP Option)
Class Hours: 54-108 lab total
A beginning to intermediate course exploring basic drawing, painting and expressive art techniques. This course will provide an introduction to basic art mediums such as: colored pens and pencils, graphite, pastels, ink, mixed media, watercolor and/or acrylics. It is designed to meet the developmental/individual needs of learning disabled students and/or those with special needs. Note: This class may be repeated three times for a total of four enrollments since course content varies and supervised repetition and practice enhance skills.

ADAP 254 ADAPTED COMPUTER SKILLS (formerly SPED 254) – 1 Unit (P/NP Option)
Class Hours: 54 lab total
Adapted Computer Skills is designed for students who have intellectual disabilities. Each student begins the course with an individualized evaluation of current needs and skills based upon the principles of self-determination. The typical skills covered include email and Internet access, the use of digital calendars, spreadsheets, and word processing. The use of personal digital devices, such as watches, cell phones, pagers and MP3 players will also be covered during the course. Note: This course may be repeated three times for a total of four enrollments since course content varies and supervised repetition and practice enhance skills.

ADAP 255 HUMAN AWARENESS (form. SPED 255) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
This course is being provided as a more focused curricular offering in social-sexual education skills for students who have intellectual disabilities. As opportunities for people with intellectual disabilities have broadened from the limited options available in segregated day programs, the skills necessary for independence in the community, such as those broadly categorized as self-protection, for example, are seen by educators in the field as essential. The aim of this course is to prepare students to tackle the rights as well as the responsibilities of life and to assist individuals to achieve an interdependent balance that is essential in order to enjoy a meaningful quality of life. The course will cover several related areas of the domestic domain over the course of four semesters: 1) Self-awareness/self-esteem, 2) Health and hygiene, 3) Self-protection, and 4) Relationships. Note: Since the subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

ADAP 256 READING FOR LIFE SKILLS (formerly SPED 256) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
This course is designed to meet the vocational preparation needs of students who have intellectual disabilities. The objectives are individually prepared with each student. The student who is preparing for employment in the near term should consider the course. Instruction may include familiarity with educational symbols, sight vocabulary, and frequently encountered public signs, word attack skills and reading comprehension. Note: This class may be repeated three times for four enrollments as skills and supervised repetition and practice enhance proficiency.

ADAP 258 MATHEMATICS FOR LIFE SKILLS (form. SPED 258) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
The course is designed to meet the needs of the student with significant cognitive deficits for independent living and vocational preparation training. The objectives of the course are specifically designated in the Student Educational Contract (SEC) that is individually prepared for each student. The course should be considered for the student who is preparing for employment and independent living in the near term. Training may include personal budget, measurements, time clocks and scheduling, interpreting pay stub information, determining the effects of supported employment on SSI payments, calculator use, and support for regular education course work in math. Note: This class may be repeated three times for four enrollments as skills and proficiencies are enhanced by supervised repetition and practice and amount to an accommodation to student learning styles.

ADAP 297 SPECIAL TOPICS IN SPECIAL EDUCATION (formerly SPED 297) – 5-2.0 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with special education. A different topic will be addressed each time the course is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

ADAP 298 SPECIAL TOPICS IN SPECIAL EDUCATION (formerly SPED 298) – 0-5.5-2.0 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of topics dealing with education and disabilities such as the use of assistive technologies, and methods of effective learning for specific types of impairments. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

ADAP 373 COMMUNITY INVOLVEMENT (formerly SPED 373) – 0 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is for adults with developmental disabilities who are able to function independently in a group setting. The course will expose students to a variety of leisure activities that can be done alone or in the community. Students will actively plan and carry out events and projects each week, building on their own skills and interests. Whenever possible, students will attend community scheduled events such as dances, movies, concerts, or have presenters from the community visit the class. Scheduling, transportation, expense, appropriate attire, and social expectations for various events will all be reviewed.

ADAP 377 VOCATIONAL EDUC. FOR PERSONS WITH DISABILITIES (formerly SPED 377) – 0 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is for adults with developmental disabilities. This course will teach students the fundamental life skills such as safety, hygiene, appropriate behaviors for various settings, personal budgeting, interpersonal communication skills, time management skills, and self-regulation skills. Fundamental academic skills such as basic math, reading, writing, and computer skills are tailored to individual needs and abilities. Projects and assignments are intended to develop personal and pre-vocational skills.

ADMINISTRATION OF JUSTICE (ADJU)

ADJU 10 INTRODUCTION TO ADMINISTRATION OF JUSTICE – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
The history and philosophy of administration of justice in America. Recapitulation of the system, identifying the various sub-systems, role expectations, and their inter-relationships; theories of crime, punishment, and rehabilitation ethics, education and the training for professionalism in the system. This course may be offered in a distance education format. Required for Administration of Justice majors.

ADJU 11 TRAFFIC CONTROL AND INVESTIGATION – 3 Units (P/NP Option)
Class Hours: 54 lecture total
A study of the vehicle code of the State of California as it pertains to Law Enforcement Officers and discussions of leading court cases. Covers Vehicle Code definitions, organization of the D.M.V. and C.H.P., registration, licensing, and law enforcement service. Identifies all moving vehicle violations, parking, pedestrian and equipment violations. Also, a study of the principles and practices of accident investigation, including selective enforcement procedures and data use, hit-and-run accidents, determination of speed from skid marks.

ADJU 15 CONCEPTS OF CRIMINAL LAW – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Historical development and philosophy of law. Definitions, concepts, specific Penal Code sections and their application to the criminal justice system. Principles of constitutional, federal, state and civil laws as they apply to and affect law enforcement; rights, duties and limitation of officers and citizens structure, definition, and case study of applicable sections of the Health and Safety Code and other related codes. Required for Administration of Justice majors.

ADJU 16 LEGAL ASPECTS OF EVIDENCE – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Origin, development and philosophy of evidence; kinds and degrees of evidence, and rules governing admissibility; judicial decisions interpreting individual rights, search and seizure, the case study approach. Required for Administration of Justice majors.

ADJU 17 PRINCIPLES AND PROCEDURES OF THE JUSTICE SYSTEM – 3 Units (P/NP Option)
Class Hours: 54 lecture total
A study of California and federal courts systems, detailed analysis of all aspects of the criminal justice system, especially identifying functions and relationships between the various sub-systems procedures from incident to final disposition; function of constitutional, federal, state, and civil law as it applies to and affects criminal justice. Required for Administration of Justice majors.
ADJU 19  COMMUNITY RELATIONS – 3 Units (P/NP Option)
Class Hours: 54 lecture total
An in-depth exploration of the roles of the Administration of Justice practitioners and their agencies. Through interaction and study the student will become aware of the interrelationship and role expectations among the various agencies and the public. Principal emphasis will be placed upon the professional image of the system of justice administration and the development of positive relationships between members of the system and the public. Required for Administration of Justice majors. This course may be offered in a distance education format.

ADJU 20  PRINCIPLES OF INVESTIGATION – 3 Units (P/NP Option)
Class Hours: 54 lecture total
The study of basic principles of all types of investigation utilized in the justice system. Coverage will include human aspects in dealing with the public, specific knowledge necessary for handling crime scenes; interviews, evidence, surveillance, follow-up, technical resources and case preparation. Required for Administration of Justice majors.

ADJU 21  POLICE FIELD OPERATIONS – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Exploration of theories, philosophies, and concepts related to the role expectations of the line enforcement officer. Emphasis is placed upon the patrol, traffic, and public service responsibilities and their relationship to the Administration of Justice System.

ADJU 22  JUVENILE PROCEDURES – 3 Units (P/NP Option)
Class Hours: 54 lecture total
The organization, functions and jurisdiction of juvenile agencies; the processing and detention of juveniles; juvenile case disposition; juvenile statutes and court procedures.

ADJU 23  CAREER PLANNING FOR ADMINISTRATION OF JUSTICE – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Career Planning for Administration of Justice is designed to acquaint students with current employment techniques and standards in multiple areas of the Administration of Justice field. Students will be exposed to multi-agency recruiting, testing and hiring practices. Students will learn to identify personal problematic areas regarding these practices and will be instructed as to how to seek out and obtain possible solutions to these problems.

ADJU 24  MULTI-CULTURAL ISSUES IN LAW ENFORCEMENT – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This class identifies cultural diversity issues related to law enforcement. Specific areas such as history, current make-up, value of diversity, recognition and handling are discussed. Law enforcement issues related to sexual harassment, victimology and crisis intervention are covered. Course satisfies P.O.S.T. Basic Academy Part 1 curriculum requirements.

ADJU 25  SUBSTANTIVE LAW – 3 Units (P/NP Option)
Class Hours: 54 lecture total
An in-depth study of the substantive laws commonly encountered by the municipal, county, or state police officer or investigator or other criminal justice employee. The scope of the course includes misdemeanor and felony violations of the criminal statutes.

ADJU 26  COURTROOM TESTIMONY & REPORT WRITING – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Provides practical instruction and experience in the proper techniques of report writing and courtroom presentation of evidence. Major emphasis will include the correct writing process, spelling, main elements of a report, report content as well as important aspects of courtroom testimony. Required for Administration of Justice majors.

ADJU 30  WILDLIFE LAW ENFORCEMENT - 3 Units (P/NP Option)
Class Hours: 54 lecture total
Students will develop an understanding of the practice of wildlife enforcement. Students will analyze wildlife enforcement situations and learn to apply management techniques to properly and safely utilize our wildlife populations.

ADJU 40  INSTITUTIONAL & FIELD SERVICES – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course shall cover the philosophy and history of correctional services. A survey of the correctional sub-systems of institutions by type and function, probation concepts, and parole operations is presented. A discussion of correctional employee responsibilities as applied to offender behavior modification via supervisory controls is discussed, as well as, rehabilitation goals as they affect individual and inmate cultural groups in both confined and field settings. This course may be offered in a distance education format.

ADJU 41  FUNDAMENTALS OF CRIME AND DELINQUENCY – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
An introduction to major types of criminal behavior, roles and careers of offenders, factors which contribute to the production of criminality or delinquency; methods used in dealing with violators in the justice system; the changing roles of police, courts, and aftercare process of sentence, probation, prisons, and parole; changes of the law in crime control and treatment processes. This course may be offered in a distance education format.

ADJU 42  INTERVIEWING AND COUNSELING – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Introduction to approaches of behavior modification through interviewing and counseling. An overview of the techniques available to entry-level practitioners in corrections, counseling and interviewing. Creates an awareness of advanced methods utilized by professional counselors. Traces the development of positive relationships between the client and corrections personnel.

ADJU 94  ADMINISTRATION OF JUSTICE WORKSITE LEARNING – 1-8 Units (P/NP Option)
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

ADJU 100  P.C. 832 ARREST COURSE – 2 Units (P/NP Option)
Limitation on Enrollment: Students wishing to receive such training need to concurrently enroll in ADJU 102.
Class Hours: 27 lab total
The ADJU 100 course requires the use of POST workbooks which will cost the student approximately $100.
1. This course does not include P.C. 832 Firearms Training. Students wishing to receive such training need to concurrently enroll in ADJU 102.
2. Students taking this course may be required to submit fingerprint card to DOJ and pay a substantial fee for a background check. Instructor will explain requirements at first class session.
3. The ADJU 100 course requires the use of POST workbooks which will cost the student approximately $100.
4. If you intend to continue in the POST basic academy Modular format this course is not required. You should enroll directly in ADJU 131 Regular Basic Course Modular Format Level III Academy.
Class Hours: 40 lecture total
Course satisfies the curriculum standards of the Commission on Peace Officer Standards and Training as required by Penal Code Section 832 for peace officers; includes laws of arrest, search and seizure, methods of arrest, and discretionary decision-making, mandatory for all peace officers who do not possess a basic certificate awarded by the Commission on Peace Officer Standards and Training.

ADJU 102  P.C. 832 FIREARMS (formerly ADJU 110) – 5 Unit (P/NP Only)
Limitation on Enrollment: Student must be at least 18 years of age to register for this course. Student will be required to submit a Live Scan report to the DOJ (at the student’s expense) to verify eligibility to possess/carry a firearm. The results of the Live Scan must be presented to the instructor the first day of class.
Class Hours: 27 lab total
Course meets curriculum and competency objectives for the firearms portion of the Commission on Peace Officer Standards and Training (P.O.S.T.) P.C. 832 training standard. Students will receive training on use and safety of firearms. They will also be required to fire a handgun and meet an accuracy standard established by P.O.S.T.

ADJU 103  COMMUNITY RESOURCES AND CRISIS INTERVENTION – 2 Units (P/NP Option)
Class Hours: 36 lecture total
The course will familiarize students with community health, education, and social service resources as related to identified social problems. In-depth instruction will be provided regarding crisis communication skills including active listening, community referral, and problem-solving. Students will be able to communicate in crisis situations and identify appropriate referrals through a problem-solving perspective.

ADJU 106  SEXUAL ASSAULT AND DOMESTIC VIOLENCE EDUCATION & TRAINING (P/NP Option) – 4 Units
Class Hours: 72 lecture total
This course covers the history, causes and dynamics of domestic violence and sexual assault. It will also cover existing laws and regulation in California with regards to sexual assault and domestic violence. Incident impact on individuals,
family structure and the community will be discussed. The course is specifically designed to provide training to those who may become involved in crisis intervention and sexual assault and domestic violence victim advocacy, as well as those pursuing a career in law enforcement, education or social services.

ADJU 131 REGULAR BASIC COURSE MODULAR FORMAT LEVEL III ACADEMY – 6 Units
Notes:
1. Students taking this course may be required to submit fingerprint card and DOJ and pay a substantial fee for a background check. Instructor will explain requirements at first class session.
2. This course now requires the use of POST workbooks which will cost the student approximately $100.
3. This course requires a material fee (ammunition) of approximately $100.
Class Hours: 90 lecture includes 7 hours written/54 lab total
A course certified by the Commission on Peace Officer Standards and Training that meets the regular basic training requirements of a Modular Level III Regular Basic Academy. This is a regular basic course that includes training in law, patrol procedures, criminal investigation, arrest methods, juvenile procedures, vehicle operations, discretionary decision-making, community relations, and firearms. Course hours/units may change due to P.O.S.T. mandated changes.

ADJU 132 REGULAR BASIC COURSE MODULAR FORMAT LEVEL II ACADEMY – 8 Units
Limitation on Enrollment: Student must have successfully completed a P.O.S.T. certified Module 3 course within the last three years.
Class Hours: 129 lecture/60 lab total
A course certified by the Commission on Peace Officer Standards and Training that meets the basic training requirements of a Modular Level II Basic Course. This is an advanced course that includes training in law, patrol procedures, criminal investigation, arrest methods, juvenile procedures, vehicle operations, discretionary decision-making, community relations, and firearms. Course mandates require that students successfully complete Modular Level III prior to enrolling in this course. Course hours/units may change due to P.O.S.T. mandated changes.

ADJU 197 SPECIAL TOPICS IN ADMIN. OF JUSTICE – .5-3 Units
Class Hours: 9-54 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge and new laws in Administration of Justice. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for Administration of Justice majors; open to anyone with an interest in the topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

AG – GENERAL AGRICULTURE (AG)

AG 1 CAREER PLANNING FOR AGRICULTURE (formerly ENVR 1) – 2 Units (P/NP Option)
Class Hours: 36 lecture total
Career opportunities and requirements in Agriculture, Agriculture Business, Equine Science, Environmental Horticulture and Veterinary Technology will be examined. Students will learn how to apply for jobs. Traits of highly successful people will be explored by formal presentation and interactive assignments. Environmental awareness and interrelationships with career success will be covered.

AG 6 CAREER PLACEMENT – AG AND NATURAL RESOURCES (formerly AGRI 6) – 1 Unit (P/NP Option)
Note: Designed for students concurrently completing or who have completed the core course requirements in agriculture, horticulture, and natural resources majors. This course may require a multi-day, overnight field trip to survey the industry.
Class Hours: 18 lecture total
This class is designed to give students an overview of the California agriculture, horticulture, and natural resources industry and assist in obtaining the best possible employment during the summer and upon graduation. Students will learn interview techniques, will develop an employment portfolio, and will learn how to apply for jobs. This class is required for all agriculture, horticulture, and natural resources majors.

AG 9 AGRICULTURE AND NATURAL RESOURCES LEADERSHIP (formerly ENVR 9) – 1 Unit (P/NP Option)
Note: Required field trips
Class Hours: 9 lecture/27 lab total
This course is designed to develop leadership qualities in students. “Hands-on” techniques will be used to facilitate problem solving, cooperative work ethics, developing initiative, managing and organizing information, flexible thinking and effective questioning. Practical experience in conducting business as a group will be gained by participation. Note: This course may be repeated three times for a total of four enrollments since course content varies and skills are enhanced by supervised repetition.

AG 58 STUDENT ENTERPRISE PROJECTS (form. AGRI 58) – 1-4 Units
Limitation on Enrollment: Student must have a sponsoring instructor from the Natural Resources, Industry and Public Safety Division.
Note: Student projects are subject to approval by a project evaluation committee.
Class Hours: 9 lecture/27-189 lab total
Selection and completion of a management/production enterprise project under faculty supervision. Each student will be required to develop a project plan, timeline, budget and contract with the sponsoring instructor.

AG 94 AG WORKSITE LEARNING (form. AGRI 94) – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on-the-job performance. FINANCIAL AID STUDENTS: Students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.

AG 97 SPECIAL TOPICS IN AGRICULTURE (formerly AGRI 97) – .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in agriculture. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

AG 98 SPECIAL TOPICS IN AGRICULTURE – LAB SKILLS (formerly AGRI 98) – .5-2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of topics in a lab setting dealing with changing knowledge in agriculture. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

AG 197 SPECIAL TOPICS IN AGRICULTURE (formerly AGRI 197) – .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in agriculture. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

AG 51 AGRICULTURE ACCOUNTING (formerly AGRI 51) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
A study of the elements of agricultural record keeping and their analysis for maximum efficiency. Course includes compiling a depreciation record, financial statement, simple accounting, and obtaining credit.

AG 53 INTRODUCTION TO AGRICULTURE BUSINESS – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Provides a basic understanding of the business and economics of the agricultural industry; an introduction to the economic aspects of agriculture and their implications to the agricultural producer, consumer and the food system; management principles encountered in the day to day operation of an agricultural enterprise as they relate to the decision making process.

AG 54 AGRICULTURE ECONOMICS – 3 Units (formerly AGRI 54) (P/NP Option)
Class Hours: 54 lecture total
An introduction to economic and business principles as they relate to resource management. The focus of the course will be to relate economic theories and principles to applied agri-business and resource management problem solving. Student involvement in practical marketing, financing, promotions, business analysis, retailing, or some other practical economic problem will be required.
AG – ANIMAL SCIENCE (AGAS)

AGAS 10 LIVESTOCK SELECTION (form. AGRI 10) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in AGAS 19
Note: Field trips to area ranches may be taken.
Class Hours: 36 lecture/54 lab total
A course designed to evaluate and select desirable production livestock. Animal genetics, performance records, grading and meat quality characteristics will be discussed as important tools in selection. The majority of lab time will be spent judging live animals.

AGAS 11 LIVESTOCK FEEDING AND NUTRITION (formerly AGRI 11) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
A study of the digestive physiology of farm animals; their utilization of the basic nutrients, feedstuffs, and feed additives. Common feeds in Northern California will be used to blend practical farm rations for beef, dairy, sheep, swine and horses. Time will be allotted to cost analysis of commercial feeds and least-cost computer ration programs.

AGAS 15 ARTIFICIAL INSEMINATION (formerly AGRI 15) – 1 Unit (P/NP Option)
Class Hours: 9 lecture/27 lab total
A course to familiarize students with basic techniques of Artificial Insemination in cattle. Demonstration and hands-on involvement will include: synchronization, handling of semen, livestock handling, and breeding techniques.

AGAS 17 BEEF PRODUCTION (form. AGRI 17) – 2 Units (P/NP Option)
Note: Required field trips will be taken to various beef production operations in northern California and southern Oregon. These field trips are intended to expose students to every facet of beef production from cow/calf to packer.
Class Hours: 27 lecture/27 lab total
Beef production in the community, state, and nation, breeds and breeding, care and management, market grades and classes, judging and selection, principles and practices of purebred commercial and feedlot production including housing, equipment and recordkeeping.

AGAS 19 PRINCIPLES OF ANIMAL SCIENCE (form. AGRI 19) – 3 Units (P/NP Option)
Class Hours: 36 lecture/54 lab total
An introduction to the principles of animal science presented in terms of an animal's biological cycle or production. Topics will include basic nutrition, genetics, reproduction, and animal health relating to domestic farm animals. In addition to investigating modern production practices, the impact of animal agriculture upon mankind and the environment will also be considered. The weekly lab session will be devoted to investigating the basic management practices associated with each livestock species.

AGAS 30 LIVESTOCK PRODUCTION – 3 Units (P/NP Option)
Class Hours: 36 lecture/54 lab total
This course is a study of the principles and practices of purebred and commercial swine, sheep and beef cattle production throughout California, the United States and the World. Emphasis will be placed on the importance of breeds, breeding principles, selection, nutrition, environmental management, health, marketing and record keeping to ensure scientifically-based management decisions and consumer product acceptance.

AG – ENVIRONMENTAL HORTICULTURE (AGEH)

AGEH 22 NURSERY PRACTICES AND PLANT PROPAGATION (formerly HORT 22, HORT 32A) – 2 Units
Class Hours: 18 lecture/54 lab total
This course is required for all Environmental Horticulture majors. The methods and principles used in the propagation of plants, including both sexual and asexual propagation will be demonstrated and practiced. Other topics related to successful plant propagation such as soil preparation, transplanting and potting, disease and insect control, irrigation, and fertilization will also be covered.

AGEH 23 NURSERY PRACTICES AND MANAGEMENT (formerly HORT 23, HORT 32B) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
This is required for all Environmental Horticulture majors. This hands-on course will cover production schedules, marketing strategies, customer service, product displays, greenhouse and nursery management and much more. Best practices and economic feasibility will be emphasized.

AGEH 26 INTEGRATED PEST MANAGEMENT IN ENVIRONMENTAL HORTICULTURE (formerly HORT 26, AGRI 26) – 3 Units (P/NP Option)
Class Hours: 36 lecture/54 lab total
Exploration; identification and control of major horticultural pests, including insects, weeds, and diseases; impact of pests on commercial nursery crops and the landscape is also discussed. Integrated pest management including cultural, biological, mechanical/physical, and chemical control methods is emphasized. Course is designed to assist students in preparing for California licensing exams in pest management. Laboratory required. (C-ID AG-EN 120L)

AGEH 27 PLANT IDENTIFICATION AND TAXONOMY OF EVERGREEN TREES, SHRUBS AND GROUND COVERS (formerly HORT 27) – 1 Unit (P/NP Option)
Class Hours: 18 lecture/12 lab total
This is a course which will familiarize the student with approximately 65 commonly used landscape plants. The plant's taxonomic description, landscape uses, and culture will be emphasized. This is the second of three plant identification courses students working toward an AA or AS Degree in Environmental Horticulture are required to take. AGEH 27, AGEH 28 and AGEH 29 are a series and may be taken in any order.

AGEH 28 PLANT IDENTIFICATION AND TAXONOMY OF DECIDUOUS TREES, SHRUBS AND GROUND COVERS (formerly HORT 28) – 1 Unit (P/NP Option)
Class Hours: 18 lecture/12 lab total
This is a course which will familiarize the student with approximately 65 commonly used landscape plants. Each plant's taxonomic description, landscape uses, and culture will be emphasized. This is the second of three plant identification courses students working toward an AA or AS Degree in Environmental Horticulture are required to take. AGEH 27, AGEH 28 and AGEH 29 are a series and may be taken in any order.

AGEH 29 PLANT IDENTIFICATION AND TAXONOMY OF TREES, SHRUBS AND GROUND COVERS (formerly HORT 29) – 1 Unit (P/NP Option)
Class Hours: 18 lecture/12 lab total
This is a course which will familiarize the student with approximately 65 commonly used landscape plants. The plant's taxonomic description, landscape uses, and culture will be emphasized. This is the third of three plant identification courses students working toward an AA or AS Degree in Environmental Horticulture are required to take. AGEH 27, AGEH 28 and AGEH 29 are the first and second in the series, but these courses can be taken in any order. The scheduling of these classes will reflect plant phenology.

AGEH 31 LANDSCAPE IRRIGATION (formerly HORT 31, AGRI 31) – 3 Units (P/NP Option)
Advisory: A grade of C or higher in MATH 100, Math Placement Level 3 or higher; and a grade of C or higher in ENGL 190, English Placement Level 6 or higher
Class Hours: 36 lecture/54 lab total
This is a study of water hydraulics, irrigation systems design and installation procedures and irrigation scheduling. Techniques in the operation and maintenance of irrigation systems will also be presented. Emphasis will be placed on residential design as well as commercial design. Completion of AGEH 31.1, AGEH 31.2 and AGEH 31.3 is the equivalent of AGEH 31. This course is required for all Environmental Horticulture majors.

AGEH 31.1 LANDSCAPE IRRIGATION – DESIGN (formerly HORT 31.1) – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in MATH 100, Math Placement Level 3 or higher; and a grade of C or higher in ENGL 190, English Placement Level 6 or higher
Class Hours: 12 lecture/18 lab total
Modular delivery of course content of AGEH 31. This is a study of irrigation systems design, water hydraulics and plant/soil/water relationships. Emphasis will be placed on residential design as well as commercial design. Completion of AGEH 31.1, AGEH 31.2 and AGEH 31.3 is the equivalent of AGEH 31. This course is required for all Environmental Horticulture majors.

AGEH 31.2 LANDSCAPE IRRIGATION – INSTALLATION (formerly HORT 31.2) – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in MATH 100, Math Placement Level 3 or higher; and a grade of C or higher in ENGL 190, English Placement Level 6 or higher
Class Hours: 12 lecture/18 lab total
Modular delivery of AGEH 31. This class covers the basics in reading blueprints, preparing a bill of materials and installing an irrigation system. Emphasis will be placed on residential installation but commercial installation will be covered. This course is required for all Environmental Horticulture majors. Completion of AGEH 31.1, AGEH 31.2 and AGEH 31.3 is the equivalent to AGEH 31.

AGEH 31.3 LANDSCAPE IRRIGATION – TROUBLESHOOT AND SCHEDULE (formerly HORT 31.3) – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in MATH 100, Math Placement Level 3 or higher; and a grade of C or higher in ENGL 190, English Placement Level 6 or higher
Class Hours: 12 lecture/18 lab total
Modular delivery of AGEH 31. This is a study of irrigation system operation and scheduling. Techniques in the operation and maintenance and troubleshooting of irrigation systems will be presented. This course is required for all Environmental Horticulture majors. Completion of AGEH 31.1, AGEH 31.2 and AGEH 31.3 is the equivalent of AGEH 31.
AGEH 33 ENVIRONMENTAL HORTICULTURE (formerly HORT 33, AGRI 33) - 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)

Environmental horticulture provides students with an understanding of how various aspects of the environment relate to plant growth and how human horticultural practices can influence the environment. This course explains the basic principles of botany and horticulture. Topics include plant structure, growth, physiology, and reproduction; climate, soil, and ecology; plant problems, including pests, diseases and effects of pollution; plant genetics, human-manipulated plants, and the world food picture. This course is useful for plant scientists, horticulturists, and those seeking science credits. Required for first-year Environmental Horticulture Majors. This course may be offered in a distance-learning format.

AGEH 34 BEGINNING FLORAL DESIGN – FALL FLOWERS (formerly HORT 34, HORT 34AB) - 2 Units (P/NP Option)
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 18 lecture/54 lab total
Course introduces the beginning floral design student to the principles and techniques of flower arranging. The subject matter includes a blend of art, science, business, and career in preparation for entering the floral industry and related areas. Fall flowers and fall/winter holiday arrangements will be emphasized. Note: This course may be repeated one additional time for a total of 2 course enrollments since course content varies and skills are enhanced by supervised repetition and practice.

AGEH 35 LANDSCAPE DESIGN (formerly HORT 35, AGRI 35) - 3 Units (P/NP Option)
Class Hours: 36 lecture/54 lab total
This course is a requirement for all Environmental Horticulture majors. This course emphasizes the process leading to the development of the residential design. The incorporation of design principles i.e. unity, rhythm, repetition, balance, etc. and how the principles are used to create a functional and pleasing composition with plant material and other landscape elements will be stressed. Emphasis is on residential design, both rural and suburban.

AGEH 36 FLORAL DESIGN FOR WEDDINGS AND SPECIAL OCCASIONS (formerly HORT 36) - 2 Units (P/NP Option)
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 18 lecture/54 lab total
This course provides instruction in floristry skills pertaining to weddings and flowers to wear and carry. This course will provide the student with the skills necessary for higher entry-level jobs in commercial floristry. Some subjects to be covered in this course include bouquets, corsages, and body flowers, wedding and reception decoration, including altar designs, candelabra, cake and table centerpieces.

AGEH 37 NURSERY AND FLORIST MANAGEMENT (formerly HORT 37, AGRI 37) - 3 Units (P/NP Option)
Class Hours: 54 lecture total
The study of retail and wholesale florist and florist/nursery operations including area within mass markets. Specific areas that will be covered are management problems, public relations, advertising, financing, wire service, sales, display and merchandising.

AGEH 38 LANDSCAPE AND TURF MANAGEMENT (formerly HORT 38, AGRI 38) - 3 Units
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher; and a grade of C or higher in MATH 220, or Math Placement Level 1 or higher
Class Hours: 36 lecture/54 lab total
This is a required course for Environmental Horticulture majors. The installation of lawns, groundcovers, shrubs and trees will be covered. The practices of pruning, trimming, mowing, watering, fertilizing, and pesticide application as applied to landscape management of home, parks, highways, and how to estimate and bid in all areas of landscape management will also be covered.

AGEH 39 TROPICAL FLORAL DESIGN (formerly HORT 39) - 1.5 Units (P/NP Option)
Advisory: A grade of C or higher in AGHE 34 or AGHE 44
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 27 lecture/9 lab total
This course covers all aspects of floral design as it relates to tropical flowers. Students will learn to make corsages, formal/linear design, leisure and party decorations from tropical flowers.

AGEH 40 INTERMEDIATE FLORAL DESIGN (formerly HORT 40, HORT 34CD) - 2 Units
Prerequisite: A grade of C or higher in AGEH 34 or AGEH 44
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 18 lecture/54 lab total
Instruction in floristry skills related to contemporary styles of design for all occasions, wedding, and sympathy work. The application of techniques for mass and line style designs including Flemish, Oriental, parallel, contemporary, free-style, vegetative, and interpretive will be addressed. Note: This course may be repeated once for a total of two enrollments since the course content varies and skills are enhanced by supervised repetition and practice.

AGEH 41 SELECTION AND CARE OF BLOOMING AND TROPICAL PLANTS (form. HORT 41, HORT 135, AGRI 135) - 1.5 Units (P/NP Option)
Class Hours: 18 lecture/27 lab total
Designed to prepare and upgrade skills of those planning to work with tropical plants in nurseries and plant shops. Emphasis will be placed upon knowledge of plants and their care and use. During lab, students will be directed in practical work using various types of planters constructed in the industry. The class will include a thorough discussion of propagation techniques, pests and diseases common to houseplants.

AGEH 42 BEGINNING FLORAL DESIGN – SPRING FLOWERS (formerly HORT 44) – 2 Units (P/NP Option)
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 18 lecture/54 lab total
Course introduces the beginning floral design student to the principles and techniques of flower arranging. The subject matter includes a blend of art, science, business, and career in preparation for entering the floral industry and related areas. Spring flowers and spring holiday arrangements will be emphasized. Note: This course may be repeated one additional time for a total of 2 course enrollments since course content varies and skills are enhanced by supervised repetition and practice.

AGEH 43 HOLIDAY DECORATIONS AND BANQUETS (formerly HORT 45) – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in AGEH 34
Class Hours: 18 lecture/9 lab total
This class will offer in-depth instruction on the specific techniques and floral materials used in holiday design. Floral pieces specific to the fall and winter holidays will be created in class.

AGEH 44 SYMPATHY FLOWERS (form. HORT 46) – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in AGEH 34
This class will offer in-depth instruction on the specific floral materials and techniques used in sympathy designing. Servicing the order and customer service relating to funerals and memorials will be emphasized. Floral pieces specific to funerals and memorials will be practiced in class.

AGEH 60 MASTER GARDENER TRAINING (formerly HORT 60) – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher
Class Hours: 54 lecture total
This is the training course for the Master Gardener Program, a community service organization designed to relay research based horticultural information to the home gardener. The Master Gardener program was developed by the University Cooperative Extension to train interested horticultural enthusiasts to assist local gardeners in diagnosing plant problems and to provide science based information for keeping home landscapes and the environment healthy. The University of California has agreed to let Shasta College use their training materials which are provided through this class. Topics covered in this course include pesticide use, IPM, weed identification and management, pruning, plant diseases, soils, fertilizers, growing vegetables, native plants, vermiculture, watering and many other plant related topics. This is a required course for anyone interested in obtaining a UC Extension certification as a Shasta College Master Gardener.

AGEH 70 ORGANIC GARDENING PRACTICES (SPRING) (formerly HORT 70) – 1 Unit (P/NP Option)
Note: This course is complementary to, but independent from organic gardening practices for summer (AGEH 71) and fall (AGEH 72) seasons.
Class Hours: 9 lecture/27 lab total
This introductory class meeting organic/sustainable practices for the home garden/small farmer. This course covers spring vegetables, soils, fertility, irrigation and cultural practices. Students will be planting and maintaining a garden plot. Since subject matter varies with each seasonal crop, this course is complimentary to AGHE 71 and AGHE 72 which addresses gardening practices for summer and fall seasons.
AGEH 71 ORGANIC GARDENING PRACTICES (SUMMER)  - 1 Unit (P/NP Option)
Note: This course is complementary to, but independent from organic gardening practices for spring (AGEH 70) and fall (AGEH 72) seasons.
Class Hours: 9 lecture/27 lab total
This course includes summer crop production, irrigation, pest control and cultural practices for summer. Students will be planting and maintaining a garden plot. Subject matter in this course is supplementary to AGEH 70 and AGEH 72, which addresses gardening practices for spring and fall seasons.

AGEH 72 ORGANIC GARDENING PRACTICES (FALL)  - 1 Unit (P/NP Option)
Note: This course is complementary to, but independent from organic gardening practices for spring (AGEH 70) and summer (AGEH 71) seasons.
Class Hours: 9 lecture/27 lab total
Fall vegetable growing practices for the home and market gardener. Includes fall vegetable cover crops and fall planting practices. Students will be planting and maintaining a garden plot. Since subject matter varies with each seasonal crop, this course is supplementary to AGEH 70 and AGEH 71, which addresses gardening practices for spring and summer seasons.

AGEH 75 WATER GARDENING (form. HORT 75)  - 1 Unit (P/NP Option)
Class Hours: 9 lecture/27 lab total
This course covers the basics of planning, constructing and maintaining a water feature in the landscape. Topics will include: selection, care and propagation of water and bog plants, planning and construction of water feature and general maintenance of the water garden. Selection and care of fish will also be covered.

AGEH 94 HORTICULTURE WORKSITE LEARNING (formerly HORT 94)  - 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

AGEH 97 SPECIAL TOPICS IN ENVIRONMENTAL HORTICULTURE - (formerly HORT 97)  - 2-5 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in environmental horticulture. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic.
Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

AGEH 98 SPECIAL TOPICS IN ENVIRONMENTAL HORTICULTURE - LAB SKILLS (formerly HORT 98)  - 2-5 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of topics in a lab setting dealing with changing knowledge in environmental horticulture. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic.
Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

AGEH 120 SELECTED TOPICS IN ENVIRONMENTAL HORTICULTURE: PRUNING (form. HORT 120, HORT 128E and AGRI 128E)  - 5 (P/NP Option)
Class Hours: 9 lecture total
A basic course in pruning techniques of ornamental plants, and the specific categories of flower-bearing and fruit-bearing trees, shrubs, and vines. The focus of this course is to teach the student why plants are pruned, when plants should be pruned and how plants are pruned.

AGEH 122 SELECTED TOPICS IN ENVIRONMENTAL HORTICULTURE: PLANT PROPAGATION  - 5 Unit (formerly HORT 122, HORT 128R and AGRI 128R) (P/NP Option)
Class Hours: 9 lecture total
Course will cover propagation by seed, cuttings, layering, grafting and budding. Rootstock selection will also be covered.

AGEH 125 MICRO-IRRIGATION AND LOW WATER USE LANDSCAPING (formerly HORT 125, AGRI 125)  - 1 Unit (P/NP Option)
Class Hours: 18 lecture total
Course will cover methods of reducing irrigation requirements of ornamental landscapes, including reducing evaporation, appropriate irrigation methods, and appropriate plants.

AGEH 130 INTRODUCTION TO NATIVE PLANTS (formerly HORT 130, AGRI 130)  - 1 Unit (P/NP Option)
Note: Includes one local plant collection field trip.
Class Hours: 18 lecture total
Covers the strategies of drought tolerant plants, as well as the identification, collection, and propagation of native and non-native plants used in the landscape.

AGEH 137 ORCHARD MANAGEMENT PRACTICES (formerly HORT 137, AGRI 137)  - 1 Unit (P/NP Option)
Class Hours: 18 lecture/4 lab total
A study of the practices of producing fruits and nuts. Varieties, areas, propagation, pollination, planting, pruning, disease and insect control will be discussed.

AGEH 150 SMALL SCALE SPECIALTY CROP FARMING (formerly HORT 150)  - 1 Unit (P/NP Option)
Class Hours: 9 lecture/27 lab total
A practical hands-on course in the methods and techniques of small scale specialty crop farming performed in the field. Organic, as well as inorganic methods, will be incorporated into the class. Students will select a site, develop a marketing plan, perform a soil analysis, select a crop, propagate seeds, and perform cultural practices, irrigation, pest management and marketing.

AGEH 197 SPECIAL TOPICS IN ENVIRONMENTAL HORTICULTURE MANAGEMENT (formerly HORT 197)  - .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in environmental horticulture management. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic.

AG - EQUINE (AGEO)

AGEQ 12 HORSEMANSHIP (formerly AGRI 12)  - 3 Units (P/NP Option)
Note: It is recommended that students provide their own horse.
Class Hours: 36 lecture/54 lab total
This course is designed for those interested in learning to ride and handle horses. Includes basic equitation, proper seat and hands, tack identification and use, and basic care and grooming of the pleasure horse.

AGEQ 13 HORSE HUSBANDRY (form. AGRI 13)  - 3 Units (P/NP Option)
Class Hours: 54 lecture total
The study of horse production practices including breed types, selection, conformation, nutrition, breeding and first aid. Emphasis will be placed on general health care and how to detect health problems. This course is designed for the beginner to intermediate horseperson.

AGEQ 14 WESTERN RIDING AND TRAINING (formerly AGRI 14, AGRI 111)  - 3 Units (P/NP Option)
Class Hours: 36 lecture/54 lab total
This course specializes in the many phases of Western riding and training. It is suitable for intermediate level riders and those interested in a career. Subjects covered include basic training, groundwork, showing, trail riding, and more. It is essential in the Certificate Program as it better prepares the student to enter the horse business. Note: This course may be repeated one time for a total of two enrollments since course content varies and skills are enhanced by supervised repetition and practice.

AGEQ 21 HORSE MANAGEMENT (formerly AGRI 21, AGRI 115)  - 3 Units (P/NP Option)
Class Hours: 54 lecture total
An intensive study of the horse industry including factors for career success, including small stable management. Record keeping and facility management are also discussed. This class will emphasize the necessary skills needed to be a manager of a boarding, breeding, or training facility.

AGEQ 109 EQUINE REPRODUCTION  - 1.5 Units (P/NP Option)
Class Hours: 18 lecture/27 lab total
An in-depth study of equine reproduction including basic principles of animal genetics, reproductive anatomy and physiology, breeding management of mares and stallions, evaluation of fertility, reproductive diseases and care of the pregnant mare and newborn foal. Artificial insemination, embryo transfer and current innovations in assisted reproduction will also be discussed. The laboratory portion of the course is designed to complement and reinforce the lecture by providing students with opportunities to learn practical skills in the field of equine reproduction. Students will be encouraged to develop skills in horsemanship, interpretation of equine sexual behavior, breeding management of mares and stallions and collection, evaluation and processing of fresh cooled and frozen semen. Ultrasound, artificial insemination and embryo transfer will be demonstrated. Some time will be dedicated to the use of computer resources currently available to breeders. There will be opportunities to participate in field trips.
AGEQ 110 HORSE TRAINING (form. AGRI 110) – 3 Units (P/NP Option)
Advisory: A grade of C or higher in AGEQ 12
Class Hours: 36 lecture/54 lab total
This course is designed to help people handle horses with existing problems as well as educating handlers on how to prevent problems from starting with their horses. Subject matter includes horse behavior and dealing with specific problems such as rearing, bucking, refusal, relaxing, biting, and pulling. Horses and the trail. Young horses are welcomed and novice handlers are encouraged to take this course.

AGEQ 112 HORSESHOEING (formerly AGRI 112, AGRI 112A) – 2 Units (P/NP Option)
Note: Students must provide their own horse for shoeing.
Class Hours: 27 lecture/27 lab total
Course offers the student an opportunity to study the anatomy and physiology of the horse’s foot, leg, and posture. Instruction will be given in trimming of horse’s feet and in the fitting and nailing of shoes.

AGEQ 113 HORSE OWNERSHIP AND BASIC HANDLING – 3 Units
Note: Field trips will be taken to local horse ranches.
Class Hours: 54 lecture total
This course specializes in the many phases of English riding and training. It will bring together the material which is important to the student interested in horses as a career. This course helps to prepare the student to enter the horse business as a riding instructor, trainer, or manager.

AGEQ 115 SHOWING AND TRAINING THE HUNTER/JUMPER (formerly AGRI 115) – 2 Units (P/NP Option)
Advisory: A grade of C or higher in AGEQ 114
Class Hours: 18 lecture/54 lab total
This course is designed to introduce the intermediate or advanced rider to the proper selection, training and showing of the classic English hunter/jumper. Topics covered through labs and lecture will include training, basic dressage and flatwork, approaching jumper safe and properly, fitting the hunter/jumper and rider for shows, and organizational techniques to enhance shared experience.

AG – MECHANIZED AGRICULTURE (AGMA)

AGMA 42 FARM POWER AND MACHINERY - 3 Units
Class Hours: 27 lecture/81 lab total
This class covers basic skill-level operation and maintenance of agricultural equipment including tractors, tillage, planting and harvesting machinery. Safe operational practices, proper machine and implement inspection and set-up, and basic operational skills will be covered. Precision agricultural technology, equipment management and field layout will be discussed. The lab activities will include the operation of machinery in the field laboratory.

AGMA 44 INTRODUCTION TO CONSTRUCTION SKILLS FOR AGRICULTURE AND NATURAL RESOURCES (formerly ENVR 44) - 3 Units
Class Hours: 27 lecture/81 lab total
This course covers the basic construction skills related to agriculture, natural resources, and environmental horticulture. Subjects covered will be mechanical drawing, design layout, arc welding, oxy/acetlene cutting and brazing, carpentry, electrification, small engine theory, concrete work structures, and project construction. Safety will be emphasized.

AG – NATURAL RESOURCES (AGNR)

AGNR 1 INTRODUCTION TO NATURAL RESOURCES (formerly NR 1) – 3 Units (P/NP Option)
Note: Required day field trips
Class Hours: 36 lecture/54 lab total
An introduction to the natural resource management of forests, soil, watershed, fish, and wildlife in the context of protection and restoration of watersheds and ecosystems. An emphasis will be placed on natural resources careers, policy and law, tools, techniques and practices, and management philosophies of public and private lands. Basic biological and ecological processes will be introduced along with discussion of the scientific method and preparing reports.

AGNR 4 INTRODUCTION TO RANGE SCIENCE – 3 Units (P/NP Option)
Note: Required day field trips
Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 108 for the lecture portion of the class and an additional 54 hours of lab totaling 162 hours for this course)
This basic range management and improvement practices. Proper utilization of rangeland resources, management for sustainable human and environmental values, use by wild and domestic animals, historical and legal changes in rangeland management. Overview of multiple use principles. Maintenance and improvement of range plant communities, conserving biological diversity and environmental quality in rangelands. The lecture portion of this course may be offered in a distance learning format.

AGNR 6 NATIVE PLANT IDENTIFICATION (formerly NR 6) – 3 Units (P/NP Option)
Note: Includes one optional overnight weekend field trip.
Class Hours: 36 lecture/54 lab total
The study of botanical characteristics, taxonomy morphology, and community relationships of the major tree and shrub associations in California and Western United States. Includes discussion of commercial uses and geographic ranges of these plants.

AGNR 10 SATELLITE IMAGERY & MAPPING TECHNIQUES FOR NATURAL RESOURCES (formerly NR 10) - 4 Units (P/NP Option)
Note: Includes one optional overnight weekend field trip.
Class Hours: 54 lecture total
This course covers the use of aerial photographs and satellite imagery to acquire, interpret, and delineate vegetation types, land management practices, wildlife habitat, and other significant environmental parameters. Students will map and spatially analyze these landscape features using computerized geographic information systems. Students will also gain experience orienting using equipment such as hand compasses, GPS receiver, topographic maps, aerial photographs, or satellite imagery.

AGNR 11 ENVIRONMENTAL ETHICS (form. ENVR 11, INTR 11) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course examines the influence of cultural values on the relationship of humans with each other and with plants, animals and the land. An important objective is to develop original and sustaining attitudes and guidelines which will enhance a healthy globe. Sources of western society’s historical and current attitudes toward nature as well as alternative cultural perspectives will be explored. Students will emerge from this class with a greater understanding of the individual moral responsibilities toward the environment. This course may be offered in a distance education format.

AGNR 12 ENVIRONMENTAL POLICY AND LAW – 2 Units (P/NP Option)
Note: Required day field trips
Class Hours: 36 lecture total (when offered in the Distance Education format, hours will total 108)
This course will introduce students to various aspects of environmental laws, policy, and agencies responsible for management and regulation of our natural resources. Topics of the course will include origins and importance of environmental law; legal principles; property rights; international, federal, state, and local environmental legislation; and regulatory authorities. The course will include discussion of the Legislative and Regulatory history, and current implementation of the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). Students will gain an understanding of the interaction between federal, state, and local environmental regulations, and how they pertain to environmental compliance and protection, and enforcement for illegal activities. Examples of legislation and regulations to be covered will include aspects of the Federal Clean Water Act (CWA), California Water Code, National Pollution Discharge Elimination System (NPDES), Federal Endangered Species Act (ESA), California Irrigated Lands Program, Local Grading Ordinances, California Storm Water Program, California Streambed Alteration Agreements, and other pertinent federal, state, and local environmental laws.

AGNR 50 NATURAL RESOURCES MEASUREMENTS (formerly NR 50) – 4 Units (P/NP Option)
Note: Several field trips to various locations will occur as feasible.
Class Hours: 36 lecture/108 lab total (when offered in the Distance Education format, hours will total 108 for the lecture portion of the class and an additional 108 hours of lab totaling 216 hours for this course)
This course is an introduction to the sampling methods and equipment used to inventory forest resources. Log scaling and aerial photo interpretation will also be discussed. Measurement of timber stand growth, quantity and quality, and other forest products including water, range, wildlife and outdoor recreation will also be covered. The lecture portion of this course may be offered in a distance education format.

AGNR 51 SILVICULTURE AND FIRE ECOLOGY (formerly NR 51) – 2 Units (P/NP Option)
Note: Includes one optional overnight weekend field trip.
Class Hours: 18 lecture/54 lab total
This course is an introduction to the integrated management of forests, soil, water, wildlife, and fire in the context of protection and restoration of watersheds and ecosystems. An emphasis will be placed on natural resources careers, policy and law, tools, techniques and practices, and government philosophies of public and private lands. Basic biological and ecological processes will be introduced along with discussion of the scientific method and preparing reports.

AGNR 60 LAKE ECOLOGY (formerly NR 60) – 4 Units (P/NP Option)
Note: Includes one required day field trip.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course covers the biological characteristics of lakes and their environments as well as the ecological relationships among the many interacting species. Focus will be placed on development of aquatic communities, ecological interactions, population dynamics, energy flow, and nutrient cycling within lake ecosystems. This course also covers aquatic management, fish management, and fish population dynamics. Potential career areas in aquatic biology, limnology, and aquatic resource management will be explored. This course may be offered in a distance education format.
AGNR 53 FOREST PROTECTION AND RESTORATION ECOLOGY (formerly NR 53) – 3 Units (P/NP Option)
Note: Several field trips to various locations will occur as feasible.
Class Hours: 18 lecture/108 lab total (when offered in the Distance Education format, hours will total 54 for the lecture portion of the class and an additional 108 hours of lab totaling 162 hours for this course)
This course will discuss the biotic and abiotic stress factors that influence forest resource values. Direct and indirect management practices in addition to Silvicultural principles that maintain and enhance biotic balance, biological diversity, and ecosystem health and productivity will be covered. The lecture portion of this course may be offered in a distance education format.

AGNR 69 BIRDS AND THEIR HABITAT (formerly NR 69) - 2 Units (P/NP Option)
Note: Three-hour field trips will be required part of this course.
Class Hours: 27 lecture/27 lab total
An introduction to the study of birds. Emphasis on the behavior, taxonomy, migration, orientation, flight, evolution, economic importance, and field identification of the birds. We will also study bird ecology and the role of birds in bio-diversity and ecosystems. Other topics covered are songs and calls, territory, courtship, nests and eggs, care of young, and the systems (reproductive, etc.) of birds.

AGNR 70 WILDLIFE CONSERVATION AND MANAGEMENT (form. NR 70) – 3 Units (P/NP Option)
Note: Includes several all-day field trips
Class Hours: 36 lecture/54 lab total
The study of plant and animal ecology in relation to principles of wildlife management. An emphasis will be placed on identification of common western birds and mammals, seeing and aging criteria, wildlife population dynamics, wildlife habitat management, and a review of trapping and marking techniques. Ecological concepts such as biotic communities, succession, limiting factors, and predator-prey relationships will also be covered.

AGNR 83 INTRODUCTION TO GLOBAL POSITIONING SYSTEMS (GPS) (formerly NR 83) – 1 Unit
Class Hours: 9 lecture/27 lab total
This course is an introduction to theory and practice of geopositioning (GPS). Course will cover principles of geopositioning, including satellite systems, triangulation, accuracy and the configuration and use of GPS field devices. Students will gain experience in the use of both recreational grade and mapping grade GPS equipment for field navigation and data collection. The application of GPS to various fields and industries will be covered, from natural resources and agriculture to construction and infrastructure management.

AGNR 94 NATURAL RESOURCES WORKSITE LEARNING (formerly NR 94) – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is approved by the student and related to the student's major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.
AGNR 97 SPECIAL TOPICS IN NATURAL RESOURCES (formerly NR 97) – 5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in natural resources. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

AGNR 98 SPECIAL TOPICS IN AGRICULTURE-NATURAL RESOURCES - LAB SKILLS – 5-2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of topics in a lab setting dealing with changing knowledge in natural resources. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

AGNR 173 BEGINNING TAXIDERMY (formerly NR 173) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
An introduction to taxidermy dealing with the taxidermy of birds. It will include collecting, materials and tools, preservatives,Jimming, mounting and painting. Habitat materials and composition will be discussed and applied.

AGNR 174 INTERMEDIATE TAXIDERMY (formerly NR 174) – 2 Units (P/NP Option)
Prerequisite: A grade of C or higher in AGNR 173
Class Hours: 18 lecture/54 lab total
An introduction to taxidermy of small mammals, reptiles and fish. Advanced techniques in bird taxidermy are also presented. Instruction will include game laws, tools and materials, skinning, tanning, mounting and display. A variety of artificial habitats will be employed. Students will supply their own specimens.

AGNR 176 WILDLIFE OF NORTHERN CALIFORNIA (formerly NR 176) – 1 Unit (P/NP Option)
Note: A weekend field trip to the Tulelake area will be required.
Class Hours: 9 lecture/27 lab total
Common species of wildlife found in Northern California will be observed and discussed. Habitat ecology and management along with regulatory and conservation issues will be covered in the class. Various identification tools, instructional aids, and other relevant materials will be reviewed and discussed. Note: This course may be repeated once for a total of two enrollments since course content varies and skills are enhanced by supervised repetition.

AGNR 197 SPECIAL TOPICS IN NATURAL RESOURCES (formerly NR 197) – 5-2 Units (P/NP Only)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in natural resources. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

AGPS 20 PLANT SCIENCE (formerly AGRI 20) – 4 Units (P/NP Option)
Note: Field trips to local areas will be included.
Class Hours: 54 lecture/54 lab total
An introduction to the biological principles of plant growth and development. Ecosystem relationships will be covered with particular emphasis on succession, water cycle, mineral cycle, and energy flow. In addition to the investigating modern production and marketing practices of agronomic crops, the impact of commercial crop production upon mankind and the environment will be considered.

AGPS 24 SOILS – 3 Units (formerly ENVR 24, AGRI 24) (P/NP Option)
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher; and one year of high school chemistry or equivalent
Note: Class includes two Saturday field trips on classification, judging, and conservation of soils. This class is required for all agriculture, natural resources, and horticulture majors.
Class Hours: 36 lecture/54 lab total
This class is an introductory course on the physical, chemical, and biological properties of soil as it relates to agriculture and natural resources. Ecosystem relationship of soil use and management is emphasized. The effects of drainage, tillage, and irrigation on land use are discussed.

AGPS 25 CALIFORNIA WATER (formerly AGRI 25) – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is an interdisciplinary examination of California’s water use and management with a historical emphasis on the politics and conflict arising from water scarcity. Topics of water quality, water law, measurement of water, evaluation of irrigation methods and systems, and issues relating to water use will all be covered. This course may be offered in a distance education format.

AGPS 126 PESTICIDE TRAINING (formerly AGRI 126, AGRI 126AD) – .5 Unit (P/NP Option)
Class Hours: 10 lecture total
This course is designed to meet the continuing education requirement for pesticide applicators and pest control advisors. The focus of the course is on methods and calculations necessary to apply pesticides safely, accurately and efficiently and to look at alternative techniques being used and developed for management of plant pests.

AGSA 50 AGRICULTURE RESOURCE MANAGEMENT (formerly AGRI 50) – 3 Units (P/NP Option)
Class Hours: 36 lecture/54 lab total
A unique non-traditional land management class based on “sustainable,” “regenerative,” or “holistic” principles and practices. The total course will focus around the use of a “model” for making land management decisions for public and private lands. This class is appropriate for managing ranches and farms or for anyone interested in sustainable land management. Note: This course may be repeated one time for a total of two enrollments since course content varies and skills are enhanced by supervised repetition.

AGSA 56 INTRODUCTION TO SUSTAINABLE AGRICULTURE AND FARM MANAGEMENT – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course explains the organization and operation of sustainable farm and ranch businesses, identifies factors affecting profitability, and evaluates the business for sustainability, increased efficiency and profit. Budgeting and resources management, farm operation analysis are applied to the Farm lab. Includes an examination of case studies to connect sustainable agriculture principles to actual farming practices.

AGVETT 1 VETERINARY ANATOMY, PHYSIOLOGY AND MEDICAL TERMINOLOGY (formerly VETT 1, AGRI 62) – 4 Units (P/NP Option)
Class Hours: 54 lecture/54 lab total
This lecture and laboratory course is designed to introduce the first semester Veterinary Technology student to the comparative normal anatomy and physiology of selected domestic animal species. The eleven anatomical systems are covered and material presented ranges from the microscopic cellular level to the level of the whole organism. Relevant application of structure and function to the clinical medical situations is addressed. Appropriate medical terminology is included with each system and animal dissection is completed by each student.

AGVETT 2 FUNDAMENTALS OF ANIMAL HEALTH (formerly VETT 2, AGRI 63) – 4 Units (P/NP Option)
Class Hours: 54 lecture/54 lab total
This introductory lecture course defines the role of the Animal Health Technician in private veterinary practice, research institutions, regulatory agencies and zoos. Topics covered include basic animal care and management, feeding species identifications, behavior, handling skills, animal restraint, sanitation, personal hygiene, study of pharmacological agents, drug use, actions and laws, emergency first aid, zoonotic disease risk factor, animal nursing skills, instruments and equipment, terminology, veterinary practice ethics and legal responsibilities.

AGVETT 3 HEALTH AND DISEASES OF ANIMALS (formerly VETT 3, AGRI 60) – 4 Units (P/NP Option)
Class Hours: 54 lecture/54 lab total
This course is for students enrolled in their second year of the Veterinary Technology curriculum. The course provides the student with an introduction to infectious and non-infectious diseases and conditions of domestic animals. Material covered includes the etiology, pathogenesis, pathophysiology, and clinical signs of each disease. This course also includes lectures, demonstrations, and laboratory exercises covering routine clinical examinations of the heart, skin, mucous membranes, and excretory organs.
AVGOTT 4 VETERINARY RADIOLOGY AND IMAGING (formerly VETT 4) – 1 Unit  
Prerequisite: A grade of C or higher in AVGOTT 2  
Class Hours: 9 lecture/27 lab total  

Acquaints the student with the use of radiography, including radiographic duties of the veterinary technician. Special emphasis on medical, veterinary and radiographic terminology; elementary radiation and electrical protection; technical principles, and equipment operation. Fundamentals of latent and visible image formation, x-ray film characteristics, intensifying screens and film holders; theory and application of darkroom chemistry and processing; use and maintenance of veterinary x-ray processing equipment.

AVGOTT 5 VETERINARY ANESTHESIOLOGY, SURGICAL ASSISTING AND DENTISTRY (formerly VETT 5, AGRI 61) – 4 Units  
Prerequisite: A grade of C or higher in AVGOTT 2  
Class Hours: 54 lecture/54 lab total  

Includes lectures covering animal surgical and medical nursing techniques and dental hygiene. Procedures and techniques with intravenous and inhalation anesthetics, surgical asepsis, skin preparation, instrument sterilization techniques and monitoring patients for vital signs are presented. Anesthetic drugs are discussed according to classification, mode of action, method of action and method of administration.

AG 6  CARE OF EXOTIC AND LAB ANIMALS (formerly VETT 6, AGRI 68) – 1 Unit  
Prerequisite: A grade of C or higher in AGVETT 2  
Class Hours: 18 lecture total  

This course will emphasize the necessary skills, and abilities required for a veterinary technician in laboratory animals. This theory should be complemented by an on-the-job training program working under the direct supervision of a California licensed veterinarian. This course is offered in partial fulfillment of the requirements to sit for the State Registry Exam via the Alternate Route.

AGVETT 7 VETERINARY MEDICAL RECORDS – 1 Unit  
Class Hours: 18 lecture total  

This lecture course is designed to teach the veterinary technician the legal aspects of working in the veterinary hospital. This course will cover proper medical records, filing, and computer principles. The course focuses on the interaction between clients and staff, and obtaining an understanding of the human and animal bond, and its effects on people. OSHA requirements will be covered including developing and applying a proper safety plan. Stress and substance abuse will also be covered.

AGVETT 16 VETERINARY PRACTICES (formerly AGRI 16) – 2 Units (P/NP Option)  
Class Hours: 18 lecture/54 lab total  

An introduction to common veterinary practices, sanitation, and livestock disease endemic to Northern California. Special emphasis will be given to parasite control and preventive vaccination programs. Lab activities will include demonstrations and student participation in performing castration, worming, vaccinations, and animal handling and restraint procedures.

AG – VITICULTURE (AGVIT)  
AGVIT 80 VINEYARD DESIGN AND CONSTRUCTION (formerly HORT 80) – 1 Unit (P/NP Option)  
Class Hours: 18 lecture/9 lab total  

An introductory course in establishing a commercial or home vineyard. Numerous principles will be covered with respect to the design and construction of a vineyard. A vineyard will be utilized as a resource for this class.

AGVIT 81 VINEYARD CARE (formerly HORT 81) – 1 Unit (P/NP Option)  
Class Hours: 18 lecture/9 lab total  

This is an introductory course for the care and maintenance of wine grape vineyards. Both conventional and organic management methods will be discussed. This course would benefit students interested in both commercial production and home vineyard care.

AGRICULTURE (AGRI)  
See AG, AGAB, AGAS, AGEQ, AGPS, AGSA, AGVETT for course listings

ANATOMY (ANAT)  
ANAT 1 HUMAN ANATOMY – 5 Units  
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher  
Note: May be taken concurrently with PHY 1  
Class Hours: 54 lecture/54 lab/18 discussion total  

A college level introductory course in human anatomy. A systematic hands-on approach to the anatomy of the human body. Human cadavers and/or mammalian dissection are used as a teaching resource. May be taken concurrently with PHY 1.

ANTHROPOLOGY (ANTH)  
ANTH 1 PHYSICAL ANTHROPOLOGY – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 1A or English Placement Level 7  
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)  
Topics include the theories of human origins and the evolution of life in general; classification of primates, introduction to living primates and primate behavior, genetics, population genetics, the fossil record, the evolution of hominid behavior, the evolution of language, environment and technology; hunting and the evolution of society; the evolution and condition of modern humans. This course may be offered in a distance education format.

ANTH 2 CULTURAL ANTHROPOLOGY – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 1A or English Placement Level 7  
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)  
An introductory course exploring the nature of culture as the human adaptation to the natural world. It includes such topics as making a living, family structure, social organization and institutions, language, religion, art, and cultural change. This course may be offered in a distance education format.

ANTH 5 HUMANITY, CULTURE, AND ECOLOGY – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 1A or English Placement Level 7  
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)  
An ecological perspective of cultures as adaptations to diverse habitats, and explorations of how these adaptations respond to environmental alterations. Emphasis will be placed on adaptive strategies and challenges in contemporary societies. This course may be offered in a distance education format.

ANTH 14 RELIGION, MYTH AND RITUAL – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 280 or English Placement Level 5 or higher  
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)  
A cross-cultural study of the forms and functions of religion, myth, and ritual in contemporary and historical societies. Emphasis will be on non-Western traditional groups and understanding their religious beliefs in a culturally relative context. This course may be offered in a distance education format.

ANTH 25 CULTURE AND HISTORY OF THE NORTH AMERICAN INDIAN – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 280 or English Placement Level 5 or higher  
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)  
A course dealing with the history and culture of the North American Indian. Emphasis will be on the origins, spread and diversification, and the development of Native American cultures in North America. Additional emphasis will be on contemporary Native Americans. Consideration will be given to how the arts, economics, and cultural contributions of Native Americans have influenced the modern world. This course may be offered in a distance education format.

ARCHAEOLOGY (ARCH)  
ARCH 3 PRINCIPLES OF ARCHAEOLOGY – 3 Units  
Class Hours: 54 lecture total  

An introductory course to the study of world prehistory and historical archaeology through the analysis of archaeological method, theory, and regional developments. The course includes case study examination of the fundamental concepts of archaeology and the changing theoretical orientations of archaeology in the contemporary world.

ARCH 4 FIELD ARCHAEOLOGY (formerly ARCH 4AD) – 3 Units (P/NP Option)  
Class Hours: 18 lecture/108 lab total  

An introductory course in the practical application of archaeological principles and methods. Students will become familiar with the basic techniques of scientific archaeological excavation and site survey, mapping, photographing, data recording, cataloging and preservation of archaeological specimens. Note: This course may be repeated three times for a total of four enrollments, since course content varies and skills are enhanced by repetition and practice.

ARCH 5 LABORATORY AND FIELD METHODS IN ARCHAEOLOGY (formerly ARCH SAD) – 5-2 Units  
Class Hours: 27-108 lab total  

This is a course that emphasizes both the field aspects of archaeology coupled with post-field laboratory analysis and data interpretation. Method and theory of both field survey, excavation and recording and post-field data processing and curation and subsequent interpretation and explanation will be the class focus. Some work may require overnight stays. Students will assume positions of crew leaders, laboratory chiefs, mappers, camp organizers, etc. under the instructor’s direction. Students will participate in preliminary site analysis, interpretive projects, and cultural material processing. Note: This course may be repeated three times for a total of four enrollments, since course content varies and skills are enhanced by repetition and practice.
ART (ART) 

ART 1  INTRODUCTION TO ART – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A basic course in the visual arts including architecture, craft, graphics, painting and sculpture. Historical periods and the artist's role in society are covered in the Stone Age, Middle Ages, Renaissance, Baroque, Classical, Romantic, Impressionism, and the 20th Century. Fundamental concepts of line, color, value, texture, form and space are examined by two and three dimensional examples. Recommended for Humanities elective. This course may be offered in a distance education format.

ART 2  HISTORY OF WESTERN ART THROUGH THE GOTHIC PERIOD – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A historical survey course of the visual arts including architecture, crafts, engraving, etching, graphics, painting, sculpture, and woodcuts. Historical periods covered are Stone Age, Egyptian, Mesopotamian, Aegean, Greek, Etruscan, Roman, Christian, Medieval, Romanesque, and Gothic.

ART 3  HISTORY OF WESTERN ART SINCE 1400 – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A historical survey course of the visual arts from the year 1400 through the 20th Century, with emphasis on painting, sculpture and architecture. This course may be offered in a distance education format.

ART 4  WORLD ART – 3 Units
Class Hours: 54 lecture total
A survey of the visual arts of ethnic and indigenous cultures with an emphasis on both historic and contemporary art. Explored are the Eskimo, North West Coast, Pueblo, Apache, Navaho, Iroquois, Plains, Southeastern, California, Mexico, Peru, Africa, India, Japan and China. Lectures are focused on the styles, motifs, symbols, rituals and traditions of the cultures by examining their crafts, drawings, sculpture, printmaking and paintings. This course is designed as a Humanities elective, recommended for Art Core Programs, and required for Art History Concentration.

ART 5  HISTORY OF MODERN ART – 3 Units
Class Hours: 54 lecture total
An in-depth study of visual expression since 1860, starting with pre-Impressionist stirring and tracing the development of modernism through significant art movements in the 20th Century.

ART 12  BEGINNING FORM, DESIGN AND COLOR (formerly ART 14A) – 3 Units (P/NP Option)
Class Hours: 36 lecture/72 lab total
A fundamental course in two-dimensional design and color theory with the study of basic design elements as they apply to form. Two-dimensional design includes balance, distance, movement, structural analysis, texture and unity. Color theory includes color schemes, psychological use of color, and value and intensity concepts. Required for the Art Core Program, and recommended for theatre, architecture and graphic design studies.

ART 13  INTERMEDIATE FORM, DESIGN AND COLOR (formerly ART 14B) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ART 12
Class Hours: 36 lecture/72 lab total
An interpretative course using two-dimensional form concepts and color theory with the application to three-dimensional form. The development of personal ideas and direction, the use of scale, surface effects, and new materials (synthetics). More concern is given to presentation, focus and consistency.

ART 15  THREE DIMENSIONAL DESIGN (formerly ART 15AB) – 3 Units
Note: Field trips may be required
Class Hours: 36 lecture/72 lab total
A hands-on studio art course using the elements and principles of three-dimensional design in the creation of form and space relationships. This course provides students with the fundamental design and problem solving skills that apply to the fields of three-dimensional art, architecture, landscape, interior and industrial design. This course may be repeated once for a total of 2 enrollments since course content varies and skill development is enhanced with a successive enrollment.

ART 16  PENCIL RENDERING (formerly ART 16AB) – 2 Units
Class Hours: 18 lecture/54 lab total
A fundamental course for preparing pictorial presentation applicable to advertising, architectural and industrial design, landscapes and illustrations using mechanical perspective and rendering media. Course designed for Architectural majors and recommended for Art majors. Note: This course may be repeated once for a total of two enrollments since course content varies and skill development is enhanced with a successive enrollment.

ART 17  SHADES, SHADOWS, AND PERSPECTIVES (formerly ART 17AD) – 3 Units (P/NP Option)
Class Hours: 36 lecture/72 lab total
A basic course in the use of various perspective techniques, using one and two point as well as grids. This course is designed for Art, Architecture, Graphic Design and Landscape Architecture students. It involves developing three-dimensional drawings of building structures, objects, etc., using perspective techniques and adding value rendering as well as shadows to create finished work. Note: This course may be repeated once for a total of two enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ART 21A  BEGINNING FREEHAND DRAWING – 3 Units (P/NP Option)
Class Hours: 36 lecture/72 lab total
An introductory course in the basic methods and tools of drawing using idea and technical development. A variety of materials will be used for this purpose. Course is required for Art Core Program.

ART 21B  INTERMEDIATE FREEHAND DRAWING – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ART 21A
Class Hours: 36 lecture/72 lab total
A developmental course designed to expand upon the information and techniques learned in 21A. Greater concern for personal idea development, consistency and presentation techniques. More information given on paper and its manufacture, drawing materials and the techniques of developing a professional portfolio. A variety of materials will be used for this purpose.

ART 23  PEN, BRUSH AND INK (formerly ART 23AB) – 2 Units
Class Hours: 18 lecture/54 lab total
Class Hours: 18 lecture/54 lab total
Exploring 2D possibilities with a variety of pens, brushes, inks, and papers. Exercises are based in observation and imagination, with supporting foundational drawing practice. Exposure to artists using this medium, and to links between illustration and fine art. Note: This course may be repeated once for a total of two enrollments, since skill development is enhanced with a successive enrollment.

ART 26  BEGINNING WATERCOLOR PAINTING (formerly ART 26AB) – 3 Units (P/NP Option)
Class Hours: 36 lecture/72 lab total
An introductory course in watercolor painting methods as they apply to the visual arts. Methods covered include wet wash, wash, stroke and glaze overlays, with emphasis on creative interpretation and expression. Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

ART 27  INTERMEDIATE WATERCOLOR PAINTING (formerly ART 26CD) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in two semesters of ART 26
Class Hours: 36 lecture/72 lab total
A developmental course designed to expand upon the information and techniques learned in ART 26. General attention will be given to personal idea development, consistency, presentation techniques and working with more independence. The student will be expected to increase quality and number of paintings completed during the semester. The student will also learn to develop a professional portfolio and to communicate professionally. Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

ART 29  BEGINNING PAINTING (formerly ART 25AB) – 3 Units
Class Hours: 36 lecture/72 lab total
A creative course in the use of oil, polymer, and other synthetic media on canvas, hardboard, or metal. Application of these media and other media use in representation and abstract form. Course designed for Painting Concentration. Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

ART 30  INTERMEDIATE PAINTING (formerly ART 25CD) – 3 Units
Prerequisite: A grade of C or higher in two semesters of ART 29
Class Hours: 36 lecture/72 lab total
A developmental course designed to expand upon the information and techniques learned in ART 29-Beginning Painting. General attention will be given to personal idea development, consistency, presentation techniques and working with more independence. The student will be expected to increase quality and number of paintings completed during the semester. The student will also learn to develop a professional portfolio and to communicate professionally. Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

ART 31  BEGINNING FIGURE DRAWING (form. ART 22AB) – 3 Units
Class Hours: 36 lecture/72 lab total
An introductory course in creative drawing of the nude human figure. Emphasis will be placed on anatomy, proportion, composition, and development of personal expression. Course required for Art Core Program. Note: This course may be repeated once for a total of two enrollments since course content varies and skills are enhanced by supervised repetition and practice.
ART 32 INTERMEDIATE FIGURE DRAWING (form. ART 22CD) – 3 Units
Prerequisite: A grade of C or higher in two semesters of ART 31
Class Hours: 36 lecture/72 lab total
A developmental course designed to expand on information and techniques learned in ART 31-Beginning Figure Drawing. Attention will be given to the development of a more personal interpretation of the figure, technique, consistency, presentation and the resolution and execution of ideas with greater independence. The student will produce and critically discuss increasingly sophisticated works which will become part of his/her professional portfolio. Note: This course may be repeated once for a total of two enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ART 35 BEGINNING CERAMICS (formerly ART 35AB) – 3 Units (P/NP Option)
Note: Field trips may be required
Class Hours: 36 lecture/72 lab total
An introductory course developing skills in hand-building with coils, slabs, and the use of the potter’s wheel. The course includes glazing, decorative techniques, properties of clay and firing of ceramic forms. Note: This course may be repeated once for a total of two enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ART 36 INTERMEDIATE CERAMICS (formerly ART 35CD) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ART 35
Note: Field trips may be required
Class Hours: 36 lecture/72 lab total
This is an intermediate ceramics course emphasizing studio problems which involve the potter’s wheel, construction of molds and more advanced hand-building techniques. Note: This course may be repeated once for a total of two enrollments (6 units) since course content varies and skills are enhanced by supervised repetition and practice.

ART 45 BEGINNING GLASS (form. ART 45AB) – 3 Units (P/NP Option)
Note: Field trips may be required
Class Hours: 27 lecture/81 lab total
This class is a hands-on course to explore the beginning aspects of the art of working with glass in its molten and frozen states. Students will develop an understanding of the wide range of possibilities that exist when working with glass. Through demonstrations and practice in the hot shop, students will acquaint themselves with the tools and materials needed to create forms in glass. Students will become involved with molten glass working, ladle sand casting, kiln casting and other glass processes. Working with clear glass, students will develop basic glass blowing skills by learning how to form simple blown shapes such as the sphere, cylinder, disk and various vessel forms. Individual student skills will be emphasized. Open to students in all disciplines; no prior glassblowing experience necessary. Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

ART 46 GLASS BLOWING (formerly ART 45CD) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ART 45 or ART 57
Note: Field trips may be required
Class Hours: 27 lecture/81 lab total
This course focuses on skills progression in working with glass in the molten state. Emphasis is placed upon individualized projects for students. Students will work with studio equipment related to recycling, melting, firing and annealing of glass. This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

ART 50 PRINTMAKING (formerly ART 50AD) – 3 Units (P/NP Option)
Class Hours: 36 lecture/72 lab total
An introductory course surveying printmaking processes as they apply to the visual arts. Studio experience will focus on one or two of the following techniques each semester: relief, intaglio, silk screen and/or lithographic printing. The creation of relief, silk screen, intaglio and lithographic prints will be discussed and demonstrated. Note: This course may be repeated three times for a total of 4 enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ART 55 BEGINNING SCULPTURE (formerly ART 55AB) – 3 Units
Advisory: A grade of C or higher in one semester of ART 15
Note: Field trips may be required
Class Hours: 36 lecture/72 lab total
A creative course in the sculpting of wood, plastics, plaster, and other materials. Application of these media are used in abstract and representational forms. Course designed for the Art Core program. Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

ART 56 INTERMEDIATE SCULPTURE (formerly ART 55CD) – 3 Units
Prerequisite: A grade of C or higher in two semesters of ART 55
Note: Field trips may be required
Class Hours: 36 lecture/72 lab total
This course is designed to expand upon the information and techniques learned in ART 55, Beginning Sculpture. General attention will be given to personal idea development, consistency, presentation, techniques and working with more imagery. It is expected to increase quality and size of sculpture pieces during the semester. The student will also learn to develop a professional portfolio and to communicate professionally. This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

ART 57 SCULPTURAL GLASS – 3 Units
Advisory: A grade of C or higher in ART 45 or ART 55
Note: Field trips may be required
Class Hours: 27 lecture/81 lab total
A structured intermediate sculpture course in which students will develop a better understanding of the potential of the medium of glass in its molten and frozen states. Students will begin to refine hands-on involvement with molten glass working, ladle sand casting, kiln casting and other glass processes. Regular demonstrations, presentations and in-class projects as well as individual assignments will establish a fundamental knowledge and physical understanding of glass as a medium for sculpture.

ART 60A BASIC PHOTOGRAPHY AND DARKROOM (formerly ART 60AB) – 3 Units (P/NP Option)
Note: This is a film based class; students must provide their own 35mm camera with adjustable shutter and aperture.
Class Hours: 27 lecture/81 lab total
An introductory course presenting the origins and history of photography, camera and lens familiarization, exposure, metering, film development, printing procedures, print presentation, composition and standards of quality. Emphasis is placed on black and white negative and print quality along with content, composition and personal expression.

ART 61 BEGINNING CREATIVE PHOTOGRAPHY (formerly ART 61A) – 3 Units (P/NP Option)
Note: This is a film based class; students must provide their own 35mm camera with adjustable shutter and aperture.
Class Hours: 27 lecture/81 lab total
A course that concentrates on expressive and aesthetic aspects of photography in fine art. Emphasis will be placed on camera use, composition, film exposure and darkroom techniques to achieve artistic effect.

ART 62 INTERMEDIATE CREATIVE PHOTOGRAPHY (formerly ART 61BD) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ART 60A or a grade of C or higher in ART 61
Note: This is a film based class; students must provide their own 35mm camera with adjustable shutter and aperture.
Class Hours: 27 lecture/81 lab total
A continuation of techniques covered in ART 61. Emphasis will be on negative quality, the fine print and presentation. On-going study will concentrate on creative development of the personal idiom in creation of a portfolio, aesthetics and critical thought process. Note: This course may be repeated two times for a total of three enrollments since skills are enhanced by supervised repetition and practice.

ART 70 INTRO. TO DIGITAL PHOTOGRAPHY – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ART 61
Note: It is recommended that students have a 7 megapixel (or larger) digital camera with manual aperture and shutter controls. It would be helpful if the student has basic skills in Adobe Photoshop.
Class Hours: 27 lecture/81 lab total
An introductory course in digital imaging and technology commonly used by photographers. Art and design principles, basic photography formats, composition and lighting in digital image making will be discussed and explored. Adobe Photoshop may be used in developing and manipulating digital images. Note: This course may be repeated once for a total of two enrollments since skill development is enhanced with a successive enrollment.

ART 71 INTERMEDIATE DIGITAL PHOTOGRAPHY – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ART 70
Note: It is recommended that students have a 7 megapixel (or larger) digital camera with manual aperture and shutter controls. It would be helpful if the student has basic skills in Adobe Photoshop.
Class Hours: 27 lecture/81 lab total
A continuation and advancing of the principles covered in ART 70 with emphasis on artistic expression and use of current technologies.

ART 80A GRAPHIC DESIGN – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ART 12
Note: It would be helpful if the student has basic skills in Adobe Photoshop.
Class Hours: 27 lecture/81 lab total
The course provides the student with an introduction to the theories and applications behind typography, color theory, layout, and composition. The student will learn and use industry standard image editing and page layout software to produce class assignments typically encountered in the graphic design and printing industries.
ART 90B INTERMEDIATE GRAPHIC DESIGN – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ART 80A
Class Hours: 27 lecture/81 lab total
This course builds on the software training and design concepts from 80A to teach the student more advanced image editing, document composition, and digital illustration techniques using industry standard software and accepted design practices and advanced theories and principles.

ART 97 SPECIAL STUDIO ART TOPICS – .5-.2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students studio-based instruction and experience in a variety of art processes not regularly covered in other art classes. A different topic/process will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for Art majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of four enrollments.

ART 98 SPECIAL ART TOPICS – .5-.2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This non-studio course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge and contemporary and historical issues in the field of art. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for Art majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of four enrollments.

THE 100 SERIES OF COURSES ARE SPECIFIC SUBJECT AREAS TAKEN FROM THE TRANSFER (1-98) COURSES AS SHORT-TERM INTRODUCTION COURSES:

ART 110 MIXED MEDIA: WORKS ON PAPER – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
This course selectively and aesthetically combines various media and techniques of drawing, painting, photo, printing and collage into two-dimensional works. Underlying the instruction is a historical component which emphasizes modern and contemporary art to broaden the students' interest and awareness of contemporary trends. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

ART 121 ILLUSTRATION (formerly ART 121W) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
This course selectively and aesthetically combines various media and techniques of drawing, painting, photo, printing and collage into two-dimensional works. Underlying the instruction is a historical component which emphasizes modern and contemporary art to broaden the students' interest and awareness of contemporary trends. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

ART 122 PORTRAIT PAINTING (form. ART 125W) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
A basic course in the materials, tools, composition, proportion, lighting, shadow patterns, anatomy, value, color, line and study of other masters in portrait painting. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

ART 123 LANDSCAPE PAINTING (formerly ART 125X) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
A basic course to introduce the techniques of landscape painting, specifically the areas of pictorial materials, space, simple perspective, composition, value, color, scale, texture, line, and the study of other landscape painters. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

ART 124 INTRODUCTION TO PAINTING (formerly ART 125Y) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
Designed as an introductory segment to the practice and theory of painting. This course will focus upon those aspects of pictorial organization employed in the formation of representational painting. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

ART 125 INTRODUCTION TO WATERCOLOR (formerly ART 126W) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
A preliminary course in watercolor methods, such as wet wash, stroke and glaze overlays, with emphasis on creative interpretation of the environment. Note: This course may be repeated three times for a maximum of four enrollments since skills are enhanced by supervised repetition and practice.

ART 126 NATURE IN WATERCOLOR (formerly ART 126X) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
An extensive course in different watercolor methods, such as: wet wash, stroke, and glaze overlays, with emphasis on creative interpretation of subjects in nature. Note: This course may be repeated three times for a maximum of four enrollments since skills are enhanced by supervised repetition and practice.

ART 301 BEGINNING, INTERMEDIATE AND ADVANCED DRAWING & PAINTING-MIXED MEDIA – 0 Units
Class Hours: 6-108 lab total
An introductory, intermediate and advanced course incorporating basic drawing techniques using a variety of pencils and covering composition, color mixing, brush strokes, watercolor, acrylic, oil and pastels. The course is designed to provide stimulation and growth for individual students through art activities.

ART 302 ART EXPRESSION FOR SENIORS – 0 Units
Class Hours: 6-108 lab total
Come and express yourself in colorful explorations. "Draw" upon your life experiences: your memories, dreams and reflections. Learn to create designs and images using paints, watercolor crayons, collage, colored pens/pencils, ink, pastels, fiber and clay. Course designed for older adults, no previous art experience is necessary.

ASTRONOMY (ASTR)
ASTR 1 ASTRONOMY – 3 Units (P/NP Option)
Class Hours: 54 lecture total
A survey course designed to introduce the science of astronomy. This course covers aspects of archaeoastronomy, telescope optics, radio astronomy, prominent scientists, planets and moons, the sun, stars, stellar evolution and galaxies.

ASTR 5 COSMOLOGY – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
A course designed to introduce past and current scientific evidence addressing the size, mass distribution and evolution of the universe. Elementary particles, fundamental forces, time, inflationary models, cosmic strings, bubble universes and the large-scale structure of the universe are included topics.

ASTR 6 EXTRATERRESTRIAL LIFE – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
A course designed to introduce the strategies and techniques scientists utilize to search and identify extraterrestrial intelligence. Search strategies, methods of detection, probability of the presence of habitable planets, terraforming, message content, interstellar travel, intelligence, and methods of communication are discussed.

AUTOMOTIVE TECHNOLOGY (AUTO)
NOTE: STUDENTS MUST PROVIDE THEIR OWN HAND TOOLS FOR TECHNICAL CLASSES IN THE DIESEL TECHNOLOGY AND AUTOMOTIVE TECHNOLOGY MAJORS IN ORDER TO COMPLETE REQUIRED COURSE OBJECTIVES.

AUTO 1 VEHICLE ELECTRICAL SYSTEMS – 3 Units
Class Hours: 36 lecture/72 lab total
Designed to cover the basic theory of electricity and magnetism, as well as areas of operation, testing, and service of vehicle batteries, switches, relays, starters and starting systems, alternators, regulators, charging systems, and light circuits. The course includes electrical theory, repair procedures, and ASE laboratory tasks. This course, along with AUTO 10, is designed to prepare students to become ASE certified in area A-6. Required for Automotive majors with emphasis on electrical systems.

AUTO 10 AUTOMOTIVE ELECTRONICS (formerly AUTO 110) – 3 Units
Prerequisite: A grade of C or higher in AUTO 1
Class Hours: 36 lecture/72 lab total
This course is designed to establish an understanding of electronic theory and solid state technology as it applies to the automobile. The student will learn to read wiring schematics, calculate voltages, current flow, and resistances within parallel and series circuits, and to properly use related testing equipment used for diagnosis. This course includes electrical/electronic theory, repair procedures, and ASE laboratory tasks. This course, along with AUTO 1, is designed to prepare students to become ASE certified in area A-6.

AUTO 20 ENGINE PERFORMANCE – 4 Units
Class Hours: 36 lecture/108 lab total
This course is designed to give students the understanding of the operation of automotive engines and related systems such as electrical, ignition and fuel delivery. The course will also provide students with entry-level skills to diagnose, service and repair these systems using current industry tools and equipment. This course includes ASE laboratory tasks and is designed to prepare students to become ASE certified in area A-8.
**AUTO 21 ADVANCED ENGINE PERFORMANCE – 3 Units**

**Prerequisite:** A grade of C or higher in AUTO 20  
**Class Hours:** 36 lecture/72 lab total  
This course is designed to continue the study of engine performance including the emission control systems and computer controlled engine operation. The course will also provide students with entry level skills to diagnose, service and repair these systems using current industry tools and equipment. This course includes ASE laboratory tasks and, along with AUTO 20, is designed to prepare students to become ASE certified in areas A-8 and L-1.

**AUTO 94 WORKSITE LEARNING FOR AUTOMOTIVE TECH. – 1-8 Units**

**Limitation on Enrollment:** Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksire Learning Classes.  
**Class Hours:** 75 hours paid or 60 hours non-paid per unit  
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

**AUTO 130 AUTOMOTIVE STEERING AND SUSPENSION – 3 Units**

**Class Hours:** 36 lecture/54 lab total  
This course is designed to give students the entry level skills required to diagnose, service, and repair modern automotive wheel and tire, steering, and suspension systems. The course includes theory of operation, repair procedures, and ASE laboratory tasks. This course, along with AUTO 131, is designed to prepare students to become ASE certified in area A-4.

**AUTO 131 AUTOMOTIVE WHEEL ALIGNMENT – 2 Units**

**Prerequisite:** A grade of C or higher in AUTO 130  
**Class Hours:** 18 lecture/54 lab total  
This course is designed to give students the entry level skills required to perform complete four-wheel alignments on modern automobiles and light trucks. The course includes theory of alignment principles and the operation of industry standard alignment equipment. This course, along with AUTO 130, is designed to prepare students to become ASE certified in area A-4.

**AUTO 147 AUTOMOTIVE BRAKING SYSTEMS – 3 Units**

**Class Hours:** 36 lecture/72 lab total  
This course is designed to provide the entry level skills needed to diagnose, service, and repair various braking systems found on domestic and import automobiles and light trucks. The course includes brake theory, repair procedures, and ASE laboratory tasks, and is designed to prepare students to become ASE certified in area A-5. Standard and power assist, drum and disc type systems and anti-lock braking systems are included in this course.

**AUTO 161 MANUAL DRIVE TRAIN AND AXLES – 3 Units**

**Class Hours:** 36 lecture/72 lab total  
A course designed to give a technical and working knowledge of manual drive trains and axles. Subject matter covered includes clutch diagnosis and repair, manual transmission diagnosis and repair, transaxle diagnosis and repair, drive (half) shaft and universal joint diagnosis and repair, rear axle diagnosis and repair, four-wheel drive component diagnosis and repair, theory of operation, repair procedures, and ASE laboratory tasks. This course is designed to prepare students to become ASE certified in area A-3.

**AUTO 162 AUTOMATIC TRANSMISSIONS AND TRANSAXLES – 4 Units**

**Class Hours:** 36 lecture/108 lab total  
A course designed to give a working knowledge of automatic transmissions and transaxles. Subject matter covered will include transmission/transaxle maintenance and adjustment, in-vehicle transmission/transaxle repair, and off-vehicle transmission/transaxle repair. The course includes theory of operation, repair procedures, and ASE laboratory tasks. This course is designed to prepare students to become ASE certified in area A-2.

**AUTO 163 HEATING, AIR CONDITIONING AND ACCESSORIES – 3 Units**

**Class Hours:** 36 lecture/54 lab total  
This course is designed to give students a technical and working knowledge of automotive heating and air conditioning systems. Emphasis is placed on entry level skills necessary for diagnosing, servicing, and repairing modern automotive heating and air conditioning systems. The course includes theory of operation, repair procedures, and ASE laboratory tasks. This course is designed to prepare students to become ASE certified in area A-2.

**AUTO 164 ADV. TOPICS IN AUTOMATIC TRANSMISSIONS – 2 Units**

**Class Hours:** 18 lecture/54 lab total  
A course designed to give a working knowledge of electronic automatic transmissions and transaxles. Subject matter covered includes a review of hydraulic and electronic principles, in-vehicle transmission/transaxle diagnosis and repair, and off-vehicle transmissions/transaxle repair. The course includes theory of operation, repair procedures, and use of diagnostic equipment necessary for problem solving on the modern electronic transmissions and transaxles. Also covered will be applications for automatic transmissions in the area of high performance vehicles.

**AUTO 170 AUTOMOTIVE SERVICE PRINCIPLES – 2 Units**

**Class Hours:** 18 lecture/54 lab total  
This course is designed as an introduction to the modern automobile with a focus on maintenance and service procedures. Emphasis will be placed on safety, consumer awareness, tool usage, and vehicle systems. Students will be required to provide a vehicle on which to perform the maintenance and service procedures and will need to have the necessary owners manual or service manual for that vehicle.

**AUTO 172 BASIC AREA CLEAN AIR CAR COURSE – 3 Units**

**Class Hours:** 36 lecture/72 lab total  
This course is designed to prepare students for entry into the Bureau of Automotive Repairs Smog Check Program. Successful completion of this course will allow any student to apply for an interim smog license. Before taking the ASE certification tests A6, A8 and L1, it is highly recommended that students complete the requirements for an Engine Performance Certificate. ASE Certification in areas A-8 and A-9 will be required by the Bureau for application for a Basic Smog License Exam and ASE Certification in areas A-6, A-8 and L-1 for application for the Advanced Smog License Exam.

**AUTO 197 SPECIAL TOPICS IN AUTOMOTIVE TECHNOLOGY – .5-2 Units**

(P/NP Option)

**Class Hours:** 9-36 lecture total  
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in the field of Automotive Technology. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for Automotive majors: open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of four enrollments.

**AVIATION (AVIA)**

**AVIA 101 AVIATION GROUND SCHOOL – 3 Units**

(P/NP Only)

**Class Hours:** 54 lecture total  
Course is designed to prepare the student for qualification to take the Federal Aviation Administration private pilot’s written exam.

**AVIA 105 INSTRUMENT GROUND SCHOOL – 3 Units**

(P/NP Only)

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)  
An aviation ground school designed to prepare the student to take the Federal Aviation Administrations instrument pilots written examination. This course may be offered in a distance education format.

**BIOLOGICAL SCIENCES (BIOL)**

**BIOL 1 PRINCIPLES OF BIOLOGY – 4 Units**

**Prerequisite:** A grade of C or higher in CHEM 1A  
**Class Hours:** 36 lecture/108 lab total  
A biological science emphasizing molecular and cellular organization, energetics of respiration and photosynthesis, cell integration and development. General principles of heredity, evolution, speciation and ecology. Intended for majors in science.

**BIOL 5 INTRODUCTION TO HUMAN BIOLOGY - 3 Units**

**Class Hours:** 54 lecture total  
A one-semester introductory course in human anatomy and physiology presented with a medical emphasis. Selected topics on eleven organ systems are covered. This course is intended to serve medical assistants, licensed vocational nursing, and fire science majors. It also complements child development and nutrition majors. BIOL 5 is a prerequisite for the LVN program.

**BIOL 6 INTRO. TO HUMAN BIOLOGY LABORATORY – 1 Unit**

**Corequisite:** Student must be concurrently enrolled in, or have completed BIOL 5 with a grade of C or higher  
**Class Hours:** 54 lab total  
A laboratory course designed to complement BIOL 5. A one-semester human anatomy and physiology laboratory course. Exercises include anatomical language, microscopy, membrane transport processes, skeletal muscle contraction, cardiology, blood pressures, pulmonary ventilation, and enzymatic digestion. The anatomy of eleven organ systems is also included. BIOL 6 is a prerequisite for the LVN program.

**BIOL 10 GENERAL BIOLOGY – 4 Units**

(P/NP Option)

**Class Hours:** 54 lecture/54 lab total  
This course is an introduction to the major concepts of modern biology. Topics covered include cell biology, heredity and nature of genes, evolution, diversity of life, and principles of ecology. Emphasis will be placed on those aspects of biology that are rapidly reshaping our culture. This is an approved general education course for non-life science majors who desire an introductory biology course with laboratory.

In the event of a discrepancy between the online edition of the catalog and the printed version of the catalog, the online version is the official version.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUAD 6</td>
<td>BUSINESS LAW – 3 Units</td>
<td>3</td>
<td>Students must provide a camera, film, and processing</td>
</tr>
<tr>
<td>BOT 1</td>
<td>GENERAL BOTANY – 4 Units</td>
<td>4</td>
<td>A grade of C or higher in MATH 102 or Math Placement Level 4 or higher</td>
</tr>
<tr>
<td>BOT 52</td>
<td>MUSHROOM IDENTIFICATION – 2 Units (P/NP Option)</td>
<td>2</td>
<td>Includes two local mushroom collection field trips</td>
</tr>
<tr>
<td>BUAD 10</td>
<td>INTRODUCTION TO BUSINESS – 3 Units</td>
<td>3</td>
<td>A grade of C or higher in ENGL 280 or English Placement Level 5 or higher</td>
</tr>
<tr>
<td>BUAD 11</td>
<td>DIVERSITY OF LIFE – 3 Units (P/NP Option)</td>
<td>3</td>
<td>Includes additional disciplines such as international business, forms of business ownership, social responsibility and ethics, and entrepreneurship.</td>
</tr>
<tr>
<td>BUAD 12</td>
<td>INTERNATIONAL BUSINESS – 3 Units (P/NP Option)</td>
<td>3</td>
<td>A grade of C or higher in BUAD 10, and a grade of C or higher in ENGL 280 or English Placement Level 5 or higher</td>
</tr>
<tr>
<td>BUAD 15</td>
<td>BUSINESS AND SOCIETY – 3 Units</td>
<td>3</td>
<td>The purpose of this course is to increase the student’s awareness of ethical issues in business.</td>
</tr>
<tr>
<td>ENGL 280</td>
<td>BUSINESS LAW – 3 Units</td>
<td>3</td>
<td>Includes the various parameters and requirements of business organizations, security devices, bankruptcy with personal and intellectual property issues.</td>
</tr>
<tr>
<td>ENGL 280</td>
<td>ENTREPRENEURSHIP AND SMALL BUSINESS – 3 Units</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BUAD 40</td>
<td>ENTREPRENEURSHIP AND SMALL BUSINESS – 3 Units</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BUAD 42</td>
<td>FINANCING A SMALL BUSINESS – 3 Units (P/NP Option)</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BIOL 11</td>
<td>DIVERSITY OF LIFE – 3 Units (P/NP Option)</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BIOL 12</td>
<td>FIELD BIOLOGY – 3 Units</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BIOL 14</td>
<td>HEREDITY (formerly PHY 10) – 3 Units</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BIOL 15</td>
<td>ENTOMOLOGY – 3 Units</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BIOL 30</td>
<td>NATURE PHOTOGRAPHY – 1 Unit (P/NP Option)</td>
<td>1</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BIOL 50</td>
<td>WILDFLOWERS OF CALIFORNIA – 1 Unit (P/NP Only)</td>
<td>1</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BIOL 52</td>
<td>MUSHROOM IDENTIFICATION – 2 Units (P/NP Option)</td>
<td>2</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BIOL 60</td>
<td>BIOLOGY OF AGING – 3 Units (P/NP Option)</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BOAD 40</td>
<td>ENTREPRENEURSHIP AND SMALL BUSINESS – 3 Units</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BOAD 42</td>
<td>FINANCING A SMALL BUSINESS – 3 Units (P/NP Option)</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
<tr>
<td>BOAD 43</td>
<td>INTRODUCTION TO GRANT WRITING – 3 Units</td>
<td>3</td>
<td>Designed to give an understanding on the various ways of funding a business venture.</td>
</tr>
</tbody>
</table>
BUAD 44 INVESTMENTS (formerly FIN 44) – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Course designed to help the student gain an understanding of stocks, bonds, and other securities. Students will be encouraged to develop their own investment philosophy based on an understanding of the securities market and methods of analyzing that market. Recommended for students wanting an understanding of how businesses raise capital in the securities market. The student will develop a hypothetical personal investment portfolio, which will be tracked with the assistance of a web-based monitoring system. This course may be offered in a distance education format.

BUAD 45 HUMAN RELATIONS ON THE JOB – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Human Relations on the Job is a course designed to give the student the opportunity to increase interpersonal skills. There is particular emphasis on communication, motivation, leadership, and group decision skills. Emphasis is placed on improved relationships among employees and between employees and employers. Topics include communication processes and styles, attitudes, values, motivation, leadership, valuing diversity, and reinforcement on the job. This course may be offered in a distance education format.

BUAD 46 FUNDAMENTALS OF NONPROFIT MANAGEMENT – 1 Unit (P/NP Option)
Class Hours: 18 lecture total (when offered in the Distance Education format, hours will total 54)
Fundamentals of Nonprofit Management provides an understanding of the nonprofit sector as a whole and as nonprofit management from an overview perspective. This course will introduce the fundamentals of effective organization mission and vision statements, strategic planning, operations management, and budgeting. Participants will gain understanding of different aspects of management of a nonprofit organization. This course may be offered in a distance education format.

BUAD 48 GRANT FUNDING: FINDING THE RIGHT SOURCE – 1 Unit (P/NP Option)
Class Hours: 18 lecture total (when offered in the Distance Education format, hours will total 54)
Grant Funding: Finding the Right Source provides an overview to the grant-seeking process that includes defining needs, identifying and researching prospective grant makers, writing proposals, cultivating grant makers, and accountability – reporting and following up with grant makers. This course may be offered in a distance education format.

BUAD 49 NONPROFIT FINANCIAL MANAGEMENT – 5 Unit (P/NP Option)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
Nonprofit Financial Management will provide an overview on the basic processes involved in nonprofit financial management. The course will focus on financial management issues faced by board members and by senior and executive managers in nonprofit organizations. The student will learn professional financial management practices for a nonprofit organization. Discussion will include how to develop and implement appropriate controls, procedures and financial management policies to ensure your organizations financial well-being. This course may be offered in a distance education format.

BUAD 50 MARKETING AND PUBLIC RELATIONS FOR NONPROFITS – 1 Unit (P/NP Option)
Class Hours: 18 lecture total (when offered in the Distance Education format, hours will total 54)
Offering a combination of theory and practice, Marketing and Public Relations for Nonprofits demonstrates how to market to key audiences, both inside and outside of the organization. In addition to helping participants understand target markets and selecting the message for the audience, this course discusses key public relations vehicles. This course may be offered in a distance education format.

BUAD 51 BOARDS OF DIRECTORS IN NONPROFIT ORGANIZATIONS – .5 Unit (P/NP Option)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
In addition to being legally mandated, boards of directors play a crucial role in shaping and leading nonprofit organizations. This course will cover how boards are developed, their legal governance roles and how partnerships between board members and the executive staff can assist the organization in fulfillment of its mission. This course may be offered in a distance education format.
BUAD 76 SALES (formerly MKTG 70, BUSI 70) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Study of the fundamental problems, practices, and techniques of the salesperson. The course covers both retail and direct selling techniques including prospecting, pre-approach, demonstration/presentation, handling objections, closing, follow-up, and time management. Students will be required to make a minimum of one sales presentation in class.

BUAD 77 PRINCIPLES OF MARKETING (formerly MKTG 74, BUSI 74) – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is designed to help the student understand everyday marketing problems in organizations. Topics include changing role of marketing, the marketing mix, consumer behavior, sales, advertising, market research, middlemen, retailing, product development, and marketing plans. Additionally, the writing and presentation of a marketing plan is required. This course may be offered in a distance education format.

BUAD 80 PRINCIPLES OF CUSTOMER SERVICE – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is designed to provide the student with understanding and knowledge of the importance of meeting the needs of customers in a service economy. Students will gain insight into employer and customer expectations of service levels. Emphasis will be placed on developing specific skills and abilities critical to providing excellent customer service. In addition, the student will be introduced to the concepts of internal and external customers, customer satisfaction and customer retention. Other topics covered are attitude in the workplace, communicating with customers, decision making and problem solving, conflict resolution, and dealing with change in the workplace. This course may be offered in a distance education format.

BUAD 81 STRESS MANAGEMENT IN THE WORKPLACE – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to provide the student with an understanding of change and how it impacts one's attitude in the workplace. The course will introduce students to the types of stress and the effects of stress on job performance, and will provide strategies for managing stress. This course may be offered in a distance education format.

BUAD 82 MANAGING ORGANIZATIONAL CHANGE – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to provide the student with an understanding of organizational change and the influence it has on an organization and the individuals in that organization. Topics will include understanding organizational change, theoretical models of change, stages of change, and how to manage organization change. This course may be offered in a distance education format.

BUAD 83 CONFLICT RESOLUTION – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to provide the student with an analysis of attitudes and behavior, which create conflict between individuals and groups within an organization. This course may be offered in a distance education format.

BUAD 84 ATTITUDE IN THE WORKPLACE – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to provide the student with certain key skills in the area of attitude so that they may effectively maintain a positive attitude at the workplace and at home. The student will be introduced to the concepts of how attitudes are communicated, the three types of attitudes and how to adjust one's attitude. Topics will also include the primary causes of a bad attitude, turnaround strategies to battle these bad attitudes and specific techniques to raise the attitude of others. This course may be offered in a distance education format.

BUAD 85 CUSTOMER SERVICE IN THE WORKPLACE – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to provide the student with certain key skills and attitudes in order to effectively meet the needs of the customers. The student will be introduced to the concept of internal and external customers, customer satisfaction and customer retention. Topics will also include communicating with customers, developing a positive attitude, handling complaints and sales skills. This course may be offered in a distance education format.

BUAD 86 DECISION MAKING AND PROBLEM SOLVING – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to introduce the student to decision making and problem solving as a supervisor. This course may be offered in a distance education format.

BUAD 87 TEAM BUILDING – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to provide the student with an understanding of how teams work together, common problems teams encounter and how to solve them. Students will learn to recognize various team player styles. Students will be introduced to team building in the workplace. This course may be offered in a distance education format.

BUAD 88 COMMUNICATING WITH PEOPLE – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to introduce the student to key elements in communication within business organizations. Topics will include verbal and nonverbal communication, listening skills and specific supervisory communication skills. This course may be offered in a distance education format.

BUAD 89 TIME MANAGEMENT – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to introduce the student to time management principles and specific tools that assist in making maximum use of time. Basic concepts of managing space will also be covered. This course may be offered in a distance education format.

BUAD 90 VALUES AND ETHICS – .5 Unit (P/NP Only)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
This course is designed to acquaint the student with the importance of values and ethics in the workplace. The importance of values and ethics involved in the supervisor carrying out his/her duties will be emphasized. This course may be offered in a distance education format.

BUAD 91 PRINCIPLES OF MANAGEMENT – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This is a basic course to broaden the student's knowledge of the business organization emphasizing how the organizational structure can affect personnel, productivity, and ultimately the success of the firm. This course is required for the business Management Certificate Program and is designed to assist any student who may already be on the lower rungs of the management ladder wishing to become more knowledgeable about organization and management theory. The course should stimulate thought and discussion of several aspects of management and provide a limited opportunity for public speaking. This course may be offered in a distance education format.

BUAD 92 BUSINESS WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student's major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

BUAD 93 SPECIAL TOPICS IN BUSINESS ADMINISTRATION – 5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in business administration. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

BUAD 94 SPECIAL LAB TOPICS IN BUSINESS ADMINISTRATION – 5-2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of activities dealing with changing knowledge in business administration. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.
BUAD 106  BUSINESS MATHEMATICS – 3 Units (P/NP Option)
Prerequisite:  A grade of C or higher in MATH 240 or Math Placement Level 2 or higher
Class Hours:  54 lecture total (when offered in the Distance Education format, hours will total 162)
A required course in several business occupational majors and suggested elective in others. Students entering this class should have a strong foundation of basic arithmetic skills of adding, subtracting, multiplying, and dividing of whole numbers, fractions, decimals, and percentages. The class consists of applications of these skills to such business problems as markup, simple discount, and compound interests, trade and cash discounts, insurance, installment buying, and depreciation. Waiver: Under certain circumstances, this course may be waived for some A.A. degrees or certificate requirements by substituting MATH 102 or higher math course. This course may be offered in a distance education format.

BUAD 120  STARTING A SMALL BUSINESS – THE ENTREPRENEUR – 1 Unit (P/NP Option)
Class Hours:  18 lecture total (when offered in the Distance Education format, hours will total 54)
A survey course that explores various components that need to be considered for anyone contemplating or currently operating a small business. The Entrepreneur. The major class project will be the development of a basic executive summary of the student’s business of choice. This course may be offered in a distance education format.

BUAD 166  BUSINESS ENGLISH – 3 Units
Prerequisite:  A grade of C or higher in ENGL 280 or English Placement Level 5 or higher
Class Hours:  54 lecture total (when offered in the Distance Education format, hours will total 162)
This course provides an effective command of written English for transaction of business. Emphasis is given to grammar, spelling, vocabulary, and punctuation, and the research and development of the business letter, including expository and argumentative writing as well as the necessary information competency skills to select and incorporate reliable data in support of an argument. This is a required course for many majors and certificate programs and an alternative requirement or suggested elective in others. This course may be offered in a distance education format.

BUAD 176  RETAIL MANAGEMENT (formerly MKTG 176, BUSI 176) – 3 Units (P/NP Option)
Class Hours:  54 lecture total (when offered in the Distance Education format, hours will total 162)
A course designed to develop student proficiency in the diverse aspects of retailing. The course includes specific areas of study, such as: store site location, store layout, product line selection, buying, pricing, selling, advertising, and financial management. This class is designed for those going into retail as well as those students planning to enter businesses that deal with retail merchants, i.e., wholesalers, advertising media, insurance agencies, accounting firms, and other service areas. This course may be offered in a distance education format.

CASINO MANAGEMENT (CAS)

CAS 10  INTRODUCTION TO CASINO OPERATIONS – 3 Units (P/NP Option)
Class Hours:  54 lecture (when offered in the Distance Education format, hours will total 162)
An orientation into the various aspects of the casino and gaming industry. Includes a study of legal gaming jurisdictions, an introduction to typical casino games, basic playing strategies and money management techniques, customer service, establishment of casino credit, comps, and casino junkets. This course will also focus on the history of casinos and on modern-day trends, career opportunities, and recent innovations in the casino industry. This course may be offered in a distance education format.

CAS 20  THE HISTORY OF GAMING/NATIVE AMERICAN GAMING – 1 Unit (P/NP Option)
Class Hours:  16 lecture total (when offered in the Distance Education format, hours will total 54)
This course reviews the historical landmarks in the casino and gaming industry within the United States. It focuses primarily on the legalization of gaming in Nevada and California. This course will also examine the economic and employment impacts of gaming on local jurisdictions. Students will also review the current and future developments of gaming. This course may be offered in a distance education format.

CAS 30  CASINO SURVEILLANCE - 3 Units (P/NP Option)
Class Hours:  54 lecture total (when offered in the Distance Education format, hours will total 162)
A review of the fundamentals of casino games including table games, slots, race and sports, and keno. The students become familiar with game protection techniques, rules of evidence, and regulations governing the casino floor. Reporting styles and prosecution procedures will also be addressed. This course may be offered in a distance education format.

CAS 40  CASINO MANAGEMENT & OPERATIONS – 3 Units (P/NP Option)
Prerequisite:  A grade of C or higher in CAS 10 and a grade of C or higher in MATH 240, or Math Placement Level 2
Class Hours:  54 lecture total (when offered in the Distance Education format, hours will total 162)
A thorough examination of the internal management practices used by today’s successful casino. Course will focus on gaming regulations and controls, casino marketing, table game management and protection, slot and gaming device management, surveillance procedures, casino staffing, and casino layout and design. Students will also be trained in the methods by which cheating can occur in each of the casino games covered. A glimpse into the future outlook of gaming and career paths in the casino industry shall be included as well. This course may be offered in a distance education format.

CAS 50  CASINO MARKETING/CONSUMER BEHAVIOR – 3 Units (P/NP Option)
Class Hours:  54 lecture total (when offered in the Distance Education format, hours will total 162)
This course will discuss concept and marketing strategies behind gaming products and services. The class will emphasize the role of marketing, VIP parties, design, décor, and “hook” strategies used by casinos to lure customers. Player retention strategies and service qualities will also be included. This course shall also explore the numerous areas of consumer behavior in the gaming industry. Factors of social, personal, psychological and medical disease will be addressed. This course may be offered in a distance education format.

CAS 94  CASINO MANAGEMENT WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in at least seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours:  75 hours paid or 60 hours non-paid per unit
This course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

CAS 97  SPECIAL TOPICS IN CASINO MANAGEMENT – .5-2 Units (P/NP Option)
Class Hours:  9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in casino management. A different topic will be addressed each time the course is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

CAS 98  SPECIAL LAB TOPICS IN CASINO MANAGEMENT – .5-2 Units (P/NP Option)
Class Hours:  27-108 lab total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in casino management. A different topic will be addressed each time the course is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

CHEMISTRY (CHEM)

CHEM 1A  GENERAL CHEMISTRY – 5 Units (P/NP Option)
Prerequisite:  A grade of C or higher in CHEM 1A or CHEM 1A2, or a score of 20 or higher on the California Chemistry Diagnostic test; and a grade of C or higher in MATH 102 or Math Placement Level 4 or higher. (If you have completed one year of high school chemistry with a grade of C or higher, you will be eligible to enroll in this course once you have seen a counselor.) Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours:  54 lecture/54 lab/18 discussion
A course for science and engineering majors which covers the nature of atoms, molecules, and ions; chemical reactions; precipitation, oxidation-reduction, and acid-base chemistry, stoichiometry; electronic structure, periodicity, chemical bonding; properties of solids, liquids, gases, and solutions; and an introduction to thermodynamics and equilibrium.

CHEM 1B  GENERAL CHEMISTRY – 5 Units (P/NP Option)
Prerequisite:  A grade of C or higher in CHEM 1A
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours:  54 lecture/18 discussion/54 lab total
An introduction to chemical kinetics, nuclear chemistry, transition metals, and organic chemistry, along with continued, in-depth study of equilibrium, thermodynamics, electrochemistry, acid-base and solution chemistry.
CHEM 2A  INTRODUCTION TO CHEMISTRY – 5 Units
Prerequisite: A grade of C or higher in MATH 101 or Math Placement Level 3 or higher.
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 54 lecture/18 discussion/54 lab total (when offered in the Distance Education format, lecture hours will total 216)
This course is a survey of inorganic chemistry and some organic chemistry suitable for agriculture and nursing students. The basic fundamentals of the metric system, chemical nomenclature, atomic and molecular structure, chemical reactions, energy changes, states of matter, solutions, chemical equilibria and kinetics, and organic functional groups are presented. The quantitative nature of chemistry is developed by introduction of the Avogadro’s number and the molar calculation. The lecture/discussion portion of this course may be offered in a distance learning format.

CHEM 2B  INTRODUCTION TO ORGANIC AND BIOCHEMISTRY – 5 Units
(P/NP Option)
Prerequisite: A grade of C or higher in CHEM 2A or CHEM 1A
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 54 lecture/54 lab/18 discussion total (when offered in the Distance Education format, hours will total 216 for the lecture/discussion portion of this class and an additional 54 hours of lab totaling 270 hours for this course)
A survey of the major classes of organic compounds including structure, nomenclature, properties, reactions, and the reaction mechanisms; an introduction to the biochemistry of proteins, carbohydrates, lipids, nucleic acids and their basic metabolic reactions. Suitable for nursing, dental hygiene, agriculture/natural resources and non-science majors. The lecture/discussion portion of this course may be offered in a distance education format.

CHEM 6  INTRODUCTORY CHEMISTRY APPLIED TO THE ENVIRONMENT – 4 Units
Prerequisite: A grade of C or higher in MATH 101, or Math Placement Level 3 or higher.
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 36 lecture/108 lab total
An introduction to the basic principles of general chemistry. Emphasis will be placed on applications to the chemistry of the environment, soils, water, air, agriculture, natural resources, and related consumer products. This course is suitable for environmental technology, agriculture, natural resources, and liberal arts students.

CHEM 10  CHEMISTRY FOR THE LIBERAL ARTS – 3 Units (P/NP Option)
Note: CHEM 10 will meet the general education requirement for a laboratory science if taken with CHEM 11
Class Hours: 54 lecture (when offered in the Distance Education format, hours will total 162)
A non-mathematical introduction to the major concepts of chemistry with attention to their relevance to practical and societal problems. This course is intended for non-science majors who wish to gain an appreciation for the application of chemistry to everyday living. The course includes such topics as nuclear energy and energy alternatives; health issues of drugs; food additives, nutrition, hormones; chemicals for household use, chemicals in the environment, and synthetics. This course may include field trips. This course may be offered in a distance education format. This course will meet the general education requirement for a laboratory science if the laboratory course is taken with CHEM 11.

CHEM 11  CHEMISTRY LABORATORY FOR THE LIBERAL ARTS – 1 Unit (P/NP Option)
Corequisite: Students must be concurrently enrolled in, or have completed CHEM 10 with a grade of C or higher.
Note: CHEM 10 taken with CHEM 11 meets GE requirement in science. Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 54 lab total (when offered in the Distance Education format, hours will total 54)
Laboratory experiments and demonstrations, almost entirely non-mathematical, covering the basic concepts of the lecture course, CHEM 10. The laboratory is designed to help students learn how to use various chemicals around us, safely and effectively. This course may include field trips. This course may be offered in a distance education format.

CHEM 16  CHEMICAL PROBLEM-SOLVING – 3 Units (P/NP Option)
Advisory: A grade of C or higher in MATH 101 or Math Placement Level 3 or higher.
Note: Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
An introductory chemistry course for students who plan to major in a scientific field. This course is also designed to prepare students for General Chemistry 1A. The major emphasis of the course will be on chemical problem-solving. This course may be offered in a distance education format.

CHEM 26  FUNDAMENTALS OF GENERAL, ORGANIC, AND BIOCHEMISTRY – 4 Units
Class Hours: 72 lecture total (when offered in the Distance Education format, hours will total 216)
An introduction to the fundamental principles of general, organic, and biochemistry delivered completely online that will emphasize practical applications to nursing and health professions. This course will fulfill the CSU-Chico requirement for entry to the RN to BSN upgrade program. It is also suitable for AA degree programs and non-science transfer students. It may fulfill requirements for other related health and nutritional degree programs. This course may be offered in a distance education format.

CHEM 70  ORGANIC CHEMISTRY – 4 Units
Prerequisite: A grade of C or higher in CHEM 1B
Note: CHEM 70A should be taken concurrently with CHEM 70 for science majors for transfer.
Class Hours: 54 lecture/18 discussion total (when offered in the Distance Education format, hours will total 216)
Structure, bonding, Polar bonds and their consequences, Alkanes and Cycloalkanes, stereochemistry and physical properties of organic compounds. Overview of organic reactions, reactions and mechanisms of alkanes, alkenes, alkynes, organic halides, Nucleophilic substitutions and eliminations. Science majors should take a second semester organic course, CHEM 71, which completes the required two-semester sequence. CHEM 70A, laboratory course, should be taken concurrently for science majors. Check school of transfer for their requirements. This course may be offered in a distance education format.

CHEM 70A  ORGANIC CHEMISTRY LABORATORY – 1 Unit
Prerequisite: A grade of C or higher in CHEM 1B
Corequisite: Students must be concurrently enrolled in, or have completed CHEM 70 with a grade of C or higher.
Note: Chemistry majors are required to take CHEM 70A concurrently with CHEM 70. Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 54 lab total
Theory and application of organic chemistry laboratory techniques.

CHEM 71  ORGANIC CHEMISTRY – 3 Units
Prerequisite: A grade of C or higher in CHEM 70
Note: CHEM 71A should be taken concurrently with CHEM 71 for science majors for transfer.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A continuation of CHEM 70. Infrared Spectroscopy, Mass Spectrometry, Nuclear Magnetic Resonance, Conjugated Dienes and Ultraviolet Spectroscopy, Biomolecules Chemistry of Benzene, Electrophilic Aromatic Substitution Alcohols and Phenols, Ethers and Epoxides, Thiois and Sulfides, Aldehydes and Ketones, Carboxylic Acids, Carboxylic Acid Derivatives and Nucleophilic Acylation substitution, Carbonyl alpha-substitution Reactions Carbonyl Condensation, Amines, Carbohydrates, Amino Acids, Peptides and Proteins, Lipids. This course completes a two-semester sequence for science majors. CHEM 71A, laboratory course, should be taken concurrently for science majors. Check school of transfer for their requirements. This course may be offered in a distance education format.

CHEM 71A  ORGANIC CHEMISTRY LABORATORY – 2 Units
Prerequisite: A grade of C or higher in CHEM 70A
Corequisite: Students must be concurrently enrolled in or have completed CHEM 71 with a grade of C or higher.
Note: Chemistry majors are required to take CHEM 71A concurrently with CHEM 71. Students must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 108 lab total
A continuation of Organic CHEM 70A. Theory and application of organic chemistry laboratory techniques.

CHEM 97  SPECIAL TOPICS IN CHEMISTRY – .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in chemistry. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.
emphasis on small groups. Subjects covered are preparation for discussion, education format)

managing diversity, critical thinking/problem-solving, managing conflict, and group participation, leadership, decision-making, interpersonal relations,

**COMMUNICATION STUDIES (CMST)**

**CMST 10 INTERPERSONAL COMMUNICATION (formerly SPCH 10/10A) – 3 Units (P/NP Option)**
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 54 lecture total
This course is an introduction to the process of human communication with emphasis on the rhetorical principles of social interaction. The examination of the psychological, social, cultural and linguistic factors that affect normal person-to-person interactions includes: the structure of the communication message and process; developing effective messages; clear organization of the message; critical thinking skills in problem solving; analyzing, adapting to and responding to the audience; and delivery of the message both verbally and nonverbally. This course includes individual and group practice which will be evaluated. Each student will demonstrate their understanding and comprehension of Rhetorical Theory by successfully making prepared, evaluated, oral presentations throughout the semester. College level writing skills will be expected on all papers, outlines and short essays. This class satisfies the Oral Communication requirement for the Associate Degree.

**CMST 20 INTERCULTURAL COMMUNICATION (formerly SPCH 20) – 3 Units (P/NP Option)**
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
The purpose of this course is to develop the skills necessary to build and maintain positive communication and relationships across cultures. Students will focus on similarities and differences in communication behaviors. Perceptions, language usage, nonverbal style, thinking modes, and values all will be explored to see how they influence face-to-face communication between individuals of different cultures. This course may be offered in a distance education format.

**CMST 30 ORAL INTERPRETATION (form SPCH 30) – 3 Units (P/NP Option)**
Advisory: A grade of C or higher in ENGL 190, or a English Placement Level 6 or higher
Class Hours: 54 lecture total
This course is an introduction to the process of human communication with emphasis on the oral interpretation of literature. Subjects covered are analyzing the literature, using nonverbal and verbal communication in the interpretation of literature and the understanding, appreciation and performance of prose and poetry. College level writing skills will be expected on all papers, outlines and short essays. This course includes oral performance of literature.

**CMST 40 ARGUMENTATION AND DEBATE (formerly SPCH 40) – 3 Units (P/NP Option)**
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher, and completion of a class in public speaking or public speaking experience
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is an introduction to the nature of argument and critical thinking, including methods of analysis, research, critical evaluation of reasoning and evidence, refutation, and debate as a practical application of argumentation. Basic principles are applied in a variety of formal and informal debate situations. Students will be expected to outline related points, demonstrating essentials of speech delivery, and completing practical speaking assignments. The course may be repeated only once with a different topic. College level writing skills will be expected on all papers, outlines and short essays. This course may be offered in a distance education format.

**CMST 54 SMALL GROUP COMMUNICATION (formerly SPCH 54) - 3 Units (P/NP Option)**
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher
Class Hours: 54 lecture total (.5 to 1.5 units may be offered in the Distance Education format)
This course is an introduction to the process of human communication with emphasis on small groups. Subjects covered are preparation for discussion, group participation, leadership, decision-making, interpersonal relations, managing diversity, critical thinking/problem-solving, managing conflict, and evaluation of group interaction. Students will be involved in group interactions and the emphasis will be on practical experience. College level writing skills will be expected on all papers, outlines and short essays. A portion of this course may be offered in a distance education format.

**CMST 60 PUBLIC SPEAKING (formerly SPCH 60/60A) – 3 Units (P/NP Option)**
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 54 lecture total
This course is an introduction to the process of human communication with emphasis on public speaking. Subjects covered are audience analysis, choosing speech topics, finding and using supporting materials, arranging and outlining related points, essentials of speech delivery and evaluation. College level writing skills will be expected on all papers, outlines and short essays.

**CMST 75 FORENSICS WORKSHOP – 3 Units (P/NP Option)**
Note: Field trips are required
Class Hours: 18 lecture/108 lab total
Principles of applied speech communication through participation in competitive intramural and intercollegiate speech performances and/or performance festivals, including debate, public speaking and interpretive performances. In addition to forensic competition, the student will debate, speak and perform before a variety of audiences, including community groups (including non-speech classes at all academic levels), audiences assembled for major Readers Theater productions, critic-judges in competitive settings, and classroom workshops.

**CMST 97 SPECIAL TOPICS IN COMMUNICATION STUDIES (formerly SPCH 97/97AD) - 5-2 Units (P/NP Option)**
This course is an introduction to the process of human communication with an emphasis on public speaking. Subjects covered are analyzing audiences, choosing speech topics, finding and using supporting materials, arranging and outlining related points, demonstrating essentials of speech delivery, and evaluating speeches. Most students have the opportunity to be videotaped and to use presentation technology. College level writing skills will be expected on all papers, outlines, and short essays.

**COMMUNICATIONS (COM)**

**COM 20 INTRODUCTION TO MULTI-MEDIA – 3 Units (P/NP Option)**
Class Hours: 54 lecture total
This course studies how multimedia programs are designed and produced. Professional and amateur productions are extensively analyzed for form, content and overall design effectiveness. The class traces the process of a typical multimedia project from start to finish. This includes design implementation, user analysis, interface and interaction considerations, project management and client needs assessment. The class explores the technical aspects of production, including capturing and compressing sound and visual images. Delivery systems such as the Internet and CD ROM are evaluated. An overview of "tools of the trade" examines a variety of production and editing software. The class is not platform specific nor does it attempt to teach all the software discussed.

**COM 21 MULTI-MEDIA AUTHORING – 3 Units (P/NP Option)**
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course will acquaint the student with the process of designing and producing effective multi-media presentations. Students work individually and as part of a creative team. The focus is on identifying and analyzing audiences; designing, adapting and organizing information for maximum effect, and then producing text, audio and video presentations, such as podcasts, video shorts suitable for free-standing use or for interactive and social-networking websites. Software such as Final Cut, Audacity, WordPress, Joomla and Omukiki are complex tools that will be explored. The class also will explore basic planning strategies, audience analysis, production techniques, materials and equipment involved in a computer multimedia production. Students will be expected to produce at least two projects suitable for a portfolio and that could be used for a blog, podcast, video-sharing or social-networking site, and a live or point-of-sale presentation. This course may be offered in a Distance Education format.

**COM 22 BEGINNING TV PRODUCTION – 3 Units**
Class Hours: 27 lecture/81 lab total
A basic course in the theory and operation of television broadcast equipment. Students will complete projects and activities so that they can effectively operate broadcast equipment and understand its engineering and production capabilities. This is a beginning course in television production.

**COM 30 INTRODUCTION TO AUDIO RECORDING – 3 Units (P/NP Option)**
Class Hours: 36 lecture/lab total (when offered in the Distance Education format, hours will total 162)
This is an introduction to the fundamentals of audio recording. Concepts covered will be the fundamentals of electricity, musical acoustics and audio theory. Course enrollment is open to communication and non-communication majors. Topics include: basics of electricity, acoustics, psychoacoustics, audio measurement terms and concepts, microphones, mixers, signal processing and hard disk recording. This course may be offered in a distance education format.
COM 31 INTRODUCTION TO DIGITAL AUDIO – 3 Units (P/NP Option)
Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)
This is an introduction to the fundamentals of digital audio theory, editing, MIDI sequencing and the production of digital audio for the web and video and a variety of other media. Topics to be covered are digital audio theory, two track digital editing, multi-channel recording, digital sequencing, and time-code. Course enrollment is open to communication and non-communication majors. This course may be offered in a distance education format.

COM 97 SPECIAL TOPICS IN COMMUNICATION DESIGN – 5-3 Units (P/NP Option)
Class Hours: 27-162 lab
This course is designed to give students experiential instruction in a variety of communication setting. It focuses on the design, implementation, management, and coordination of the technical elements of production of communication design projects. Students will design multimedia projects, manipulate digital and analog sounds and images, and develop and produce television, radio, or internet content. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. This course may be repeated three times for a total of four enrollments.

COMPUTER INFORMATION SYSTEMS (CIS)

CIS 1 COMPUTER LITERACY WORKSHOP (formerly MIS 19) – 3 Units
Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to the Microsoft Operating System and Office Suite—further information will be provided on the first day of class. Class Hours: 45 lecture/27 lab total (when offered in the Distance Education format, hours will total 162)
This course is intended to help students achieve a degree of computer literacy through exposure to a variety of basic computer concepts including discussions of hardware, software, computer history, programming, computer ethics, and cultural implications. In addition, the student will be introduced to several hands-on applications such as systems software (Windows), word processing software (MS Word), spreadsheet software (MS Excel), database software (MS Access), and presentation software (MS PowerPoint). This course may be offered in a distance education format.

CIS 2 INTRODUCTION TO COMPUTER SCIENCE (formerly MIS 20) – 4 Units
Class Hours: 72 lecture total (when offered in the Distance Education format, hours will total 216)
This course is designed as an introduction to computer technology for those students planning on a career in the field of computer science or related disciplines. Computer history, hardware, software, processing, systems, programming languages, storage devices, careers, and impact on society will be explored to enable the student to become literate in the technical aspects of computing. Common business applications are used to examine a wide range of methods for processing data in the interactive mode. The students will design, code, and debug programs in languages such as Machine, Assembler, Java, C and/or BASIC as assigned. This course may be offered in a distance education format.

CIS 3 SYSTEMS ANALYSIS METHODS (formerly MIS 29) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Information Systems Analysis with emphasis on current system documentation through the use of both classical and structured tools/techniques for describing process flows, data structures, file designs, input and output designs and programs specifications. Discussion of the information gathering and reporting activities and of the transition from analysis to design. This course specifically satisfies requirements for the CIS-4 course in the DPMA Education Foundation Model Curriculum for Undergraduate Computer Information Systems Education. This course may be offered in a distance education format.

CIS 4 BUSINESS DATA COMMUNICATIONS (form. MIS 30) – 3 Units
Advisory: A grade of C or higher in CIS 1 or CIS 2 or equivalent computer experience recommended for success. Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Covers the concepts, vocabulary, design issues, and techniques currently used in the area of data communications. Topics include history and evolution of the Internet, transmission media, interconnection topology, control methods, protocols, types of nodes, network interfaces, bridges, gateways, performance considerations, maintenance considerations, and security considerations. This course may be offered in a distance education format.

CIS 6 COMPUTER BASICS – .5 Unit (P/NP Only)
Class Hours: 9 lecture total
A brief introductory course in computer basics covering hardware, software, file management, email set-up and use, and Internet accessibility.

CIS 20 ACCESS FOR WINDOWS – I (form. MIS 53) – 1 Unit (P/NP Option)
Advisory: Ability to type 25 wpm
Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center and the Tehama campus. Students taking the Internet format of this course must have access to the same version of Microsoft Operating System and Office Suite being used in the course. Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
This course introduces the concepts, principles, and creation of relational databases through multi-media lecture/demonstration/discussion using Microsoft ACCESS on an IBM compatible microcomputer. Topics to be covered will include: the principles and elements of the relational database; design of tables and data entry; maintenance of the database for data accuracy; queries for sorting, linking related tables, and selecting specific records; development of forms for viewing as well as entering data; and reports for presenting printed copy of the database and/or selected records. This course provides preparation for the Microsoft Certified Application Specialist Access exam (77-605). This course may be taught in a distance education format.

CIS 21 ACCESS FOR WINDOWS II (form. MIS 54) – 1 Unit (P/NP Option)
Prerequisite: A grade of C or higher in CIS 20 or a grade of C or higher in CIS 23
Advisory: Ability to type 25 wpm
Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center and the Tehama campus. Students taking the Internet format of this course must have access to the same version of Microsoft Operating System and Office Suite being used in the course. Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
Designed to expand and improve database management skills through multi-media lecture/demonstration/discussion on an IBM compatible microcomputer. Instruction will include a review of database design concepts; queries involving linked tables, logical operators, calculated fields; crosstab, update, and summary queries; pivot tables and Pivot Charts; presentation of data through forms and reports (including field calculations and graphics); creating hyperlinks from Access to web pages; importing and exporting data; and advanced queries. This course provides preparation for the Microsoft Certified Application Specialist Access exam (77-605). This course may be offered in a distance education format.

CIS 22 ACCESS FOR WINDOWS III (formerly MIS 55) – 1 Unit (P/NP Option)
Prerequisite: A grade of C or higher in CIS 21
Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center and the Tehama campus. Students taking the Internet format of this course must have access to the same version of Microsoft Operating System and Office Suite being used in the course. Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
Designed to expand and improve database management skills to a much more advanced level of proficiency through multi-media lecture/demonstration/discussion on an IBM compatible microcomputer. Instruction will include a review of database design concepts; management, maintenance, and protection of the database and its objects; development and use of macros and modules; customizing forms and reports; providing user-friendly access; and analyzing database performance. This course provides preparation for the Microsoft Certified Application Specialist Access exam (77-605). This course may be offered in a distance education format.

CIS 23 INTRODUCTION TO DATABASE MANAGEMENT – 3 Units
Advisory: A grade of C or higher in CIS 1
Class Hours: 45 lecture/27 lab total (when offered in the Distance Education format, hours will total 162)
This course is designed to provide individuals with a complete introduction to database concepts and the relational database model. Topics include QBE, SQL, normalization, design methodology, DBMS functions, database administration, and other database management approaches, such as client/server databases, object oriented databases, and data warehouses. At the completion of this course, students should be able to understand a user's database requirements and translate those requirements into a valid database design. Microsoft Access is used to illustrate database design concepts. The concepts and skills taught in this course include but go well beyond the level of the Access for Windows I course. This course may be offered in a distance education format.
CIS 31  CISCO CCNA 1 – NETWORKING FOR HOME AND SMALL BUSINESSES (formerly MIS 32, MIS 2) – 3 Units
Prerequisite: A grade of C or higher in CIS 2
Class Hours: 45 lecture/27 lab total (when offered in the Distance Education format, hours will total 162)
This course is the first in a two-course series designed to prepare students for the Cisco Certified Entry Network Technician (CCENT) exam, and the course is the first of a four-course series designed to prepare students for the Cisco Certified Networking Associate (CCNA) exam. This course is offered by Shasta College and the Cisco Regional Networking Academy in the area. Instructional materials developed by Cisco Systems are utilized for the course. The course teaches students the skills needed to obtain entry-level home network installer jobs. It also helps students develop some of the skills needed to become network technicians, computer technicians, cable installers, and help desk technicians. It provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in home and small business environments. Labs include PC installation, Internet connectivity, wireless connectivity, file and print sharing, and the installation of game consoles, scanners, and cameras. This course may be offered in a distance education format.

CIS 32  CISCO CCNA 2 – WORKING AT A SMALL-TO-MEDIUM BUSINESS OR HOME (formerly MIS 32, MIS 2) – 3 Units
Prerequisite: A grade of C or higher in CIS 31
Class Hours: 45 lecture/27 lab total (when offered in the Distance Education format, hours will total 162)
This course is the second in a two-course series designed to prepare students for the Cisco Certified Entry Network Technician (CCENT) exam, and the course is the second of a four-course series designed to prepare students for the Cisco Certified Networking Associate (CCNA) exam. This course is offered by Shasta College and the Cisco Regional Networking Academy in the area. Instructional materials developed by Cisco Systems are utilized for the course. The course prepares students for jobs as network technicians. It also helps students develop additional skills required for computer technicians and help desk technicians. It provides a basic overview of routing and remote access, addressing, and security. It familiarizes students with servers that provide email services, Web space, and authenticated access. Students learn soft skills required for help desk and customer service positions. Network monitoring and basic troubleshooting skills are taught in context. This course may be offered in a distance education format.

CIS 33  CISCO CCNA 3 – ROUTING AND SWITCHING IN THE ENTERPRISE (formerly MIS 33, MIS 3) – 3 Units
Prerequisite: A grade of C or higher in CIS 32
Class Hours: 45 lecture/27 lab total (when offered in the Distance Education format, hours will total 162)
This course is the third in a four-course series designed to prepare students for the Cisco Certified Networking Associate (CCNA) exam. The course is offered by Shasta College and the Cisco Regional Networking Academy in the area. Instructional materials developed by Cisco Systems are utilized for the course. The course familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks. Topics covered include: Telephony requirements, and security. It also introduces advanced routing protocols including Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. Other specific topics include Virtual LANs, enterprise security, line termination, and inter-VLAN routing. Hands-on exercises include configuration, installation, and troubleshooting. This course may be offered in a distance education format.

CIS 34  CISCO CCNA 4 – DESIGNING AND SUPPORTING COMPUTER NETWORKS (formerly MIS 34, MIS 4) – 3 Units
Prerequisite: A grade of C or higher in CIS 33
Class Hours: 45 lecture/27 lab total (when offered in the Distance Education format, hours will total 162)
This course is the fourth in a four-course series designed to prepare students for the Cisco Certified Networking Associate (CCNA) exam. The course is offered by Shasta College and the Cisco Regional Networking Academy in the area. The course provides a basic overview of routing and remote access, addressing, and security. It familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks. This course teaches students the skills needed to obtain entry-level home network installer jobs. It also helps students develop additional skills required for computer technicians and help desk technicians. It provides a hands-on introduction to networking and the Internet using tools and hardware commonly found in home and small business environments. Labs include PC installation, Internet connectivity, wireless connectivity, file and print sharing, and the installation of game consoles, scanners, and cameras. This course may be offered in a distance education format.

CIS 35  CISCO CCNP 1 – BUILDING SCALABLE INTERNETWORKS (formerly MIS 5) – 3 Units
Prerequisite: A grade of C or higher in CIS 34 or CCNA Certification
Note: CIS 35, CIS 36, CIS 37 and CIS 38 may be taken in any order
Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)
CIS 35 is one of a four-course series designed to prepare students for the Cisco Certified Networking Professional (CCNP) exams. This course is offered by Shasta College and the Cisco Regional and Local Networking Academy in the area. Instructional materials developed by Cisco Systems are utilized for the course. The course introduces students to scalable IP networks. Students will learn how to create an efficient and expandable enterprise network by installing, configuring, monitoring, and troubleshooting network infrastructure equipment (especially routers). Topics include how to configure EIGRP, OSPF, IS-IS, and BGP routing protocols and how to manipulate and optimize routing updates between these routing protocols. Other topics include multicast routing, IPv6, and DHCP configuration. This course may be offered in a distance education format.

CIS 36  CISCO CCNP 2 – IMPLEMENTING SECURE CONVERGED WIDE-AREA NETWORKS (formerly MIS 6) – 3 Units
Prerequisite: A grade of C or higher in CIS 34 or CCNA Certification
Note: CIS 35, CIS 36, CIS 37, and CIS 38 may be taken in any order
Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)
CIS 36 is one of a four-course series designed to prepare students for the Cisco Certified Networking Professional (CCNP) exams. This course is offered by Shasta College as the Cisco Regional and Local Networking Academy in the area. Instructional materials developed by Cisco System are utilized for the course. The course introduces students to providing secure enterprise-class network service for teleworkers and branch sites. Students will learn how to secure and expand the reach of an enterprise network with focus on VPN configuration and securing network access. Topics include teleworker configuration and access, frame-mode MPLS, site-to-site IPSec VPN, Cisco EIGRP and OSPF strategies used to mitigate network attacks, Cisco device hardening and IOS firewall features. This course may be offered in a distance education format.

CIS 37  CISCO CCNP 3 – BUILDING MULTI-LAYER SWITCHED NETWORKS (formerly MIS 8) – 3 Units
Prerequisite: A grade of C or higher in CIS 34 or CCNA Certification
Note: CIS 35, CIS 36, CIS 37, and CIS 38 may be taken in any order
Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)
CIS 37 is one of a four course series designed to prepare students for the Cisco Certified Networking Professional (CCNP) exams. This course is offered by Shasta College as the Cisco Regional and Local Networking Academy in the area. Instructional materials developed by Cisco Systems are utilized for the course. This hands-on, lab-oriented course stresses the design, implementation, operation, and troubleshooting of multilayer switched networks in a campus LAN environment. Specific topics include VLANs, Spanning Tree Protocol, Inter-VLAN routing, high availability, wireless client access, security, and switch configuration to support voice. This course may be offered in a distance education format.

CIS 38  CISCO CCNP 4 – OPTIMIZING CONVERGED NETWORKS (formerly MIS 8) – 3 Units
Prerequisite: A grade of C or higher in CIS 34 or CCNA Certification
Note: CIS 35, CIS 36, CIS 37, and CIS 38 may be taken in any order
Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)
CIS 38 is the last course in a four course series designed to prepare students for the Cisco Certified Networking Professional (CCNP) exams. This course is offered by Shasta College as the Cisco Regional and Local Networking Academy in the area. Instructional materials developed by Cisco Systems are utilized for the course. The course introduces students to optimizing and providing effective QoS techniques in converged networks operating voice, wireless and security applications. Topics include implementing a VoIP network, implementing QoS in converged networks, and managing QoS mechanisms for implementing the DiffServ QoS model, AutoQoS, wireless security and basic wireless management. This course may be offered in a distance education format.

CIS 39  CISCO NETWORKING – CCNA SECURITY – 3 Units
Advisory: A grade of C or higher in CIS 34 or CCNA Certification
Class Hours: 45 lecture/27 lab total (when offered in the Distance Education format, hours will total 162)
This course is offered by Shasta College in its role as a Cisco Local Networking Academy. This course prepares students for the Cisco CCNA Security certification exam. This is a widely recognized entry level certification in the network security field. Obtaining this certification will provide Shasta College students with a competitive advantage in advancing to skilled technician positions in the high-demand job markets of computer and network security. Topics that will be addressed include: vulnerabilities and threats, security policy, security technologies and solutions, firewall and secure router design, switch security, intrusion detection, access lists, VPNs, cryptography, and hands-on equipment configuration. This course may be offered in a distance education format.

CIS 50  WINDOWS 7 – CONFIGURATION – 1 Unit
Class Hours: 9 lecture/27 lab total
A Microsoft Certified Technical Specialist course. The terminology, planning, installation, configuration, maintenance, troubleshooting, and security of the Windows 7 operating system will be covered. The course is designed to prepare a student to take and pass the Microsoft Certification Exam 70-680 and for employment in the IT field. Note: This course may be repeated if student has previously taken CIS 50 with an earlier version of the operating system.
CIS 51  WINDOWS 7 ENTERPRISE SUPPORT TECHNICIAN – 1 Unit
Class Hours:  9 lecture/27 lab total
A Microsoft Certified IT Professional course.  Supporting and troubleshooting applications on a Windows 7 client for enterprise support technicians. The terminology, planning, installation, configuration, administration, and troubleshooting of applications in the Windows 7 environment will be covered.

CIS 52  SERVER 2008 ACTIVE DIRECTORY CONFIGURING – 1 Unit
Note: Students who have taken CIS 52 Manage and Maintain Windows 2003 Network Infrastructure will be able to register for this course using Windows Vista.
Class Hours:  9 lecture/27 lab total
A Microsoft Certified Technology Specialist course.  The terminology, planning, installation, configuration, administration, and troubleshooting Windows Server 2008 Active Directory will be covered.  The course is designed to prepare a student to take and pass the Microsoft Certification Exam 70-640 and for employment in the IT field.

CIS 53  SERVER 2008 NETWORK INFRASTRUCTURE – 1 Unit
Note: Students who have taken CIS 53 Plan and Maintain Windows 2003 Network Infrastructure will be able to register for this course using Windows Vista.
Class Hours:  9 lecture/27 lab total
A Microsoft Certified Technology Specialist course.  The terminology, planning, installation, configuration, administration, and troubleshooting Windows Server 2008 Network Infrastructure will be covered.  The course is designed to prepare a student to take and pass the Microsoft Certification Exam 70-642 and for employment in the IT field.

CIS 54  SERVER 2008 SERVER ADMINISTRATOR – 1 Unit
Note: Students who have taken CIS 54 Plan, Implement and Maintain Windows 2003 AD Network Infrastructure will be able to register for this course using Windows Vista.
Class Hours:  9 lecture/27 lab total
A Microsoft Certified IT Professional course.  The terminology, planning, installation, configuration, administration, and troubleshooting Windows Server 2008 administration will be covered.  The course is designed to prepare a student to take and pass the Microsoft Certification Exam 70-646 and for employment in the IT field.

CIS 55  EXCHANGE SERVER 2007, CONFIGURING – 1 Unit
Note: Students who have taken CIS 55 Designing a Windows Server 2003 AD and Exchange Server 2003 Network Infrastructure will be able to register for this course using Windows Vista.
Class Hours:  9 lecture/27 lab total
A Microsoft Certified Technology Specialist course.  The terminology, planning, installation, configuration, administration, and troubleshooting Exchange Server 2007 will be covered.  The course is designed to prepare a student to take and pass the Microsoft Certification Exam 70-236 and for employment in the IT field.

CIS 57  INTRODUCTION TO COMPUTERS THROUGH GAMING – 3 Units
Class Hours:  36 lecture/54 lab total
This course is designed to get students interested in the computer field by teaching concepts related to computer gaming. The course will cover the necessary computer troubleshooting and repair, networking, internet research, and overall computer knowledge needed to use sophisticated networked and online games. This course will include hands-on activities such as labs and projects to further learning and experience.

CIS 60  VISUAL BASIC PROGRAMMING (formerly BUSI 27, MIS 27) – 3 Units
Advisory: A grade of C or higher in CIS 2
Class Hours:  36 lecture/54 lab total
This course is intended to teach programming techniques using the Visual Basic language.  Students will be introduced to Visual Basic statements including, but not limited to input, output, computation, loop, arrays, subroutines, file processing commands, form layout, objects, events, and Visual Basic tools.  Students will design, code, test, and execute several detailed business-oriented programs ranging from very simple to complex.

CIS 61  C++ LANGUAGE PROGRAMMING (formerly MIS 25) – 3 Units
Advisory: A grade of C or higher in CIS 2
Class Hours:  36 lecture/54 lab total
This study of the C++ Programming language.  Emphasis is placed on programming theory and structure including data types, selection and iteration structures, functions, arrays, pointers, graphics, objects and classes.

CIS 62  JAVA PROGRAMMING (formerly MIS 17) – 3 Units
Advisory: A grade of C or higher in CIS 2
Class Hours:  36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)
Java is a platform-neutral, object-oriented, and secure programming language that is quickly becoming the standard programming language for creating interactive content on the World Wide Web (WWW).  This course covers Java programming language and the standard Java class libraries.  This course may be offered in a distance education format.

CIS 63  ASSEMBLER LANGUAGE PROGRAMMING (formerly MIS 24) – 4 Units
Prerequisite: A grade of C or higher in CIS 2
Class Hours:  54 lecture/54 lab total (when offered in the Distance Education format, hours will total 216)
This course is designed to introduce students to basic digital computer architecture, assembly language and the standard assembly language instruction formats and developing computer programs in assembly language.  Emphasis will be placed on understanding machine language instruction formats and developing computer programs in assembly language.  Programming techniques and concepts will be studied including data types, file processing commands, form layout, objects, events, and Visual Basic tools.  Students will be introduced to Visual Basic statements including, but not limited to input, output, computation, looping, arrays, subroutines, file processing commands, form layout, objects, events, and Visual Basic tools.  This course should enable students to develop and execute computer programs in a variety of computer languages.

CIS 64  WEB PROGRAMMING USING JAVA/PHP/FLASH – 3 Units
(P/N/P Option)
Advisory: A grade of C or higher in CIS 2
Class Hours:  36 lecture/54 lab total
Java is a platform-neutral, object-oriented, and secure programming language that is quickly becoming the standard programming language for creating interactive content on the World Wide Web (WWW).  PHP (Hypertext Preprocessor) is a programming language that allows web developers to create dynamic content that interacts with databases.  PHP is basically used for developing web-based software applications.  Adobe Flash Professional is used to create content for the Adobe Engagement Platform (such as web applications, games and movies, and content for mobile phones and other embedded devices).  This course covers Introductory Java Applets, PHP Scripting, and Adobe Flash programming.

CIS 70  WINDOWS I (formerly MIS 45, OAS 74) – 1 Unit (P/N/P Option)
Note: Class will require outside time using a computer with appropriate software.
Class Hours:  18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
This course is designed to familiarize students with Microsoft Windows.  It is a hands-on course designed to give the student a beginning knowledge of Windows' graphical user interface.  Topics covered will include manipulating Windows, using Help, launching and running multiple applications, transferring information between applications, and managing files and folders on a desk with Explorer and My Computer.  This course may be offered in a distance education format.

CIS 72  FUNDAMENTALS OF LINUX – 3 Units
Advisory: A grade of C or higher in CIS 2 and CIS 90
Class Hours:  45 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)
Fundamentals of Linux is an introductory and hands-on course for new users of the popular Linux operating system.  Students will learn basic Linux systems administration skills using both command-line and graphical tools.  Topics will include Linux installation and initialization, file system navigation and management, changing file permissions, the vi and emacs text editors, Bash, KDE, and GNOME shell features, process management, shell scripts, security, backup and recovery, printing, and basic networking including clients and network services.  The course prepares students for the Comptia Linux+ certification exam.  This course may be offered in a distance education format.

CIS 73  PHOTOSHOP – 1 Unit (P/N/P Option)
Advisory: A grade of C or higher in CIS 70 or basic knowledge of word processing and Windows
Class Hours:  9 lecture/27 lab total
This course is designed to introduce students to image editing and graphic rendering and design using Adobe Photoshop.  This course should enable students to develop their own graphics and text styles with little or no previous training in graphic arts.

CIS 74  DIGITAL PHOTO EDITING WITH PHOTOSHOP – 1 Unit (P/N/P Option)
Advisory: A grade of C or higher in CIS 70 or basic knowledge of Windows
Class Hours:  9 lecture/27 lab total
This course is designed to introduce students to basic digital photo restoration, repairing, and rebuilding techniques using Adobe Photoshop.  This course should enable students to restore, repair, and rebuild digital photos with little or no previous training in graphic arts.
CIS 75  DIGITAL MULTIMEDIA – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in CIS 70 or basic knowledge of Windows
Class Hours: 9 lecture/27 lab total
This course is designed to introduce students to the basics of using digital multimedia such as digital photos, video, and sound. This course should enable students to extract digital media from devices and prepare the digital media for use on the web, personal computers, and televisions. They will learn how to convert file types for optimal performance in various settings and store the media in different formats for easy retrieval. Digital cameras, video recorders, and digital music have become mainstream technologies as well as digitizing traditional analog media. There has been an increasing demand from consumers and employers for the skills taught in this course.

CIS 76  CELL PHONE APPLICATIONS DEVELOPMENT – 2 Units
Advisory: A grade of C or higher in CIS 2 and CIS 61
Class Hours: 18 lecture/54 lab total (when offered in a Distance Education format, hours will total 108)
This course covers the development of applications for cell phones such as the iPhone, the Blackberry and more. The course will prepare students to design, program and submit their applications for use on cell phones. This course may be offered in a distance education format.

CIS 79  ADVANCED WEB DESIGN USING DREAMWEAVER AND ADOBE – 2 Units (P/NP Option)
Advisory: A grade of C or higher in CIS 70 or basic knowledge of word processing and Windows
Class Hours: 27 lecture/27 lab total
This course introduces advanced concepts in web design, application development, and web hosting. This course will use dreamweaver and other adobe products such as Photoshop, Flash, and Fireworks. This course introduces web applications and databases using ASP, PHP, Cold Fusion and AJAX.

CIS 80  INTERNET BASICS (formerly MIS 81) - 1 Unit (P/NP Option)
Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
This course is designed to familiarize students with the Internet. It is a hands-on course that will provide the student with an understanding of what the Internet is and a working knowledge of the hardware and software used to access the Internet, how to use e-mail, searching, newsgroups, etc. This course may be offered in a distance education format.

CIS 81  WEB DESIGN (EXPRESSION WEB) (formerly MIS 80) – 1 Unit (P/NP Option)
Advisory: Basic knowledge of word processing, Windows, and the Internet
Note: Students who have taken CIS 81 Web Design (FrontPage 1) will be able to register for this course using Expression Web. Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to the Microsoft Operating System and Office Suite’s further information will be provided on the first day handout.
Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
This course introduces the student through lecture and hands-on operation to the use of Microsoft Expression Web, a web authoring software. Focus is on the functions of creating, editing, saving, and publishing Web pages. Topics include formatting text, graphical elements, hypertext links, lists, tables, forms, and other active web authoring elements. This course may be offered in a distance education format.

CIS 83  WEB DESIGN USING DREAMVEAVER – 2 Units (P/NP Option)
Advisory: A grade of C or higher in CIS 70 or basic knowledge of word processing and Windows
Class Hours: 27 lecture/27 lab total
This course is designed to introduce students to Web site development using Macromedia Dreamweaver. It will also introduce the students to Flash, Shockwave, CSS and Dynamic Web pages.

CIS 86  HTML – 3 Units (P/NP Option)
Note: This class does not require any special software. Assignments may include work outside class with the use of a computer with standard browsers like Internet Explorer or Netscape Navigator. Some computer access is provided on campus at the Math and Business Learning Center and at the Learning Resources Center.
Class Hours: 54 lecture (when offered in the Distance Education format, hours will total 162)
This is a fundamental course on the Hypertext Markup Language for web page authoring, with lecture and hands-on classes. The topics include: the HTML “<TAG>” structure, the “<HEAD>” and “<BODY>” components of a web document, text formatting, creation of hyperlinks, inclusion of images, the use of tables, frame and form structures, and incorporation of multimedia, applets and javascripts. The editing, saving and publishing of web pages is performed with the basic tools provided with any of the currently available Windows platforms; no special software is needed for the class. This course may be offered in a distance education format.

CIS 90  A+ CERTIFICATION PREPARATION/CISCO IT ESSENTIALS 1 – 4 Units
Advisory: A grade of C or higher in CIS 2
Note: This course replaces ELEC 20, 21, 22, 23 and 24 for A+ Certification
Class Hours: 54 lecture/54 lab total (when offered in the Distance Education format, hours will total 216)
This course provides the student with the knowledge and skills to pass the A+ Core Hardware and the A+ OS Technologies certification tests. The CompTIA A+ certification exams are nationally recognized, and measures essential competencies for an entry-level computer technician. Topics covered are microcomputer architecture, personal computer hardware, including Microsoft Windows installations, configurations and troubleshooting. Students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. This course may be offered in a distance education format.

CIS 92  INTRO. TO COMPUTER SECURITY – SECURITY + – 3 Units
Advisory: A grade of C or higher in CIS 2
Class Hours: 45 lecture/27 lab total (when offered in the Distance Education format, hours will total 162)
This course provides the student with background, requirements, policies and procedures for establishing and maintaining computer and information system security. Course elements include: Risk discovery and assessment; system planning with cost/benefit analyses; management policies; security practices and procedures within system life cycles and system recovery. The course will stress applied solutions to computer security problems, preparing students for the CompTIA Security+ Certification exam. This course may be offered in a distance education format.

CIS 94  COMPUTER INFORMATION SYSTEMS WORKSITE LEARNING 1-8 Units (P/NP Option)
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/externship at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course. Since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

CIS 97  SPECIAL TOPICS IN MANAGEMENT INFORMATION SYSTEMS (formerly MIS 97) – 5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in management information systems. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

CIS 98  SPECIAL LAB TOPICS IN MANAGEMENT INFORMATION SYSTEMS (formerly MIS 98) – 5-2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in management information systems. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

CIS 197  SPECIAL TOPICS IN COMPUTER TECHNOLOGY (formerly MIS 197) – 5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in the field of office technology. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

CIS 198  SPECIAL LAB TOPICS IN COMPUTER TECHNOLOGY (formerly MIS 198) .5-2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing topics/knowledge in computer technology. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.
CONSTRUCTION TECHNOLOGY (CONS)

CONS 45 CAREER PLANNING AND LEADERSHIP FOR HEAVY EQUIPMENT OPERATORS - 2 Units
Class Hours: 36 lecture total
Careers, opportunities and training requirements in the field of Heavy Equipment Operations will be examined. Students will be assisted in identifying career opportunities and developing career goals. Leadership skills dealing with organizing a meeting, public speaking, and leadership styles will be covered. This class is required of all Equipment Operations and Maintenance students.

CONS 46 EQUIPMENT OPERATIONS & MAINTENANCE (formerly AGRI 46/ENV 46) - 3 Units (P/NP Option)
Limitation on Enrollment: Student must produce a negative test result in accordance with the Shasta College Student Substance Abuse Testing Policy at a student cost to be paid to the designated testing facility prior to enrolling.
Class Hours: 27 lecture/54 lab total
This class covers basic skill-level operation and maintenance of on- and off-road heavy equipment including agriculture and earth moving. Students will not be allowed to operate road equipment without license and driving record. Operational equipment used may include any of the following: dump truck, grader, backhoe, dozer, farm tractor, loader, excavator, forklift, and scraper.

CONS 47 PROJECT CONSTRUCTION FOR EQUIPMENT OPERATIONS (formerly ENVR 47, AGRI 47) - 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in CONS 46 and a grade of C or higher in CONS 48
Note: Students will not be allowed to operate road equipment without a proper license and driving record. Students must be enrolled in the college’s random drug testing program.
Class Hours: 27 lecture/81 lab total
This class teaches intermediate skill-level operation and maintenance of off-road and on-road heavy equipment. It also covers common project construction techniques utilizing heavy equipment with an emphasis on environmental concerns.

CONS 48 SURVEYING FOR EQUIPMENT OPERATORS (formerly AGRI 48) - 2 Units (P/NP Option)
Advisory: A grade of C or higher in MATH 100
Class Hours: 18 lecture/54 lab total
This course teaches basic surveying techniques and concepts with emphasis on application for heavy equipment operators. It involves basic problem solving, grade setting and checking, leveling, distance measurement, cut-fill ratio, and basic mapping. The course has a heavy emphasis on field work using various equipment and instruments including levels, compasses tapes, as well as various state-of-the-art electronic surveying devices. This course will prepare students for a career in construction surveying.

CONS 52 RESIDENTIAL ESTIMATING - 3 Units
Class Hours: 54 lecture total
This course is designed for learning construction-estimating techniques for both small and medium sized construction projects. It includes estimating materials, costs, labor, taxes, insurance fees, overhead, profit, transportation and contingencies common in the residential construction industry. In this class students will be responsible for interpreting blueprints, developing budgets and estimates, as well as planning a construction project representative of current industry activity.

CONS 53 MATERIALS OF CONSTRUCTION - 3 Units
Class Hours: 54 lecture total
This course introduces students to traditional and current construction materials and their use.

CONS 54 SURVEY OF THE BUILDING INDUSTRY - 3 Units
Note: Field trips may be required
Class Hours: 54 lecture total
This course will provide essential knowledge and skill related to deck, closet finishing, and drywall. This course is designed for students who wish to work on a heavy equipment construction crew.

CONS 55 EQUIPMENT OPERATIONS SKILLS DEVELOPMENT (formerly AGRI 55/ENVR 55) - 1-4 Units (P/NP Option)
Prerequisite: A grade of C or higher in CONS 46
Limitation on Enrollment: Student must produce a negative test result in accordance with Shasta College Student Substance Abuse Testing Policy at a student cost to be paid to the designated testing facility.
Class Hours: 54 lab hours per unit
This course will provide essential knowledge and skill related to the students for work on a heavy equipment construction crew.

CONS 56 ESSENTIALS OF CONSTRUCTIONS - 3 Units
Class Hours: 54 lecture total
In this course, students will become familiar with traditional and current construction for safety obligations of workers, supervisors, and managers to ensure a safe workplace. Teach students the basic terms used as construction drawings, components, and symbols including the different types of drawings (civil, architectural, structural, mechanical, plumbing/piping, electrical, and fire protection) and instruct students on how to interpret and use drawing dimensions. Provide instruction in the current methods to move materials and equipment from one location to another on a job site. Describes inspection techniques and load-handling safety practices. Also reviews American National Standards Institute (ANSI) hand signals. This course covers OSHA-10 training requirements and application.

CONS 71 WOODWORKING (formerly CONS 71A) – 3 Units
Class Hours: 36 lecture/54 lab total
Course is designed to develop interest in the fundamentals of woodworking. Instruction is given on safety, wood identification, working with hand tools, and proper use of hand tools, power and pneumatic tools on machinery.

CONS 72 CABINETMAKING (formerly CONS 71B) – 3 Units
Prerequisite: A grade of C or higher in CONS 71
Class Hours: 36 lecture/54 lab total
This course will enable the student to have an understanding of cabinet making, types found in kitchens, bathrooms and garages. Styles of cabinets, types of layout for all basic case type cabinets. Be able to select counter tops, drawer construction and door construction.

CONS 73 FURNITURE AND CABINET FINISHING (formerly CONS 71C) – 3 Units
Prerequisite: A grade of C or higher in CONS 71
Class Hours: 36 lecture/54 lab total
This course is designed to teach inorganic as well as organic finishing in vocational and industrial applications. It is divided into sections which describe various categories in the broad field of cabinet finishing.

CONS 74 TRIM AND DETAIL FINISHING (formerly CONS 71D) – 3 Units
Class Hours: 36 lecture/54 lab total
This course will provide essential knowledge and skill related to decked, closet treatments, inside and outside window and door treatments.

CONS 78 ANALYSIS OF CONSTRUCTION DRAWINGS AND SPECIFICATIONS – 3 Units
Class Hours: 54 lecture total
An in-depth study of construction plans and specifications, including reading and interpreting construction documents from various private and public designers and determining quantities and types of materials used in both building and general engineering construction.

CONS 84 CONSTRUCTION TECH. WORKSITE LEARNING - 1-8 Units
Limitation on Enrollment: Students must have completed 30 units of required construction technology course work. Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
This course is designed for employment on approved jobs related to the student major and is supervised by a College representative to ensure that the work experience is of educational value. Good work habits through actual job performance is stressed. One to four units per semester may be taken depending on hours and nature of the jobs. One unit of worksite learning credit is granted for 75 hours paid or 60 hours non-paid of on-the-job activity. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

CONS 148 SURVEYING AND GRADE SETTING FOR CONSTRUCTION (formerly AGRI 148) - 1 Unit (P/NP Only)
Note: Previous construction experience will be helpful
Class Hours: 9 lecture/27 lab total
This course is an advanced level course designed to give the participants practical skills and knowledge in the latest technology and applications related to surveying for construction and grade setting. The course will emphasize skills development and hands-on experiences as well as provide an opportunity for participants to discuss related topics with industry leaders.
CONS 149 CLASS HOURS & LICENSE TRAINING (formerly ENV 149, AGRI 149) – 1 Unit (P/NP Only)
Prerequisite: A grade of C or higher in CONS 46
Note: Students will not be allowed to operate road equipment without a proper license and driving record. Students must be enrolled in the college’s random drug test program. Students must produce a negative test result in accordance with Shasta College Student Substance Abuse Testing Policy at a student cost to be paid to the designated testing facility.
Class Hours: 9 lecture/27 lab total
This course is recommended for entry-level students in the construction trades. Instruction will include the safest, estimating costs, foundations, framing, plumbing, electrical, mechanical, and finish carpentry. The student will gain a basic knowledge of the building trades. 

CONS 150 INTRO. TO RESIDENTIAL CONSTRUCTION – 3 Units
Class Hours: 54 lecture total
This course is recommended for entry-level students in the construction trades. Instruction will include safety, estimating costs, foundations, framing, exterior and interior trim, and cabinet work. Basic information of building codes will be covered.

CONS 151 CARPENTRY PRACTICES I (formerly CONS 151A) – 3 Units
Class Hours: 36 lecture/54 lab total
The purpose of this course is to train students to become competent in the construction field. Related information including interpretation of layout, estimation of construction costs and choice quantities of materials will be emphasized. Basic skills will be developed with each phase of the job: foundation, framing, exterior and interior trim, and cabinet construction. Basic information of building codes will be covered.

CONS 152 CARPENTRY PRACTICES II (formerly CONS 151B) – 3 Units
Prerequisite: A grade of C or higher in CONS 151
Class Hours: 36 lecture/54 lab total
The purpose of this class is to expand the students’ knowledge of interpretation of general construction practices to include intermediate layout, field estimation, quantities of materials needed for a construction site, enhance the education of estimating man hours in relation to materials required, and to become familiar with the Uniform Building Code, the National Electrical Code, Uniform Plumbing Code and HVAC standards associated with city and county requirements.

CONS 154 RESIDENTIAL PLUMBING – 3 Units
Class Hours: 36 lecture/54 lab total
This course is designed to give the student entry-level job skills in the residential plumbing trade.

CONS 155 RESIDENTIAL ELECTRICAL – 3 Units
Class Hours: 36 lecture/54 lab total
This course in residential electrical is designed to give the student a basic understanding of how to run a variety of circuits, grounding systems, and familiarize them to the National Electrical Code.

CONS 156 GENERAL SHOP/WOODWORKING – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
This course is designed to provide the materials and supervision for students to practice woodworking skills. This course is designed to give the student an opportunity to explore a variety of topics dealing with changing knowledge and historical issues in the field of Construction Technology. A different topic will be addressed each time the course is taught. Recommended for Construction Technology majors; open to anyone with an interest in this topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

CONS 157 SPECIAL TOPICS IN CONSTRUCTION TECHNOLOGY – .5 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge and historical issues in the field of Construction Technology. A different topic will be addressed each time the course is taught. Recommended for Construction Technology majors; open to anyone with an interest in this topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

CONS 158 SPECIAL TOPICS IN CONSTRUCTION TECHNOLOGY – LAB SKILLS – .5 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of topics in a lab setting dealing with changing knowledge in Construction Technology. A different topic will be addressed each time the course is taught. Recommended for Construction Technology and Equipment Operations majors; open to anyone with an interest in these topics. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

CULINARY ARTS

The following courses will require extensive reading and math exercises.

CULA 45 BASIC FOOD PRODUCTION – 5 Units
Prerequisite: A grade of C or higher in CULA 45 and a grade of C or higher in CULA 50
Class Hours: 18 lecture/216 lab total
This is a beginning laboratory course in food preparation and presentation involving cooking equipment, techniques, and safety procedures, using weights and measures, and interpretation of recipes. Product identification and basic cooking techniques and procedures based on nutrition and classic preparation methods are presented. Students are provided the hands-on experience in preparing meals by following recipe structure and using and modifying recipes based on knowledge gained through the course. Food preparation is produced in a time-restricted setting to prepare for functioning in a commercial kitchen. This course is designed for students interested in pursuing a career in Culinary Arts/Culinary Management.

CULA 46 ADVANCED FOODS – 5 Units
Prerequisite: A grade of C or higher in CULA 45 and a grade of C or higher in CULA 50
Class Hours: 18 lecture/216 lab total
This course examines advanced principles of food preparation of foods served in restaurants. Emphasis given to the planning and preparation of food products relating to restaurants, hotels, and specialty food operations.

CULA 48 GOURMET FOOD PREPARATION – 3 Units
Prerequisite: A grade of C or higher in CULA 46 and a grade of C or higher in CULA 50
Class Hours: 27 lecture/81 lab total
This course is designed to teach advanced food preparation techniques and methods. Students learn the science of scratch cookery through small batch assignments. Areas of focus include gourmet items, buffet specialties, hors d’oeuvres, and canapés, while practicing presentation and garnishing. Small scale preparation is produced in a time-restricted quality-minded setting. This course is for students pursuing a career in culinary arts/culinary management.

CULA 49 MENU PLANNING AND COST ANALYSIS – 2 Units
Class Hours: 36 lecture total
This course is designed to summarize the basic principles of menu planning and layout for various food service operations. Topics included are pricing, nutrition, and types of menus.

CULA 50 SANITATION & SAFETY (formerly CULA 150) – 2 Units
Prerequisite: A grade of C or higher in ENGL 260, or English Placement Level 5 or higher
Class Hours: 36 lecture (when offered in the Distance Education format, hours will total 108)
This course provides safety and sanitation principles and practices for personal and institutional application. Methods and techniques for handling foods safely are examined including food preparation, storage, service, and the prevention of food contamination. Also covered are the importance of microorganisms, food borne illness and food allergies, sanitary facilities and equipment, accident prevention, crisis management, and pest management. Compliance with city, state, and federal health regulation as embodied in HACCP (Hazard Analysis Critical Control Point) are emphasized, along with the supervisor’s responsibilities in maintaining high standards of these principles. This course will provide updated information on USDA, FDA, Codex, and ISO 22000 regulations and their relationship to food borne illness. The student receives a certificate of completion from the Educational Foundation of the National Restaurant Association upon the successful completion of this course with a passing grade of 75% or higher. This course will provide the necessary knowledge to the foodservice environment and its proper use to avoid accidents. This course is required for all Culinary Arts/Culinary Management students and is advised to be taken as the first course prior to all other culinary courses or in conjunction with the first few. It may be used for American Culinary certification and recertification, and is required for the Dietary Service Supervisor Certificate offered by the Nutrition Department. This course may be offered in a distance education format.

CULA 55 PURCHASING (formerly CULA 155) – 2 Units
Prerequisite: A grade of C or higher in ENGL 260, or English Placement Level 5 or higher
Class Hours: 32 lecture total (when offered in the Distance Education format, hours will total 108)
This course will cover the function of purchasing from the viewpoint of management. It discusses channels of distribution, buying techniques, specification writing and other principles needed to perform this critical activity. This course may be offered in a distance education format.
CULA 59 CATERING AND EVENT PLANNING – 3 Units
Prerequisite: A grade of C or higher in CULA 45 and a grade of C or higher in CULA 50
Advisory: A grade of C or higher in ENGL 280 or English Placement Level 5 or higher; concurrent enrollment in CULA 94
Class Hours: 36 lecture/54 lab total
This course provides practical experiences designed to supplement the basic curriculum and includes special cooperative educational opportunities set up with the College and approved food service Chefs. Experiences include special and short order food preparation and service, buffet service, catering, dining room management and service and receiving and storeroom procedures. Large scale and small quantity preparation is produced in a time restricted quality minded setting. This course is for students pursuing a career in culinary arts/culinary management.

CULA 60 BEVERAGE MANAGEMENT – 2 Units
Class Hours: 36 lecture total
Identification, production, purchasing, and service of spirits, wine and beer products. Marketing, menu development, and cost controls of a beverage operation. Special emphasis on staffing, training, and legal regulations for beverage sales.

CULA 65 DINING ROOM SERVICE – 3 Units
Class Hours: 27 lecture/81 lab
In this course, students will learn in a live environment, the skills and techniques of the “front of the house” service staff. Throughout this course, students will rotate through basic dining room positions, learning and practicing their skills in front of dining room guests, in our public dining facility. Emphasis will be on the basic serving techniques and on customer satisfaction.

CULA 66 WINE WITH FOOD – 2 Units
Limitation on Enrollment: Students must be 21 years of age or older to take this course.
Class Hours: 36 lecture total
This course is designed to teach students the applied approach to match wine and food from different parts of the world using flavors, textures, and components present in food and wine as complementing strategies. Emphasis on menu planning, preparation of foods, cooking methods, and tasting wines with food. Concepts can be applied to home preparation of food with wine, restaurant food production with wine, and dining out.

CULA 71 BEGINNING BEERMAKING – 1 Unit (P/NP Only)
Limitation on Enrollment: Students must be a minimum of 21 years old to take this course.
Class Hours: 18 lecture total
This course covers beer styles, ingredients, brewing equipment, brewing techniques, sanitation, fermentation, clarification, and bottling. It also provides a sensory evaluation of representative beers. Students will make one or two batches of beer during the class.

CULA 73 INTRODUCTION TO WINES – 2 Units (P/NP Option)
Limitation on Enrollment: Students must be 21 years of age or older to take this course.
Class Hours: 36 lecture total
Characteristics of wines from the major varietals emphasized. Identification of wines from the wine districts of California, France, Germany, and Italy. The concept of food and wine pairing will also be evaluated.

CULA 74 BASIC WINEMAKING – 2 Units (P/NP Option)
Limitation on Enrollment: Students must be 21 years of age or older to take this course.
Class Hours: 27 lecture/27 lab
This is a course in the basic science and technology of winemaking. It is intended for the entrepreneur exploring business opportunities in the grape wine industry, and/or the prospective small winery employee, as well as the home winemaker, interested in career or skills development. This course encompasses winemaking in the realms of wine analysis, chemistry, and treatments.

CULA 78 SENSORY EVALUATION OF WINE – 2 Units (P/NP Option)
Advisory: A grade of C or higher in CULA 73 or CULA 66
Limitation on Enrollment: Students must be 21 years of age or older to take this course.
Class Hours: 36 lecture
This course will provide the student a better understanding of wine by learning about the senses and how to use them. Students will learn how to describe wines precisely, practice tasting varietals, learn how to judge good and bad wines, and how a wine’s sensory characteristics are created in the vineyard and the winery.

CULA 80 WINE SALES AND MARKETING – 3 Units (P/NP Option)
Class Hours: 54 lecture (when offered in the Distance Education format, hours will total 75)
This course explains the principles and strategies of wine marketing and sales. The information covered will help winery personnel or distributors understand this unique market. Students will develop a successful marketing plan. This course may be offered in a distance education format.

CULA 82 WINES OF CALIFORNIA - 3 Units (P/NP Option)
Limitation on Enrollment: Students must be 21 years of age or older to take this course.
Advisory: A grade of C or higher in CULA 73
Class Hours: 54 lecture
This class focuses on how California has become a focal wine producing area in the world in less than 25 years. The course traces the dramatic progress of the California winemaking industry—the who, how, why, what, and where. Insight is provided into the ways in which West Coast vintners are working to create extraordinary wines, and to explain the myriad of developments in character, quality, and technology that have taken place. The course and text look at how new approaches to wine making have contributed to California’s current high status in the world order of wine. Sensory evaluation of applicable wines is part of the course.

CULA 84 CULTURAL APPRECIATION OF WINE - 3 Units (P/NP Option)
Limitation on Enrollment: Students must be 21 years of age or older to take this course.
Advisory: A grade of C or higher in CULA 73
Class Hours: 54 lecture
This class is a survey of wine and its role in culture, art, religion, and society throughout history to modern day. Sensory evaluation of applicable wines is also covered.

CULA 86 WINES OF FRANCE AND ITALY - 2 Units (P/NP Option)
Limitation on Enrollment: Students must be 21 years of age or older to take this course.
Advisory: A grade of C or higher in CULA 73
Class Hours: 18 lecture
This course covers the predominant French and Italian wine-producing regions, including history, viticulture practices and winemaking styles. Sensory evaluation of representative wines is also covered.

CULA 88 WINES OF THE NORTH STATE - 1 Unit (P/NP Option)
Limitation on Enrollment: Students must be 21 years of age or older to take this course.
Advisory: A grade of C or higher in CULA 73
Class Hours: 18 lecture
A short course, including history, viticulture practices and winemaking styles of the North State wines of California, specifically Shasta, Tehama, and Trinity Counties. Sensory evaluation of representative wines is also covered.

CULA 94 CULINARY ARTS WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksites Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student's major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are acquired by actual on the job performance. A maximum of 9 units may be earned in a single semester.

CULA 97 SPECIAL TOPICS IN CULINARY ARTS - .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in culinary arts. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.
CULA 96 SPECIAL LAB TOPICS IN CULINARY ARTS – .5-2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in culinary arts. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

CULA 159 STOCKS, SOUPS, SAUCES & BASIC CULINARY PREPARATION - 2 Units
Corequisite: Students must be concurrently enrolled in, or have completed CULA 50 with a grade of C or higher
Class Hours: 18 lecture/54 lab total
Demonstration and practical application in the preparation of various stocks, soups, and sauces involving different methods of cooking meat, fish, seafood, poultry and vegetables. The uses of culinary terms, equipment and hand tools will be applied to preparation of stocks, soups, and sauces. Emphasis is placed on the development, organization and carrying out of recipe standardization, need and procurement of supplies, work stations, and attractive service.

CULA 161 THE ART OF GARDE MANGER (PREPARATION AND PRESENTATION OF GARNISHED FOODS) – 2 Units
Corequisite: Students must be concurrently enrolled in, or have completed CULA 50 with a grade of C or higher
Class Hours: 18 lecture/54 lab total
This laboratory course builds on skills previously learned while the student studies traditional upscale pantry preparation. Topics covered include hors d’oeuvres, canapés, pâtés, terrines and charcuterie. Artistic displays including buffet tables, centerpiece culinary showpieces are presented. The student gains practical experience preparing and serving theme buffets for guests. Small and large scale preparation is produced in a time-restricted quality-minded setting. This course is for students pursuing a career in culinary arts/culinary management.

CULA 167 CAFETERIA BASIC SKILLS: BASIC FOODS – 2 Units
Corequisite: Students must be concurrently enrolled in, or have completed CULA 50 with a grade of C or higher
Class Hours: 18 lecture/54 lab total
This is a beginning laboratory course in food preparation and presentation including cooking equipment, techniques, and safety procedures, using weights and measures, and interpretation of recipes. Product identification and basic cooking techniques and procedures based on nutrition and classic preparation methods are presented. Students are provided the hands-on experience in preparing meals by following recipe structure and using and modifying recipes based on knowledge gained through the course. Subject areas include: food preparation principles and standardized recipes including qualities of standard food products; components of reimbursable meal pattern; “United States Dietary Guidelines” and the four food groups; safety and sanitation standards and procedures; portion control; basics of work improvements and recordkeeping; and methods for developing positive staff morale.

CULA 170 MENU DESIGN FOR CHILD NUTRITION PROGRAMS - 3 Units
Class Hours: 54 lecture total
An overview of menu planning for child nutrition programs including meal planning options, nutrition standards, menu writing, student preferences, marketing and evaluation. Procedures for developing standardized products, budgetary controls, and evaluating procurement and delivery systems meeting federal, state, and local standards.

CULA 171 INTRODUCTION TO CHILD NUTRITION PROGRAMS FOR MANAGERS - 3 Units
Class Hours: 54 lecture total
An overview of the responsibilities in child nutrition programs, school and food service organization; nutrition issues and the evaluation of nutrition information; meal planning and food acceptability; issues in food procurement; nutrient retention in food production; requirements for sanitation and safety; records and accountability; cost control procedures; personnel job satisfaction and professionalism; training procedures; marketing, public relations, and nutrition education.

CULA 172 BAKING - 2 Units
Corequisite: Students must be concurrently enrolled in, or have completed CULA 50 with a grade of C or higher
Class Hours: 18 lecture/54 lab total
This course covers fundamental baking skills for students who intend to specialize in baking and pastry making for commercial production. Production of yeast and quick breads, cakes, cookies, pies, and pastries, as well as decorating and icing techniques undertaken. Gourmet baked items and pastries are produced in a time-restricted quality-minded setting. This course is for students pursuing a career in culinary arts/culinary management.

DANCE (DAN)

DAN 10 DANCE COMBINATIONS - .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Introduction to the fundamental movement, technique, terminology, choreography, and philosophy of jazz, ballet, and modern dance. Note: This course may be repeated once for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

DAN 15 CHOREOGRAPHY & DANCE ANALYSIS – 1 Unit (P/NP Option)
Advisory: Previous dance experience or concurrent enrollment in dance classes
Class Hours: 54 total activity
Introduction to the fundamentals of choreography for concert dance. This course will explore the elements of space and its use. Students portray a topic of interest through a dance discipline experimenting with movement style and choice of music accompaniment. The course will include analysis and critique of the student's own work, the work of other students and of professional and historic choreography. Students will have the opportunity to audition completed works for the Shasta College Dance Company. Note: This course may be repeated once for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

DAN 16 CHOREOGRAPHY AND DANCE ANALYSIS 2 – 1 Unit (P/NP Option)
Advisory: Previous dance experience or concurrent enrollment in dance classes
Class Hours: 54 total activity
This is a continuation of the fundamentals of choreography. The class will expand on concert dance into commercial work and musical theater; working within the parameters of someone else’s criteria. The course will elaborate on the elements of space and its use. Students may come up with their own topics of interest, using a dance discipline of their choice for choreography. Analysis and critique of the works presented will include professional and historical choreography references. Students will be invited to audition completed works for presentation at the Shasta College dance concerts. Note: This course may be repeated once for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

DAN 20 MODERN DANCE 1 (formerly PE 40 and HPE 36AB) – .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Fundamental movement, techniques, terminology, basic rhythm and simple choreography of modern dance. Note: This class may be repeated one time for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

DAN 21 MODERN DANCE 2 (formerly PE 43 and HPE 47AD and HPE 36CD) – .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
A class for modern dance students interested in more technical and sophisticated performing and choreography. Note: This course may be repeated once for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

DAN 30 BALLET 1 (form PE 41 and HPE 37AB) – .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
This course is an introduction to the art form of classical concert dance and includes beginning classical technique, emphasis on body placement, introduction to classical ballet terminology used worldwide, recognition of the musical rhythms that accompany specific historic steps, beginning choreography of most used ballet step combinations and patterns. NOTE: This course may be repeated once for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

DAN 31 BALLET 2 (formerly PE 44 and HPE 45AD and HPE 37CD) – .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
This is a class for ballet students interested in developing a more technical and sophisticated aspect of classical dance. Students will be instructed in the process of the classical exercises and be able to identify their purpose. Students will gain knowledge of the different schools of thought and the terminology of classical dance. There are performance and choreographic requirements and opportunities. Note: This course may be repeated once for a total of two enrollments, as skills and proficiencies are enhanced by supervised repetition.

DAN 32 BALLET 3 – POINTE AND PARTNERING – .5-1 Unit (P/NP Option)
Advisory: A grade of C or higher in DAN 30 or DAN 31
Class Hours: 27 or 54 total activity
This is an intermediate level of ballet for the student who is ready to approach the art of classical technique that involves dancing on pointe and the fundamentals of partnering another dancer. This class will expand on an intermediate level of knowledge of classical dance that can be gained through enrollment in DAN 30 or DAN 31. Students will be taught original variations from past masters as well as contemporary work of choreographers working today. Performance opportunities are available each semester. Note: This course may be repeated once for a total of two enrollments since strength, skills and proficiencies are enhanced by supervised repetition and practice.
DENTAL (DNTL)

DNTL 10 ORAL BIOLOGY - 3 Units
Limitation on Enrollment: Enrollment in the Dental Hygiene Program
Class Hours: 54 lecture/18 lab total
The study of embryology and histology of oral structural formation, clinical recognition of normal oral structures, the physiological and structural functions of teeth and supporting tissues, and oral anatomy relative to proper dental hygiene procedures.

DNTL 11 ORAL RADIOLOGY - 3 Units
Limitation on Enrollment: Enrollment in the Dental Hygiene Program
Class Hours: 36 lecture/34 lab total
This course focuses on radiation physics, biology, protection, quality, dental techniques, film processing and mounting, interpretation of errors, recognition of anatomical landmarks, and evidence of pathologies. Students practice skills on radiographic models and student patients in a clinical setting; all skills are taught to clinical competence. This course builds on basic and dental sciences and prepares for clinical dental hygiene practice.

DNTL 12 HEAD AND NECK ANATOMY - 2 Units
Limitation on Enrollment: Enrollment in the Dental Hygiene Program
Class Hours: 27 lecture/27 lab total
This course studies the anatomical structures of the head and neck regions and relates these structures to the clinical practice of Dental Hygiene.

DNTL 13 DENTAL HEALTH EDUCATION/SEMINAR – 2 Units
Limitation on Enrollment: Enrollment in the Dental Hygiene Program
Class Hours: 36 lecture total
Principles and practices of prevention and control of dental disease with emphasis on nutrition, and plaque control, motivation and chairside patient education.

DNTL 14 INTRODUCTION TO CLINIC - 4 Units
Limitation on Enrollment: Enrollment in the Dental Hygiene Program
Class Hours: 36 lecture/108 lab total
Introduction to all clinical procedures and skills needed for Dental Hygiene.

DNTL 20 LOCAL ANESTHESIA AND NITROUS OXIDE – 2 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 10, DNTL 11, DNTL 12, and DNTL 14
Class Hours: 18 lecture/54 lab total
Covers the pharmacology and physiology of local anesthetic agents and effective technique in delivery of these agents to the oral cavity. Focuses on the anatomy of the nerves, physiology of nerve conduction, and how anesthesia works. Discusses the prevention and management of associated emergencies. Skills are practiced in a clinical setting on student patients: all skills are taught to clinical competence.

DNTL 21 GENERAL AND ORAL PATHOLOGY - 4 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 10, DNTL 11, DNTL 12, DNTL 13 and DNTL 14.
Class Hours: 72 lecture total
Pathological processes of inflammation, immunology defense, degeneration, neoplasia, developmental disorders, healing and repair. Recognition of abnormalities in the human body with a special emphasis on normal and abnormal conditions in the oral cavity.

DNTL 23 PATIENT MANAGEMENT AND GERIATRICS – 2 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 10, DNTL 11, DNTL 12, DNTL 13 and DNTL 14.
Class Hours: 36 lecture total
This course teaches characteristics of individual patients, motivation, and management of same and interpersonal communication. Treatment of the compromised patient and myofunctional therapy is presented.

DNTL 24 CLINICAL PRACTICE I - 4 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 10, DNTL 11, DNTL 12, DNTL 13 and DNTL 14.
Class Hours: 18 lecture/162 lab total
Provides beginning clinical experience in the treatment of adult and child patients. Various clinical procedures utilizing scaling and polishing techniques, oral inspection, cancer screening, dental and periodontal charting, principles of ultrasonic scaling, plaque control instruction and fluoride application will be taught.

DNTL 25 CLINIC I SEMINAR - 2 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 10, DNTL 11, DNTL 12, DNTL 13 and DNTL 14.
Class Hours: 36 lecture total
Provides learning opportunities related to clinical dental hygiene care through lecture, demonstrations and guest speakers.

DNTL 26 NUTRITION IN DENTISTRY - 1 Unit
Prerequisite: A grade of C or higher in each of the following courses: DNTL 10, DNTL 11, DNTL 12, DNTL 13, and DNTL 14
Class Hours: 18 lecture total
Provides the basic principles of nutrition and their relationship to dental health. To teach students to perform dietary surveys on clinic patients and to plan nutritional dietary programs.

DNTL 27 SUMMER CLINIC 27 - 1 Unit (P/NP Only)
Prerequisite: Completion of DNTL 11, DNTL 12, DNTL 14, DNTL 20, DNTL 23, DNTL 24
Class Hours: 54 lab total
This course will provide students with the opportunity to become more proficient in the clinical skills learned and practiced during previous clinical courses including instrumentation techniques, patient assessment, and administration of local anesthesia.

DNTL 30 PERIODONTOLOGY I - 3 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 20, DNTL 21, DNTL 23, DNTL 24, DNTL 25 and DNTL 26
Class Hours: 54 lecture total
A course in Periodontology teaches the scientific study of the structures and function of the periodontium in both health and disease, the etiology and principles of periodontal diseases, examination procedures, treatment and preventative measures.

DNTL 31 PHARMACOLOGY - 2 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 20, DNTL 21, DNTL 23, DNTL 24, DNTL 25 and DNTL 26
Class Hours: 36 lecture/18 lab total
Focuses on pharmacology as it affects the clinical practice of dentistry. Emphasizes drugs commonly used in dentistry, for treatment of common systemic and oral diseases, and for emergency treatment effects, administration, and toxicology. Builds on basic and dental sciences and prepares for clinical dental hygiene practice.

DNTL 32 DENTAL MATERIALS - 2 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 20, DNTL 21, DNTL 23, DNTL 24, DNTL 25 and DNTL 26
Class Hours: 36 lecture/18 lab total
Presents the history, composition, chemical and physical properties and use of materials commonly utilized in the dental laboratory and dental operator. Builds on dental sciences. Provides laboratory experience in performing common dental laboratory procedures and prepares for the clinical practice of extended functions. All skills are taught to competence.

DNTL 33 ADVANCED CLINICAL TOPICS - 2 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 20, DNTL 21, DNTL 23, DNTL 24, DNTL 25 and DNTL 26
Class Hours: 36 lecture total
This course is designed to present advanced topics and current technology used in the dental and dental hygiene field such as soft tissue curettage, root morphology and periodontal instrumentation, oral brush biopsy, non-surgical periodontal dressings, care for dental implants, oral maxillofacial surgery and orthodontics.

DNTL 34 CLINICAL PRACTICE II - 4 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 20, DNTL 21, DNTL 23, DNTL 24, DNTL 25 and DNTL 26
Class Hours: 216 lab total
Advanced skills of dental hygiene practice. Including assessment and treatment are practiced on patients in a clinical setting, with emphasis on planning and comprehensive treatment; all skills are taught to clinical competence. Expands on the procedures and techniques introduced in previous preclinical and clinical courses. Builds on basic and dental sciences and prepares for clinical dental hygiene practice.
DNTL 35  CLINICAL II SEMINAR - 1 Unit
Prerequisite: A grade of C or higher in each of the following courses: DNTL 20, DNTL 21, DNTL 23, DNTL 24, DNTL 25 and DNTL 26
Class Hours: 18 lecture total
Provides an expanded learning experience through discussion of dental hygiene care for the culturally diverse, tobacco cessation counseling, and seminar study of clinical cases. Builds on basic and dental sciences and prepares for clinical dental hygiene practice.

DNTL 40  PERIODONTOLOGY II - 1 Unit
Prerequisite: A grade of C or higher in each of the following courses: DNTL 30, DNTL 31, DNTL 32, DNTL 33, DNTL 34 and DNTL 35
Class Hours: 18 lecture total
A course to enhance assessment skill applicable in the treatment of patients with advanced periodontal disease. To teach the dental hygienist ethical and clinical responsibility in periodontal disorders and to teach the relationship of the specialty practice of periodontics within the broad scope of dentistry and the legal ramifications thereof.

DNTL 41  PRACTICE AND FINANCIAL MANAGEMENT - 1 Unit
Prerequisite: A grade of C or higher in each of the following courses: DNTL 30, DNTL 31, DNTL 32, DNTL 33, DNTL 34, and DNTL 35
Class Hours: 18 lecture total
Office practice management; ethical and legal aspects of dentistry and dental hygiene, and business matters relating to dental hygiene practice.

DNTL 42  CLINIC III SEMINAR - 2 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 30, DNTL 31, DNTL 32, DNTL 33, DNTL 34 and DNTL 35
Class Hours: 216 lab total
Provides an expanded clinical experience exposure through independent study or additional clinical experience.

DNTL 43  CLINICAL PRACTICE III - 4 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 30, DNTL 31, DNTL 32, DNTL 33, DNTL 34 and DNTL 35
Class Hours: 216 lab total
Provides students with the opportunity to become more proficient in the clinical skills learned and practiced in previous clinical courses and to prepare them for success on their state and national board examinations.

DNTL 44  COMMUNITY ORAL HEALTH - 3 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 30, DNTL 31, DNTL 32, DNTL 33, DNTL 34 and DNTL 35
Class Hours: 54 lecture total
Introduces students to the principles and practices of dental public health. The emphasis is placed on the role of the dental hygienist as an innovator of, and an educator in community health programs. Public health issues will be introduced and completely discussed.

DNTL 45  ETHICS AND JURISPRUDENCE - 2 Units
Prerequisite: A grade of C or higher in each of the following courses: DNTL 30, DNTL 31, DNTL 32, DNTL 33, DNTL 34 and DNTL 35
Class Hours: 36 lecture total
The study of the fundamental factors necessary to be employed and practice within the ethical and legal framework of the State Dental Practice Act and the Code of Ethics of the American Dental Association.

DNTL 54  SUMMER CLINIC 54 - 1 Unit (P/NP Only)
Prerequisite: A grade of C or higher in each of the following courses: DNTL 14, DNTL 20, DNTL 24, DNTL 30, DNTL 34, DNTL 43
Class Hours: 54 lab total
This course will provide students with the opportunity to become more proficient in the clinical skills learned and practiced during previous clinical courses and to prepare for success on their state clinical licensing examinations. This course is offered on a pass/no pass basis only.

DIES 30  HYDRAULIC TROUBLESHOOTING - 1 Unit
Prerequisite: A grade of C or higher in DIES 48
Class Hours: 9 lecture/27 lab total
This class is intended to demonstrate safe and effective troubleshooting procedures as required for industrial and mobile hydraulic equipment.

DIES 48  HYDRAULICS - 3.5 Units (P/NP Option)
Class Hours: 54 lecture/27 lab total
A study of the theory, application, and component parts of hydraulic systems. This course will emphasize fundamentals in dismantling, inspection, and troubleshooting hydraulic components and complete systems. Closed-loop application, inspection and trouble-shooting will be studied. This course is required for all Diesel Technology, Welding Technology and Equipment Operations and Maintenance majors.

DIES 49  ADV. HYDRAULICS (formerly AGRI 49) - 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in DIES 48
Class Hours: 36 lecture/72 lab total
This course will emphasize the application of cylinders and motor used to control fluid power systems. Hydraulic-pneumatic circuitry, maintenance, repair, and closed loop drive systems are recommended for Equipment Operations and Maintenance, production, agriculture, and diesel majors.

DIES 94  DIESEL TECHNOLOGY WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours; 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A minimum of 8 units may be earned in a single semester.

DIES 160  DIESEL ENGINE ELECTRONIC CONTROL – 4 Units
Class Hours: 54 lecture/54 lab total
This course will cover electronic diesel engine control systems as related to testing, calibrating and diagnostic procedures. The use of industry software generated computer programs will be utilized.

DIES 161  DIESEL TECHNOLOGY FIELD TRAINING – 2 Units
Prerequisite: A grade of C or higher in DIES 162
Corequisite: Students must be concurrently enrolled in four units of DIES 94
Limitation on Enrollment: Student must be at least 18 years of age, provide his/her own transportation, DMV readout, and must be prepared to take a physical including drug test at the repair facility’s request.
Class Hours: 36 lecture total (when offered in the Distance Education format, hours will total 108)
This course is designed to prepare the student for a career in the diesel technology field. Classroom instruction will include work-site expectations, interview techniques, and assessment of work performance. The student will be placed with local industry at various diesel repair facilities to expose them to actual industry standards. This course may be offered in a distance education format.

DIES 162  HEAVY DUTY POWER TRAIN - 4 Units
Class Hours: 54 lecture/54 lab total
This course covers shop practices in service, repair, adjustment and preventive maintenance of heavy duty drive trains.

DIES 164  DIESEL PERFORMANCE ANALYSIS - 4 Units
Class Hours: 54 lecture/54 lab total
Diesel fuel systems, composition of fuels, combustion chamber design, manifolds, fuel and air filters, fuel transfer pumps, fuel-injection pumps and injectors are taught in this class. Mechanical and electronic fuel controls will be analyzed. You will learn testing, calibrating and diagnostic procedures, using modern test equipment. Performance analysis of diesel engines as related to the California Air Resources Board Heavy Duty Vehicle Smoke and Tamper Inspection Program as mandated by Senate Bill 1997 of 1998 will be covered.

DIES 165  AIR BRAKE SYSTEMS AND TROUBLESHOOTING - 2 Units
Class Hours: 36 lecture total
This course will cover the operation and troubleshooting of air brakes pertaining to heavy duty equipment.

DIES 166  DIESEL ENGINES - 6 Units
Prerequisite: A grade of C or higher in DIES 164
Class Hours: 54 lecture/162 lab total
This course is an in-depth study of various diesel engines, theory of design, operation and application. This lab will provide training in the disassembly and inspection of diesel engines, practical assembly procedures and technical analysis of engine services.

DIES 170  HEAVY DUTY BRAKING SYSTEMS - 4 Units
Class Hours: 54 lecture/54 lab total
This course will cover the basic design and repair of foundation brakes and air systems pertaining to heavy duty vehicles.

DIES 197  SPECIAL TOPICS IN DIESEL TECH. - .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in the field of Diesel Technology. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Resource recommended for Diesel Technology majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of four enrollments.
DIETARY SERVICES SUPERVISOR (DSS)

DSS 10 FOOD PRODUCTION MANAGEMENT – 3 Units (P/NP Option)
Advisory: A grade of C or higher in CULA 50
Class Hours: 54 lecture (when offered in the Distance Education format, hours will total 162)
This course will cover effective management skills in food production, food purchasing policies and procedures, and the role of the Dietary Service Supervisor. Basic institutional cooking skills will be presented including using weights and measures, choosing ingredients and food preparation methods. Students will be involved in menu planning and costing, recipe standardization and recipe costing. Instruction on the selection, safety and usage of institutional equipment will be provided. This course may be offered in a distance education format.

DSS 63 DIETARY SERVICE SUPERVISOR OPERATIONS AND MANAGEMENT - 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course includes methods of supervision and leadership which are applicable to the food service industry. Methods and techniques of recruitment, selection, training and evaluation of personnel are covered. Record maintenance, enforcement of safety and sanitary standards; supervision of food service employees are stressed. This course may be offered in a distance education format.

DSS 94 DSS CERTIFICATE WORKSITE LEARNING – 1-8 Units
Prerequisite: A grade of C or higher in DSS 63 and CULA 50
Corequisite: Students must be concurrently enrolled in or have completed DSS 10 and FSS 27 with a grade of C or higher.
Limitation on Enrollment:
1. All students participating in DSS 94 must pass a drug screening and background check prior to enrollment in the course. Students are financially responsible for meeting these requirements according to the established program process.
2. Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
Students must complete 150 hours of verified, supervised field experience in a healthcare setting as required by the CA Department of Public Health (CADPH) for the DSS Certificate. Schedules will be determined by the CADPH. This course stresses good work habits and meeting of required competencies through actual on-the-job performance with a preceptor. Students must complete a minimum of 150 hours, but may complete up to a maximum of 18 units in this WSL course in order to meet the required competencies.

EARLY CHILDHOOD EDUCATION (ECE)

ECE 1 HUMAN DEVELOPMENT - 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course involves a study of development and behavior throughout the human life span. Classic and up-to-date research on the physical, cognitive, and psychosocial domains will be presented. Theories will be integrated with practical application concepts throughout the course, underscoring the importance of life-long learning and adaptation. This course may be offered in a distance education format.

ECE 2 CHILD, FAMILY, COMMUNITY - 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Child, Family, Community introduces the student to the interacting influences of family life and community experiences that affect the developing child. The course focuses on the primary social relationships and social settings within the context of dissimilar family patterns. The study encourages understanding and practical utilization of child and family systems and resources that promote quality outcomes for both preschool and school age children, families, schools, and communities. This course may be offered in a distance education format.

ECE 3 EARLY CHILDHOOD PROGRAM ADMINISTRATION – 3 Units
Prerequisite: A grade of C or higher in ECE 7
Note: This course meets the Title 22 requirements for Teacher/Director qualifications.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course identifies and assesses the principles and practices of managing early childhood programs. Course content will focus on overall administrative procedures of early childhood programs. Specific attention will be paid to personnel, administration, policy, and record keeping. This course may be offered in a distance education format.

ECE 6 EXPLORING FAMILY CHILD CARE (form. ECE 153) – 3 Units
Class Hours: 54 lecture total
This course provides an introduction to family childcare. Topics presented include an overview of regulations, family childcare management, application of child growth and development principles, importance of culturally diverse and age appropriate activities, and safe and healthful setting in a family childcare.

ECE 7 EARLY CHILDHOOD OBSERVATION & ASSESSMENT – 3 Units
Prerequisite: A grade of C or higher in ECE 1 or ECE 6
Note: Observation hours for this course will be obtained through the course lab hours at the Shasta College Early Childhood Education Center or a designated Early Childhood Mentor Site.
Class Hours: 36 lecture/54 lab total (The lab portion of this course may be offered in a distance education format to accommodate lab hours completed at a designated Early Childhood Mentor Site. Lecture hours will be regularly scheduled hours.)
This course provides the student with opportunities for further study of development and behavior of young children by developing skills in observation and assessment. Recording strategies, rating scales, portfolios and multiple assessment tools are explored.

ECE 8 TEACHING PRACTICUM FOR YOUNG CHILDREN (formerly ECE 8A) - 5 Units
Prerequisite: A grade of C or higher in ECE 7
Note: Supervised field site experience for the California Child Development Permit will be obtained through the course lab hours at the Shasta College Early Childhood Education Center or a designated Early Childhood Mentor Site.
Class Hours: 54 lecture/108 lab total (The lab portion of this course may be offered in a distance education format to accommodate lab hours completed at a designated Early Childhood Mentor Site. Lecture hours will be regularly scheduled hours.)
This course focuses on identifying, developing, and refining skills and behaviors essential for effective teaching of young children. The course is intended for students who are concurrently working or volunteering in center-based programs for young children (infant, toddler, preschool or after school care) where under guided supervision they have the opportunity to work directly with the children to test the methods and refine the teaching skills explored in the course.

ECE 9 CHILD GROWTH AND DEVELOPMENT – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course provides an in-depth examination of the major physical, psychosocial, and cognitive/ language developmental milestones for children, both typical and atypical, from conception through adolescence. There will be an emphasis on interactions between maturational processes and environmental factors. While studying developmental theory and investigative research methodologies, students will observe children, evaluate individual differences and analyze characteristics of development at various stages. This course may be offered in a distance education format.

ECE 10 EARLY CHILDHOOD LEARNING – 3 Units
Class Hours: 54 lecture total
This course focuses on the developmental learning process of children ages birth through eight. Attention will be given to the application of current studies providing insight into the maturational stages as they relate to the acquisition of knowledge. Topics will include: individuality, readiness, transitions, competence, and developmentally appropriate strategies during the preschool and primary school years.

ECE 12 INFANT TODDLER LEARNING – 3 Units
Class Hours: 54 lecture total
This course focuses on developmental research and current practices in care and learning during infancy and toddlerhood. Emphasis will be on understanding developmental stages, planning optimal environments and clarifying the care giving role of teachers and child care workers for children during the first two years of life.

ECE 14 SCHOOL AGE AND ADOLESCENT DEVELOPMENT – 3 Units
Class Hours: 54 lecture total
This course focuses on growth, development and behavior of school age children and adolescents. Current research and theoretical concepts will be discussed and analyzed for practical implications and applications to assist those living with and/or working with school age children and adolescents.

ECE 15 CHILD HEALTH, SAFETY AND NUTRITION – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course provides an opportunity for early childhood educators and caregivers to focus on health, safety and nutrition in children’s programs. Fundamentals of a safe and healthful environment, including knowledge of state and local laws and regulations will be introduced. Key factors that ensure physical health, mental health and safety for both children and staff, and effective strategies for working collaboratively with families will be identified. Community health, safety and nutrition resources and their application to the children's curriculum will be highlighted. This course may be offered in a distance education format.
ECE 16  **FUNDAMENTALS OF EARLY CHILDHOOD MENTORING AND SUPERVISION** – 2 Units
Prerequisite: A grade of C or higher in ECE 7
Advisory: A grade of C or higher in ECE 3
Class Hours: 36 lecture total
Designed to satisfy the Child Development Permit Master Teacher level and above requirement. Course content focuses on the methods and principles of supervising the adult learner in the early childhood program. Emphasis is on the role of the classroom teacher who functions as a mentor to new teachers and other adult participants while simultaneously meeting objectives for children, parents, and staff. Expanded modeling, guidance, and evaluation approaches will be examined.

ECE 17  **PRINCIPLES AND PRACTICES OF TEACHING YOUNG CHILDREN** – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course presents an overview of knowledge and skills related to providing developmentally appropriate curriculum and environments for young children from birth to age 8. Students will examine the roles of the teacher in supporting development and fostering the joy of learning for all young children using observation and assessment strategies. An overview of content areas will include but not be limited to: language and literacy, social and emotional learning, sensory learning, art and creativity, math and science. Students will acquire an understanding of the philosophies and strategies for developing and documenting integrated curricula for early childhood programs including ways to organize and implement daily, monthly, and long-range activity planning. This course may be offered in a distance education format.

ECE 20  **INTRODUCTION TO CURRICULUM** – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course focuses on learning to work with children birth to eight years of age. The role of the teacher in supporting development and enhancing the child's day will be examined with special attention given to staff interrelationships as well as communication skills with parents and other adults. This course may be offered in a distance education format.

ECE 24  **E.C. CURRICULUM: SCHOOL AGE CHILDREN** – 3 Units
Class Hours: 54 lecture total
This course will examine the planning and presentation of curriculum experiences for school age children in an extended care setting. Opportunities to develop skills in enhancing the school age child’s day with developmental experiences and positive social interaction will be provided. Focus will be placed on individualized and group activities to encourage the development of self-esteem, motivation for learning, and problem-solving abilities. Special attention will be given to both indoor and outdoor environments and curriculum. This course may be offered in a distance education format.

ECE 26  **THE CHILD WITH SPECIAL NEEDS** – 3 Units
Prerequisite: A grade of C or higher in ECE 1 for ECE 9
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course will focus on early childhood education and children with special needs. Developmental, educational, and family issues related to children and youth with disabilities and giftedness will be presented. The course also provides an overview of special education as a professional discipline, including its history, laws, challenges, current trends, and issues. This course will explore different types of special needs identified in children, including children who are gifted, developmentally delayed, learning disabled, as well as children with: emotional and behavioral disorders, communication disorders, sensory disorders, neurological disorders, and health impairments. This course may be offered in a distance education format.

ECE 27  **TEACHING CHILDREN WITH SPECIAL NEEDS & EARLY INTERVENTION STRATEGIES** – 3 Units
Prerequisite: A grade of C or higher in ECE 26
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course focuses on learning to work with children birth to eight years of age with disabilities and other special needs and their families in inclusive early childhood educational settings. It will include an exploration of the following: characteristics of young children with disabilities and other special needs; impact on the family; types of educational and other programs/services that are available; modification of the educational environment; approaches to assessment and curriculum; integration and future trends. Upon completion, students should be able to recognize appropriate development, make appropriate referrals, and work collaboratively to plan, implement, and evaluate inclusion and intervention strategies. This course may be offered in a distance education format.

ECE 28  **TEACHING IN A DIVERSE SOCIETY** – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Examination of the development of social identities in diverse societies including theoretical and practical applications of oppression and privilege as they apply to young children, families, programs, classrooms, and teaching. Various early education classroom strategies will be explored emphasizing culturally and linguistically appropriate anti-bias approaches supporting all children in becoming competent members of a diverse society. Special includes self-examination and reflection on issues related to social identity, stereotypes and bias, social and educational access, media, and schooling. This course may be offered in a distance education format.

ECE 30  **E.C. CURRICULUM: PHYSICAL DEVELOPMENT** – 3 Units
Prerequisite: A grade of C or higher in ECE 20
Class Hours: 54 lecture total
Students will explore the essential factors that affect and facilitate physical growth and development of young children. The course will first explore the developmental aspects of planning appropriate experiences with application of children’s assessed needs and interests. An integrated curriculum will be created with focus on three curriculum content areas: health and nutrition; music and rhythm; and perceptual and motor development. Curriculum planning for physical development will include documentation of integrated experiences, focusing on appropriate early childhood care and learning and literacy practices that strengthen children’s physical abilities.

ECE 40  **E.C. CURRICULUM: AFFECTIVE DEVELOPMENT** – 3 Units
Prerequisite: A grade of C or higher in ECE 20
Class Hours: 54 lecture total
This course is designed to offer students strategies for supporting affective development with specific guidance directed to young children’s social, emotional, and creative needs. This study acquaints students with techniques for planning and implementing activities that help young learners achieve academic and social awareness. An integrated curriculum for early childhood will emphasize on art, music, and drama. Students will learn to plan activities for young children with focus on language and literacy practices as well as inclusion and cultural strengths.

ECE 50  **E.C. CURRICULUM: COGNITIVE DEVELOPMENT** – 3 Units
Prerequisite: A grade of C or higher in ECE 20
Class Hours: 54 lecture total
This course presents methods and rationale for enhancing young children’s thinking and language abilities. Students will acquire skills to coordinate experiences that integrate activities from curriculum areas including communication and literacy, mathematics, and science. The coursework will require students to organize and implement appropriately planned activities that meet young children’s needs and instructional accountability. Students will acquire strategies with focus on intentional learning for integrating literacy practices that strengthen young children’s cognitive skills.

ECE 51  **EARLY CHILDHOOD STAFFING AND MANAGEMENT** – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course offers an expanded study of operational resources to manage an early care and learning program for young children. The managerial process in an early childhood education setting will be reviewed with special attention given to staff interrelationships as well as communication skills with parents and volunteers. The selection process for staffing a program for young children will be explored with study of performance evaluation, retention and professional development. This course may be offered in a distance education format.

ECE 52  **GUIDANCE IN ADULT-CHILD RELATIONS** - 3 Units
Class Hours: 54 lecture total
This course explores principles and strategies of positive guidance that are both effective and flexible for adults interacting with young and school age children. Course content will include social, emotional, and personality development, and needs of children will be examined. This course would be of interest to parents, educators, caregivers, and any adult involved with or interested in children.

ECE 94  **EARLY CHILDHOOD ED. WORKSITE LEARNING** – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member
supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

**ECE 140 ESSENTIALS OF 40 DEVELOPMENTAL ASSETS – 1 Unit**
Class Hours: 18 lecture total (when offered in the Distance Education format, hours will total 54)

This course offers an expanded study of the key elements necessary for children/youth to develop positive and healthy behaviors and habits. The research behind 40 Developmental Assets will be explored and action-based methods of using the research will be viewed. Strength-based approaches to building assets in children/youth will be analyzed. This course may be offered in a distance education format.

**ECE 147 MENTAL HEALTH AWARENESS IN ECE PROGRAMS – 1 Unit**
Class Hours: 18 lecture total (when offered in the Distance Education format, hours will total 54)

This course introduces the student to mental health issues in young children, their families, and their caregivers. It includes an overview of early childhood mental health from prenatal development to eight years of age, and the effects of environment and biology on mental health. Students will become aware of potential mental health concerns in early childhood, and how we can help children, parents, and caregivers in our programs. This course may be offered in a distance education format.

**ECE 152 THE YOUNG CHILD: MOVEMENT, RHYTHM, AND SINGING (formerly ECE 152A) – 1 Unit**
Class Hours: 18 lecture total

A course exploring advanced techniques in the planning and presentation of curriculum appropriate for young children in the areas of movement, rhythm, and singing.

**ECE 155 THE YOUNG CHILD: INTRODUCTION TO THE MONTESSORI METHOD (formerly ECE 155F) – 1 Unit**
Class Hours: 18 lecture total

This course will introduce the student to the teaching and theory of Dr. Maria Montessori. This method of preparing a preschool environment, which promotes independence in the young child, will be presented through lectures and demonstrations.

**ECE 197 SPECIAL TOPICS IN EARLY CHILDHOOD EDUC. – 5-2 Units (P/NP Option)**
Class Hours: 9-36 lecture total

This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in early childhood education. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

**EARTH SCIENCE (ESCI)**
(formerly Geology and Physical Science)

**ESCI 1 PHYSICAL GEOLOGY (formerly GEOL 1, 1A) – 4 Units**
Note: Required field trips.
Class Hours: 54 lecture/54 lab total

An introduction to the physical processes that drive Earth as a dynamic planet. Both internal and external processes are considered as well as their interrelationships. Discussion in the course will include Earth’s internal structure, plate tectonics, minerals and rocks and their origins, surface processes, geologic structures such as faulting and folding, metamorphism, sedimentation, soil formation, geologic time including radiometric methods, geologic hazards such as earthquakes, volcanism, mass wasting, flooding, and the vital nature of Earth materials to society. Laboratory activities will focus on the application of classroom concepts and will include mineral and rock identification, geologic structures, topographic and geologic map use, use of remote imagery, recognition of landforms, geologic time, seismology, and volcanism. Lecture and laboratory will consider geologically produced and influenced natural resources, their exploitation, and concepts centered about sustainable uses.

**ESCI 2 HISTORICAL GEOLOGY (formerly GEOL 2, 1B) – 4 Units**
Advisory: A grade of C or higher in ESCI 1, or ESCI 5, or ESCI 6, or ESCI 7, or ESCI 10, or ESCI 12, or ESCI 15, or ESCI 17.
Note: Required day and overnight field trips.
Class Hours: 54 lecture/54 lab total

The study of Earth history as revealed in the rock record and the placement of varied geologic events through time. Discussion in this course will include the genesis of minerals and three rock types, principles of stratigraphy, geologic structures, organic evolution, relative and absolute geologic time, paleogeography, and mountain building episodes of North America with emphasis on the west coast. Plate tectonics and crustal evolution will provide a framework for the preceding. Laboratory exercises will include the description and classification of minerals and rocks; recognition of ancient metamorphic, igneous and sedimentary environments; recognition, occurrence, and geologic use of fossil organisms; application of stratigraphic principles; recognition of geologic structures; and the development and use of different types of geologic maps and cross sections.

**ESCI 3 MINERALOGY AND CRYSTAL OPTICS (formerly GEOL 3) – 5 Units**
Prerequisite: A grade of C or higher in ESCI 1
Corequisite: Students must be concurrently enrolled in, or have previously completed CHEM 1A with a grade of C or higher
Class Hours: 54 lecture/108 lab total

An exploration into the chemistry, classification, optics and crystalline structure of minerals. Topics covered in the course will include the chemistry, bonding, and crystalline structure of minerals, recognition of crystal types, physical properties of minerals, mineral classification as well as their origins, occurrence, and use, and an introduction to the theory of optical identification of minerals. Laboratory activities will include crystallography, physical properties testing, mineral classification, and optical techniques to identify mineral crystals with an introduction to uniaxial and biaxial minerals.

**ESCI 4 ROCK ORIGINS AND RELATIONSHIPS (formerly GEOL 4) – 4 Units**
Prerequisite: A grade of C or higher in ESCI 2 and a grade of C or higher in ESCI 3
Note: Required day field trips.
Class Hours: 54 lecture/54 lab total

A survey of igneous, sedimentary, and metamorphic rocks presented in the context of recognizing processes responsible for rock origins. Rock classification based both on mega- and microscopic textures and mineralogy is fundamental to interpretation and provides the main discussion of topics for the course and laboratory. Specialized topics include mafic igneous rocks, origin and emplacement, sedimentary rock provenance and depositional environments, and metamorphic rocks as pressure and temperature indicators. Rock assemblages will be considered with the purpose of interpreting their origins at larger scales. Field trips to various localities will observe rock assemblages that demonstrate different origins.

**ESCI 5 INTRODUCTION TO GEOLOGY (formerly GEOL 5) – 4 Units**
Note: Required field trip. The lecture portion of this course may be offered as distance education.
Class Hours: 54 lecture/54 lab total (when offered in the Distance Education format, hours will total 162 for the lecture portion of the class and an additional 54 hours of lab totaling 216 hours for this course)

A survey course for non-science majors designed to introduce the discipline of geology and its vital influence on society. Among the topics to be discussed are geologic hazards such as volcanoes and earthquakes, Earth materials and economic resources, processes which shape Earth’s surface, internal processes and their manifestations, environmental geology, geologic time, reconstruction of Earth history, and the fossil record. Laboratory activities include mineral and rock identification, map use, evaluation of geologic hazards associated with different geologic threats, the impacts of environmental geology and natural resources consumption on society, and economic geology and exploration for ores and petroleum deposits. Lecture and laboratory will consider concepts centered about the sustainable use of natural resources. The lecture portion of this course may be offered in a distance learning format.

**ESCI 6 ANCIENT LIFE (formerly GEOL 6) – 4 Units**
Note: Required day field trips.
Class Hours: 54 lecture/54 lab total (When offered in a distance Education format, hours will total 162 for the lecture portion of the class and an additional 54 hours of lab totaling 216 hours for this course)

A survey of past life is presented through geologic and biologic investigation. This course is interdisciplinary in nature and provides geologic background and evidence for the origination and evolution of life. Associated methodologies and concepts presented include geologic time and its measure, chemical and organic evolution, controls on evolution, cladistic analysis, ancient ecological reconstruction, mass extinction and adaptive radiation, fossilization, and ancient geographic distributions of flora and fauna. Anatomical innovations that define major classes of organisms are traced through ancestor-descendant relationships. Laboratory exercises include processes of fossilization, fossil recognition, cladistic analysis, genetics, stratigraphy, reconstruction of ancient biologic communities, ancient geographic reconstruction through fossil information, functional morphology, mass extinction and adaptive radiation in the fossil record. This course may be offered in a distance education format. The lecture portion of this course may be offered in a distance education format.

**ESCI 7 INTRODUCTION TO THE GEOLOGY OF CALIFORNIA (formerly GEOL 7, 25) – 4 Units**
Note: Required field trips (day trips and overnight trips)
Class Hours: 54 lecture/54 lab total

As the newest material added to North America, California geology records ancient and continued mountain building which has shaped the state into landforms and geologic features. Each geographic province in California records unique rock packages indicative of ancient and modern processes. Discussions in the course will include geologic hazards such as earthquakes, volcanism, and mass wasting, plate tectonics, economic resources, state and national parks, ground and surface water, soils, glaciation, coastal processes,
ESCI 8 PLANETARY GEOLOGY: DEVELOPMENT, HISTORY AND PLANETARY PROCESSES (formerly GEOL 8, 22) – 3 Units

Note: Required field trips and/or evening observations when possible

Class Hours: 54 lecture total

An introduction to the physical processes that shape planetary surfaces and guide their development through time. The course will explore the origins of the solar system and use Earth as a planetary “model” to perform systematic and comparative investigations of the planets and other bodies in the solar system. Recent information gathered by Earth-based and orbiting observation platforms and un-manned planetary probes will be used to investigate planetary processes, develop planetary histories and differentiate the varied pathways and processes that have influenced each planet’s evolution. The course will also consider the Sun and its influence on the planets and other bodies in the solar system, as well as asteroids, comets, meteors and impacts on planetary surfaces.

ESCI 9 EARTHQUAKES, VOLCANAES, AND OTHER GEOLGIC HAZARDS (formerly GEOL 9, 20) – 3 Units

Note: Required field trips

Class Hours: 54 lecture total (When offered in a distance Education format, hours will total 162. A scheduled field trip will still be required for the online course.)

This introductory course considers geologic hazards and their impact on society in part through the utilization of case histories, many of which are from California. The course will focus on earthquakes and volcanism specifically considering the dynamic of these processes, rocks and geologic phenomena. Geologic hazards and their control factors and influences, and flooding. A portion of the course will also describe geologic hazards that are human influenced or caused, such as soil erosion, acid rain, toxic waste, water contamination and ground subsidence. Engineering mitigation, hazard preparedness and remediation strategies complete the course. This course may be offered in a distance education format.

ESCI 10 ENVIRONMENTAL GEOLOGY (formerly GEOL 10/40) – 4 Units

Note: Required field trips.

Class Hours: 54 lecture/54 lab total

Geologically related impacts on the environment, both natural and human-influenced, provide the subject content for this course. Emphasis is placed on human environment interactions and apply those concepts to exploration, evaluation, and recovery. Industrial and precious metals as well as fossil fuels (oil, gas, and coal) will provide the main focus of the course. Exploration techniques in geophysics, remote imagery, and computer-aided analysis will also be considered. Laboratory exercises will evaluate material for its economic potential using the identification of mineral and rock associates, geologic maps and remote images, and geophysical techniques and data collection. Additionally, the volume, value, and recovery costs of an ore deposit will be reviewed.

ESCI 11 ECONOMIC GEOLOGY (formerly GEOL 11) – 3 Units

Prerequisite: A grade of C or higher in ESCI 1 and a grade of C or higher in ESCI 9

Note: Required field trips.

Class Hours: 36 lecture/54 lab total

An introduction to economic deposits, their origins and associations, and recovery. This course will review the basic geological concepts in the context of economic deposits and then apply those concepts to exploration, evaluation, and recovery. Industrial and precious metals as well as fossil fuels (oil, gas, and coal) will provide the main focus of the course. Exploration techniques in geophysics, remote imagery, and computer-aided analysis will also be considered. Laboratory exercises will evaluate material for its economic potential using the identification of mineral and rock associates, geologic maps and remote images, and geophysical techniques and data collection. Additionally, the volume, value, and recovery costs of an ore deposit will be reviewed.

ESCI 12 GENERAL EARTH SCIENCE (formerly PHSC 2/PHSC 2 and PHSC 3) – 4 Units

Note: Required field trips. The lecture portion of this course may be offered as distance education.

Class Hours: 54 lecture/54 lab total (when offered in the Distance Education format, hours will total 162 for the lecture portion of the class and an additional 54 hours of lab totaling 216 hours for this course.)

A survey course designed for non-science majors which spans the Earth-related sciences, including geology, oceanography, meteorology, and astronomy. In general, the course focuses on physical processes and materials as related to each discipline. Topics include the geologic evolution of the Earth, economic resources derived from Earth, Earth materials, evolution and character of the ocean, ocean-atmosphere interactions, atmospheric processes including weather and climate, the solar system and Earth as part of the universe. Using an Earth systems approach, lecture and laboratory will consider concepts centered on the interrelated use of natural resources. The laboratory portion of this course provides hands-on activities that support and demonstrate lecture concepts. The lecture portion of this course may be offered in a distance learning format.

ESCI 14 METEOROLOGY (formerly PHSC 4) – 4 Units

Class Hours: 54 lecture/54 lab total

Dynamic aspects of the atmosphere responsible for climate and weather represent the main focus of this course. Topics include atmospheric composition, solar radiation, global heat transfer, atmospheric moisture, and atmospheric circulation, air masses, weather patterns and forecasting, storms including hurricanes and tornadoes, air pollution and ozone, and global climate changes. Applicable fundamental science concepts such as state changes, heat transfer mechanisms, and the physical and chemical aspects of the media involved in weather are also introduced. Laboratory exercises will include analyses of incoming solar radiation, heat transfer in the atmosphere, humidity measurements, atmospheric motion, weather maps, storm characteristics, and climate controls and climate change. Lecture and laboratory will consider influences on the atmosphere that disrupt sustainable, stable climate conditions.

ESCI 15 OCEANOGRAPHY (formerly PHSC 5) – 4 Units

Note: Required overnight field trip.

Class Hours: 54 lecture/54 lab total (when offered in the Distance Education format, hours will total 162 for the lecture portion of the class and an additional 54 hours of lab totaling 216 hours for this course.)

Global ocean dynamics are part of an intricate system that influences world climate and both terrestrial and oceanic life. Basic principles and concepts are presented including ocean origins, ocean basin formation, seawater composition and characteristics, oceanic circulation, and the marine habitat providing a habitat for the study of oceans. Coastal processes such as waves and tides, erosion and deposition, and landforms are also considered. Laboratory activities will survey marine geology including plate tectonic and ocean topography, chemical oceanography, physical oceanography such as circulation, wave formation, and oceanic processes, marine ecosystems and nutrient flow. Lecture and laboratory will consider marine produced and influenced natural resources, their exploitation, and concepts centered about sustainable uses. The lecture portion of this course may be offered in a distance education format.

ESCI 16 COASTAL OCEANOGRAPHIC FIELD STUDIES (formerly PHSC 6) – 2 Units

Note: Required overnight field trip.

Class Hours: 27 lecture/27 lab total

An introduction to the coastal oceanography of northern California and coastal habitat evaluation. The course will include a three-day field trip along the northern California coast. In general, the course will focus on oceanographic systems, their interactions with coastal processes, and human influences on coastal natural resources, their exploitation, and concepts centered about sustainable uses, especially as applied to field activities.

ESCI 17 EARTH SYSTEM SCIENCE (formerly PHSC 7) – 3 Units

Note: Required day field trips

Class Hours: 54 lecture total

Earth is a dynamic planet, changing in response to natural processes within the atmosphere, biosphere, hydrosphere, and geosphere. Modern science is now viewing the Earth system in its entirety, the sum of its parts, in an effort to understand how processes in one sphere impact those in another. This course stresses the inter-relationships of these systems and reviews natural cycles and positive and negative feedback pathways that operate over various time scales to affect global environmental change. The impact of civilization on the Earth system is also analyzed as the course considers pollution, over population, global warming, deforestation, desertification, resource depletion, and biologic extinctions along with solutions developed within sustainable concepts and practices.

ESCI 18 GLOBAL CLIMATE CHANGE: PAST, PRESENT AND FUTURE – 3 Units

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)

Atmospheric processes, on a global and local scale, are considered as they determine weather and climate through time. Natural influences on the atmosphere include the global ocean, the sun, and volcanisms on planet Earth, each directing atmospheric responses in a different manner. Past climate conditions on Earth, and the science used to determine those conditions through rock sediment and ice core will be explored. Human influences on the atmosphere will be considered as well as a review of the observations that have lead to scientific consensus on global climate change. Current trends in climate change will be extrapolated into the future as directed by climate modeling and their consequences considered. This course may be offered in a distance education format.
ESCI 23  INTRODUCTION TO GEOLOGY IN THE FIELD (formerly GEOL 13, 13AB) – 2 Units (P/NP Option)
Prerequisite:  A grade of C or higher in ESCI 1, or ESCI 5, or ESCI 6, or ESCI 7, or ESCI 10, or ESCI 12 and a grade of C or higher in ESCI 2
Note: Includes required day field trips.
Class Hours:  27 lecture/27 lab total
An introduction to methods used to collect and interpret geologic data. Lecture sessions will provide theory and background for field excursions as well as compilation periods to devise interpretations, assemble geologic summary reports, graphics, and maps. Emphasis will be placed on field equipment and its use, outcrop examination and interpretation, rock and mineral identification, utilization of topographic maps, utilization and construction of geologic maps and cross sections, construction of stratigraphic columns, utilization of aerial and satellite imagery, recognition and interpretation of geologic structures, and recognition and interpretation of primary and secondary features in outcrops and different rock types. Two or more field sites will provide the focus of the course.

ESCI 26 GEOLGY OF THE NORTH COAST RANGES (formerly GEOL 26, 26AB) – 2 Units (P/NP Option)
Prerequisite:  A grade of C or higher in ESCI 1, or ESCI 5, or ESCI 6, or ESCI 7, or ESCI 10, or ESCI 12
Note: Includes two required overnight field trips.
Class Hours:  27 lecture/27 lab total
The North Coast Ranges geomorphic province represents a zone of active mountain building and the most recently added material to the North American continent.  The province will be explored through lecture topics and field excursions that will relate active tectonics, accretion, and mountain building to the rocks now exposed in the North Coast Ranges.  Coastal exposures will demonstrate the tectonics processes that are actively shaping this province and have done so for over 100 million years.  Structural, lithologic, economic, and geomorphologic aspects of the province, as well as geologic hazards are also investigated.

ESCI 27 GEOLGY OF THE KLAMATH MOUNTAINS (formerly GEOL 27, 27A) – 2 Units (P/NP Option)
Prerequisite:  A grade of C or higher in ESCI 1, or ESCI 5, or ESCI 6, or ESCI 7, or ESCI 10, or ESCI 12
Note: Two overnight field trips are required.
Class Hours:  27 lecture/27 lab total
The diverse and complex geologic history of the Klamath Mountains geomorphic province will be explored through lecture topics and field excursions. Plate tectonics and mechanisms of continental growth will provide the context needed to frame the assembly of varied tectonostratigraphic terrains which represent this province. Structural, magmatic, lithologic, economic, and geomorphologic aspects of the province, as well as geologic hazards are also investigated.

ESCI 32 GEOLGY OF THE NORTHERN SIERRAS (formerly GEOL 32) – 1.5 Units (P/NP Option)
Note: Required overnight field trip.
Class Hours:  18 lecture/27 lab total (when offered in a Distance Education format, hours will total 54 for the lecture portion of the class and an additional 27 hours of lab totaling 81 hours for this course.)
An introduction to the geologic processes that have shaped the northern Sierras into a geologically diverse setting. The course will culminate with a three-day field trip through the northern Sierras. Lecture meetings will present basic concepts in geology as well as topics specific to the northern Sierras such as continental growth, uplift, mountain building and landscape development. Glaciation and related geomorphology, and “mother-lode” economic geology. Field trip exercises will also be conducted at various stops. The lecture portion of this course may be offered in a distance education format.

ESCI 33 GEOLGY OF THE SACRAMENTO VALLEY (formerly GEOL 33, 37B) – 1.5 Units (P/NP Option)
Note: Required overnight field trip.
Class Hours:  18 lecture/27 lab total (when offered in a Distance Education format, hours will total 54 for the lecture portion of the class and an additional 27 hours of lab totaling 81 hours for this course.)
An introduction to the geologic history of the Sacramento Valley that will culminate with a two-and-a-half day overnight field trip through this geologic province. Lecture meetings will present basic concepts in geology needed to understand the geologic history of the Sacramento Valley as well as outcrops visited during the field trip. Topics to be discussed include geologic hazards, economic resources, volcanism, faulting, river processes, and the Pleistocene geology of the valley. Field trip exercises will also be conducted at various stops. The lecture portion of this course may be offered in a distance education format.

ESCI 34 GEOLGY OF THE MODOC PLATEAU (formerly GEOL 34, 61AB) – 1.5 Units (P/NP Option)
Note: Required overnight field trip.
Class Hours:  16 lecture/27 lab total (when offered in a Distance Education format, hours will total 27 for the lecture portion of the class and an additional 27 hours of lab totaling 81 hours for this course.)
An introduction to the geology of the Modoc Plateau which will culminate with a two-and-a-half day overnight field trip through this geomorphic province. Lecture meetings will present basic concepts in geology needed to understand the geologic history of the Modoc Plateau as well as outcrops visited during the field trip. Topics to be discussed include volcanic processes and features, geologic hazards, geothermal potential, economic resources, faulting, plateau development, basin and range development, and surface and subsurface water. Field trip exercises will also be conducted at various stops. The lecture portion of this course may be offered in a distance education format.

ESCI 35 GEOLGY OF LASSEN VOLCANIC PARK (formerly GEOL 35, 62AB) – 1.5 Units (P/NP Option)
Note: Required overnight field trip.
Class Hours:  18 lecture/27 lab total (when offered in a Distance Education format, hours will total 54 for the lecture portion of the class and an additional 27 hours of lab totaling 81 hours for this course.)
An introduction to the geology of Lassen Volcanic Park that will culminate with a two-and-a-half day overnight field trip within and around the park. Lecture meetings will present basic concepts in geology needed to understand the geologic history of the park as well as outcrops visited during the field trip. Topics to be discussed include volcanic processes and features, geologic hazards and geothermal phenomena, geothermal potential, glaciation and faulting. Field trip exercises will also be conducted at various stops. The lecture portion of this course may be offered in a distance education format.

ESCI 36 GEOLGY OF MOUNT SHASTA AND VICINITY (formerly GEOL 36, 64AB) – 1.5 Units (P/NP Option)
Note: Required overnight field trip.
Class Hours:  18 lecture/27 lab total (when offered in a Distance Education format, hours will total 54 for the lecture portion of the class and an additional 27 hours of lab totaling 81 hours for this course.)
An introduction to the geologic processes which have shaped and continue to shape northern California’s coastline. The course will culminate with a three-day field trip through the coast. Lecture meetings will present basic concepts in geology as well as topics specific to northern California’s coastline such as geologic hazards including earthquakes, tsunamis, mass wasting events, and shore erosion, tidal processes, erosion and depositional processes, active mountain building, and geomorphology. Field trip exercises will also be conducted at various stops. The lecture portion of this course may be offered in a distance education format.

ESCI 37 GEOLGY OF THE NORTHERN CALIFORNIA COAST (formerly GEOL 37) – 1.5 Units (P/NP Option)
Note: Required overnight field trip.
Class Hours:  18 lecture/27 lab total (when offered in a Distance Education format, hours will total 54 for the lecture portion of the class and an additional 27 hours of lab totaling 81 hours for this course.)
An introduction to the geologic processes which have shaped and continue to shape northern California’s coastline. The course will culminate with a three-day field trip through the coast. Lecture meetings will present basic concepts in geology as well as topics specific to Point Reyes such as the San Andreas Fault system, geologic hazards including earthquakes, tsunamis, and mass wasting events, tidal and estuarine processes, and the area geology. Field trip exercises will also be conducted at various stops. The lecture portion of this course may be offered in a distance education format.

ESCI 38 GEOLGY OF POINT REYES NATIONAL SEASHORE (formerly GEOL 38) – 1.5 Units (P/NP Option)
Note: Required overnight field trip.
Class Hours:  18 lecture/27 lab total (when offered in a Distance Education format, hours will total 54 for the lecture portion of the class and an additional 27 hours of lab totaling 81 hours for this course.)
An introduction to the geologic processes which have shaped and continue to shape the Point Reyes National Seashore. The course will culminate with a three-day field trip through the national seashore. Lecture meetings will present basic concepts in geology as well as topics specific to Point Reyes such as the San Andreas Fault system, geologic hazards including earthquakes, tsunamis, and mass wasting events, tidal and estuarine processes, and the area geology. Field trip exercises will also be conducted at various stops. The lecture portion of this course may be offered in a distance education format.

ESCI 42 GEOLGY OF THE REDDING AREA (formerly GEOL 42, 100) – 1 Unit (P/NP Option)
Note: Two required day field trips.
Class Hours:  9 lecture/27 lab total (when offered in a Distance Education format, hours will total 27 for the lecture portion of the class and an additional 27 hours of lab totaling 54 hours for this course.)
This introductory, short-term field class that will introduce the student to geologic features in the Redding area. Included in the lecture meetings is a basic introduction to geology and the concepts necessary to appreciate the geologic history recorded in the rocks near town. Mining aspects will also be introduced. Field trip activities will explore rock relationships and visit points of interest and significance around the Redding area over two 8-hour outings. The lecture portion of this course may be offered in a distance education format.
ESCI 43 GEOLGY OF THE SHASTA LAKE AREA (formerly GEOL 43, 102) – 1 Unit (P/NP Option)
Note: Two required day field trips
Class Hours: 9 lecture/27 lab total (when offered in a Distance Education format, hours will total 27 for the lecture portion of the class and an additional 27 hours of lab totaling 54 hours for this course.)
This course is an introductory, short-term field class that will introduce the student to geologic features in the Shasta Lake area including those that are associated with Shasta Dam and the Sacramento River. Included in the lecture meetings is a basic introduction to geology and discussions related to developments on the Sacramanto River including engineering and ecosystem considerations. The geologic history of record in the area will be demonstrated though rock features such as fossil content. Field trips activities will explore rock relationships, river, lake and relationships and other points of significance during two 8-hour outings. The lecture portion of this course may be offered in a distance education format.

ESCI 44 GEOLGY OF THE WHISKEYTOWN AREA (formerly GEOL 44) – 1 Unit (P/NP Option)
Note: Two required day field trips
Class Hours: 9 lecture/27 lab total (when offered in a Distance Education format, hours will total 27 for the lecture portion of the class and an additional 27 hours of lab totaling 54 hours for this course.)
The geologic history recorded in the Whiskeytown National Recreation area will be discussed with an introduction to relevant geologic concepts, accompanied by on-site explorations to demonstrate those concepts. Accretion, shear zone dynamics, magma chamber evolution and emplacement and the economic geology of the area are among the topics to be explored. The field trip will emphasize field with application as we visit points of interest and significance during two 8-hour outings. The lecture portion of this course may be offered in a distance education format.

ESCI 45 GEOLGY OF CASTLE CRAGS AND VICINITY (formerly GEOL 45) – 1 Unit (P/NP Option)
Note: Two required day field trips.
Class Hours: 9 lecture/27 lab total (when offered in a Distance Education format, hours will total 27 for the lecture portion of the class and an additional 27 hours of lab totaling 54 hours for this course.)
Castle Crags and the upper Sacramento River will provide the backdrop for an introduction to the geologic history and processes which have shaped this area. Lecture meetings will present relevant geologic concepts while on-site explorations will demonstrate those concepts. Topics will include glaciation, river dynamics, sea floor accretion, magma chamber evolution and emplacement and ancient environments. The field trip will emphasize theory with field application as we visit points of interest and significance during two 8-hour outings. The lecture portion of this course may be offered in a distance education format.

ESCI 46 GEOLGY OF BURNEY FALLS AND VICINITY (formerly GEOL 46) – 1 Unit (P/NP Option)
Note: Two required day field trips.
Class Hours: 9 lecture/27 lab total (when offered in a Distance Education format, hours will total 27 for the lecture portion of the class and an additional 27 hours of lab totaling 54 hours for this course.)
As a part of the southern Cascades and southern Modoc Plateau, the Burney Falls area presents an excellent backdrop for considering the evolution of volcanic mountain chains. In addition, water resources are among the most impressive in the country as springs in the area emit millions of gallons of water daily. Lecture meetings will focus on relevant concepts while on-site explorations will allow for the synthesis of those concepts with on-site observations. Volcanics, surface and subsurface hydrology included in erosive forces as displayed by Burney Falls, and ancient environments such as vast ancient lake deposits, represent some of the topics explored in this course. The field trip will emphasize theory with field application as we visit points of interest and significance during two 8-hour outings. The lecture portion of this course may be offered in a distance education format.

ESCI 97 SPECIAL TOPICS IN EARTH SCIENCE (formerly GEOL 97) – .5-2 Units
Note: Required field trips.
Class Hours: 9-36 lecture total
This course will provide students with a focused topic in the expanding fields of the geosciences. The topics chosen will be characterized by recent advances in the field and/or by multi-disciplinary approaches to traditional subjects. Topics will vary with each course offering and will be listed in the schedule of classes. Since the subject matter of this course varies with each offering, this course is repeatable three times for a total of four enrollments.

ESCI 98 SPECIAL LAB TOPICS IN EARTH SCIENCE (formerly GEOL 98) – .5-1 Unit
Note: Required field activities.
Class Hours: 27-54 lecture total
This course will provide students with an introduction to recent technological advances or multidisciplinary approaches to laboratory and field techniques in the geosciences. Topics will vary with each course offering and will be listed in the schedule of classes. Since the subject matter of this course varies with each offering, this course is repeatable three times for a total of four enrollments.

ECONOMICS (ECON)
ECON 1A PRINCIPLES OF ECONOMICS (MICRO) – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher (ECON 1A is not a prerequisite for ECON 1B)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is a study of the basic institutions and principles of microeconomics and so it concentrates on the parts of an economic system; the markets, the producers, the consumers and the structures of basic industries along with systems for relative resource use and income determination. This course may be offered in a distance education format.

ECON 1B PRINCIPLES OF ECONOMICS (MACRO) – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher (ECON 1A is not a prerequisite for ECON 1B)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course studies the basic economic institutions and principles as they pertain to the entire economic system such as money and banking, determinants of national income, employment, output and the roles played by government in using monetary and fiscal policy to promote the mandates of the Employment Act of 1946. This course may be offered in a distance education format.

ECON 2 ECONOMIC ISSUES AND POLICIES - 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course approaches the study of economics not from the standpoint of theory and principle but through the investigation of problems. The purpose is to identify cause and to construct solutions while being mindful of the philosophies, values, and attitudes involved. This course is designed specifically for those not required to take ECON 1A-1B. This course may be offered in a distance education format.

ECON 17 ECONOMIC HISTORY OF THE UNITED STATES – 3 Units (P/NP Option)
Advisory: Combined with POLS 2, ECON 17 satisfies the CSU requirement in US History, Constitution, and American ideals
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This survey course combines the approaches of the economist and of the historian for an alternative investigation into the origins and into the evolution of the United States. For events, movements and trends seemingly non-economic in nature, this course will identify and analyze the often hidden economic components. For events, movements and trends considered mainly economic in nature, other aspects such as social and political components will be identified, analyzed and synthesized with the economic for a more complete historical investigation. This course satisfies the CSU requirement for US History (US-1).
This course may be offered in a distance education format.

EDUCATION (EDUC)
EDUC 1 INTRODUCTION TO EDUCATION AND TEACHING - 3 Units
Class Hours: 54 lecture total
This course serves as a theoretical framework for prospective teachers, paraprofessionals, tutors, classroom volunteers/mentors, and others interested in education, this introductory course focuses on contemporary education practices and theories. Topics include: educational history, organization, teacher-child relationships, teaching methods, school resources, staff relations, curriculum patterns, authority, and discipline in the schools.

EDUC 2 LITERACY AND LEARNING – 3 Units
Class Hours: 54 lecture total
This course serves as a theoretical framework for prospective teachers, paraprofessionals, and continuing professional development regarding how humans acquire language and literacy skills from childhood through adulthood. It provides practical information for developing language and literacy in a pluralistic multi-cultural society, which will enhance first and second language and cognitive development. This course is useful preparation for CLAD credential requirements.

EDUC 8 ELEMENTARY EDUCATION CURRICULUM – 3 Units
Class Hours: 54 lecture total
This course is designed to prepare elementary school educators with the knowledge and understanding to assist with the implementation of elementary curriculum. Topics will include an understanding of the California essential standards, and the use of specific grade level assessments to effectively address individual student needs.
EDUC 10  LAWS AND SERVICES FOR SPECIAL EDUCATION – 3 Units
Class Hours: 54 lecture total
This course is designed to prepare prospective teachers, paraprofessionals, tutors, classroom volunteers/mentors, and others interested in education to work effectively with students identified as having special education needs. The course covers the legal mandates and criteria needed to qualify for special education services, and the laws and regulations that govern special education practices.

EDUC 94  EDUCATION WORKSITE LEARNING – 5.8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

EDUC 97  SPECIAL TOPICS IN EDUCATION - 5.3 Units (P/NP Option)
Class Hours: 9-54 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in education. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

EDUC 197  SPECIAL TOPICS IN EDUCATION - 5.2 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in education. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

EDUCATION – TEACHER EDUCATION (EDTE)

EDTE 51  CLASSROOM EXPERIENCE I – READING (formerly EDTE 55) – 1 Unit
Corequisite: Students must be concurrently enrolled in EDUC 94
Class Hours: 18 lecture total
This course is an introduction to the teaching profession designed for students wishing to obtain a multiple subject teaching credential. Classroom instruction is aligned with fieldwork so that prospective teachers acquire planned structured observations and experiences in K-8 classrooms that demonstrate exemplary practice as described in the California Standards for the Teaching Profession. The class provides an overview of various important aspects of the teaching profession, including current issues and legislation in education, state requirements for teacher certification, elementary school curriculum, student diversity, factors which impact learning. Discussion sessions assist prospective teachers in making connections between college courses and instruction in elementary schools. Emphasis is upon application in the content areas of reading and language.

EDTE 52  CLASSROOM EXPERIENCE II – READING (formerly EDTE 60) – 1 Unit
Corequisite: Students must be concurrently enrolled in EDUC 94
Class Hours: 18 lecture total
This course is designed to deepen awareness and knowledge regarding specific important aspects of the teaching profession, including in-depth examination of curriculum and assessment requirements specified in recent legislation, specific tests required for teacher certification, student development, specific education and content standards, lesson planning, and effective instructional strategies to promote learning. Classroom instruction is aligned with fieldwork so that prospective teachers acquire planned structured observations and experiences in K-8 classrooms that demonstrate exemplary practice as described in the California Standards for the Teaching Profession. Discussion sessions assist prospective teachers in making connections between college courses and instruction in elementary schools. Emphasis is upon application in the content areas of reading and language.

EDTE 61  MATH I CLASSROOM EXPERIENCE (form. EDTE 65) – 1 Unit
Corequisite: Students must be concurrently enrolled in EDUC 94
Class Hours: 18 lecture total
This course is designed to deepen awareness and knowledge about the role, function, and responsibilities of the teacher in today’s public school setting. Prospective teachers learn theories related to child development, as well as various age-level cognitive, physical, emotional and social characteristics which impact learning. Prospective teachers gain knowledge and practice regarding tests required for teacher certification, including the CSET and RICA. Classroom instruction is aligned with fieldwork so that prospective teachers acquire planned structured observations and experiences in K-8 classrooms that demonstrate exemplary practice as described in the California Standards for the Teaching Profession. Discussion sessions assist prospective teachers in making connections between college courses and instruction in elementary schools. Emphasis is upon application in the content area of math.

EDTE 62  MATH II CLASSROOM EXPERIENCE (form. EDTE 70) – 1 Unit
Corequisite: Students must be concurrently enrolled in EDUC 94
Class Hours: 18 lecture total
EDTE 62 is designed to deepen awareness and knowledge about each of the six California Standards for the Teaching Profession, including topics addressed within the standards and ways in which the standards drive and support effective instructional practices. The class promotes understanding about math content standards and developmentally appropriate strategies to teach math at various grade levels. Prospective teachers learn about effective instructional practices for diverse student populations, including English language learners, students with various types of disabilities, and students with special needs associated with economics and culture. Classroom instruction is aligned with fieldwork so that prospective teachers acquire planned structured observations and experiences in K-8 classrooms that demonstrate exemplary practice as described in the California Standards for the Teaching Profession. Discussion sessions assist prospective teachers in making connections between college courses and instruction in elementary schools. Emphasis is upon application in the content area of math.

EDTE 71  INTERNSHIP IN SCIENCE TEACHING – LIFE SCIENCE – .5 Unit
Class Hours: 27 lab total
EDTE 71 is focused on current teaching methods for life science. It is designed to give students the opportunity to work with elementary and middle school students in a science teaching/learning environment in the hands-on Science Education Laboratory facility on campus. The hands-on lessons provide early teaching experience in science for undergraduates exploring teaching as a career. All lessons are based on the California content standards in science. Students cover instructional strategies as well as content as part of the two-hour teaching and one-hour follow-up laboratory experience.

EDTE 72  INTERNSHIP IN SCIENCE TEACHING – PHYSICAL SCIENCE – .5 Unit
Class Hours: 27 lab total
EDTE 72 is focused on current teaching methods in physical science. It is designed to give students the opportunity to work with elementary and middle school students in a science teaching/learning environment in the hands-on Science Education Laboratory facility on campus. The hands-on lessons provide early teaching experience in science for undergraduates exploring teaching as a career. All lessons are based on the California content standards in science. Students cover instructional strategies as well as content as part of the two-hour teaching and one-hour follow-up laboratory experience.

EDTE 73  INTERNSHIP IN SCIENCE TEACHING – EARTH SCIENCE – .5 Unit
Class Hours: 27 lab total
EDTE 73 is focused on current teaching methods for earth science. It is designed to give students the opportunity to work with elementary and middle school students in a science teaching/learning environment in the hands-on Science Education Laboratory facility on campus. The hands-on lessons provide early teaching experience in science for undergraduates exploring teaching as a career. All lessons are based on the California content standards in science. Students cover instructional strategies as well as content as part of the two-hour teaching and one-hour follow-up laboratory experience.

ENER 50  RENEWABLE ENERGY AND SUSTAINABLE DEVELOPMENT – 2 Units (P/NP Option)
Class Hours: 36 lecture
This course introduces students to the field of sustainable development and renewable energy. Participants will receive instruction in sustainable development, renewable energy, related vocabulary and terminology, photovoltaic systems, and types of photovoltaic systems. This course also includes current developments in the photovoltaic industry including net metering laws, rebates, tax incentives, and its relationship to federal and state economic stimulus packages.
ENGR 1A MEASUREMENTS AND PLANE SURVEYING – 3 Units
Prerequisite: A grade of C or higher in MATH 10 or Math Placement Level 5 or higher
Class Hours: 36 lecture/54 lab total
Surveying fundamentals including the use and care of surveying instruments such as engineers’ transits, and theodolite. Application includes surveying procedures, vertical and horizontal measurements, traverses, layout, and survey calculations. Additional topics include legal descriptions, public land surveying, advanced equipment, and GPS.

ENGR 1B PLANE SURVEYING - 3 Units
Prerequisite: A grade of C or higher in MATH 10 or Math Placement Level 5 or higher, and a grade of C or higher in ENGR 1A
Class Hours: 36 lecture/54 lab total
Application of plane surveying principles to control surveys, field astronomy, route and construction surveys and property surveys. Introduction to advanced survey equipment and related systems.

ENGR 2 CAREER PLANNING FOR ENGINEERING & ENGINEERING TECHNOLOGY - 1 Unit (P/NP Option)
Class Hours: 18 lecture total
Career opportunities and training requirements in the fields of engineering and engineering technology will be examined. Students will be assisted in developing career and educational goals. Emphasis will also be placed upon developing basic employment skills and resume writing. Student activities will develop teamwork.

ENGR 17 CIRCUITS AND DEVICES - 4 Units
Prerequisite: A grade of C or higher in MATH 4A, and a grade of C or higher in PHYS 4B
Corequisite: Students must be concurrently enrolled in, or have completed MATH 4B with a grade of C or higher
Class Hours: 54 lecture/108 lab total
This course covers nodal and mesh circuit analysis techniques, first and second order steady state and transient analysis using the methods of differential calculus, phasors, resonance, RLC circuits, the operator, operational amplifiers, duality, basic digital circuits and Karnaugh mapping.

ENGR 20 RESIDENTIAL DESIGN (formerly ENGR 21A) - 2 Units
Corequisite: Students must be concurrently enrolled in, or have completed ENGR 29 with a grade of C or higher
Class Hours: 18 lecture/54 lab total
This is a course in the study of residential design, including nontraditional structures and their application to single family dwellings. Course topics include costs, architectural styling, site consideration, room design and orientation, and preliminary drawings. The student designs one dwelling and develops the preliminary drawings in basic CAD for completion in the succeeding course, ENGR 21.

ENGR 21 ARCHITECTURAL DRAWING (formerly ENGR 21B) - 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in both ENGR 20 and ENGR 29
Class Hours: 36 lecture/54 lab total
The student develops a basic set of architectural drawings of a residence from preliminary drawings designed during ENGR 20 and approved by the instructor. This course teaches architectural specific CAD design software, including both 2D and 3D concepts as they relate to floor plans, elevations, foundations, roofs, and electrical plans.

ENGR 22 ENGINEERING GRAPHICS - 2 Units
Prerequisite: A grade of C or higher in ENGL 270, or English Placement Level 4 or higher, and a grade of C or higher in MATH 220 or Math Placement Level 1 or higher
Class Hours: 18 lecture/54 lab total
This course teaches the theory of orthographic projections and its use in delineating three-dimensional objects. The course begins with the basics. Topics include lettering, types of lines, geometric constructions, basic dimensioning practices, auxiliary views and a brief introduction to Computer-Aided Drafting (CAD).

ENGR 24 DESCRIPTIVE GEOMETRY - 2 Units
Prerequisite: A grade of C or higher in ENGR 22
Class Hours: 18 lecture/54 lab total
This course is a continuation of study of the theory of engineering graphics and its use in solving three-dimensional problems through the application of the principals of multi-view projections. Descriptive Geometry topics include the use of auxiliary views in finding true length, bearing and slope of lines, the true shape and edge view of surfaces, dihedral angles, shortest connectors, and the intersection between planes. Graphics topics include a review of geometric constructions and tolerancing.

ENGR 25 STRUCTURAL DRAFTING - 3 Units
Prerequisite: A grade of C or higher in each of the following courses: ENGR 22, ENGR 29, and ENGR 38
Class Hours: 36 lecture/54 lab total
This is a course in advanced drafting, focusing on structural drafting, in order to prepare drafters for industry. Topics include reference and standards research, graphic and mathematical analysis, and engineering notes. Emphasis is on structural steel design and detailing plus reinforced concrete detailing.

ENGR 26 INDUSTRIAL DRAFTING - 4 Units
Prerequisite: A grade of C or higher in ENGR 22 and a grade of C or higher in ENGR 29
Class Hours: 36 lecture/108 lab total
The advanced study and application of industrial design and drafting strategies, techniques, and standards. Prepares the drafting technician for employment in industry. Includes advanced topics in tooling jigs and fixtures, welding, graphic layout, piping, fasteners, reference data, casting design, gears and bearings, precision geometric dimensioning and tolerancing, and American Society of Mechanical Engineers (ASME) and ANSI drafting standards, document management, and checking procedures. Both manual and CAD techniques and strategies are covered. The course places emphasis on group organization and team work.

ENGR 27 MAP & COMPUTER-AIDED DRAFTING – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGR 29
Class Hours: 36 lecture/54 lab total
This course teaches the use of the computer and civil design software to produce maps. Course topics include input and processing of field data, digital terrain modeling, contours, subdivisions, roads, and deed descriptions.

ENGR 29 COMPUTER-AIDED DRAFTING (CAD) - 2 Units (P/NP Option)
Corequisite: Students must be concurrently enrolled in, or have completed ENGR 22 with a grade of C or higher
Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows, plus access to the most recent version of the basic AutoCAD software.
Class Hours: 18 lecture/54 lab total (when offered in the Distance Education format, hours will total 108)
This course utilizes basic AutoCAD as a tool for efficient drafting and design development. This course helps prepare students for the growing number of jobs that require CAD, both for its greater efficiency and for its computer database drawings. The emphasis is on graphics with engineering applications. This course may be offered in a distance education format.

ENGR 30 INTERMEDIATE COMPUTER-AIDED DRAFTING – 2 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGR 29
Class Hours: 18 lecture/54 lab total
This is an intermediate course using AutoCAD for drafting and design. This course builds on basic 2D CAD, develops management systems, and covers 3D CAD through solid modeling.

ENGR 31 ARCHITECTURAL DETAILING – 2 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGR 21
Class Hours: 16 lecture/54 lab total
This is a continued study of CAD as it pertains to architectural applications. The student completes the set of architectural drawings designed from the previous courses. The emphasis is in detailing sections, interior elevations, structural calculations, electrical loading, and building code compliance. The techniques for presentation renderings and commercial design considerations will also be discussed.
ENGR 32  ADVANCED CIVIL DESIGN APPLICATIONS FOR CAD – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in both ENGR 27 and ENGR 1A
Class Hours: 36 lecture/54 lab total

This course will further the student's knowledge obtained in ENGR 27, so that the student will be better prepared as an engineering/drafting technician in a civil engineering office. Course topics include the use of computer and currently available software to process surveying data into complex topographic maps. These maps can be used for planimetric and profile maps as well as to process complex earthwork calculations.

ENGR 33  SOLID MODELING COMPUTER-AIDED DRAFTING (formerly ENGR 30C) – 2 Units
Prerequisite: A grade of C or higher in ENGR 29
Class Hours: 18 lecture/54 lab total

An advanced computer-aided drafting course using Solid Works, Mechanical Designing software to prepare students for drafting positions with high potential to advance to designer, etc. ENGR 33 builds on the skills and knowledge of ENGR 29. This course will focus on how to create 3D models, assemble and constrain assembly models. Students will use advanced drafting skills to solve design problems and to present solutions for production or engineering processes, and to visually communicate their solution.

ENGR 35  STATICS 3 Units
Prerequisite: A grade of C or higher in PHYS 4A
Corequisite: Students must be concurrently enrolled in, or have completed MATH 4A with a grade of C or higher
Advisory: A grade of C or higher in ENGR 190, or English Placement Level 6 or higher. Previous drafting experience is helpful.
Class Hours: 54 lecture total

A course in the study of the mechanics of equilibrium of force systems acting on engineering structures, and will be used for plant operation, design, and maintenance of industrial structures. Topics include equivalent force systems, equilibrium, truss analysis, multi-force member analysis, centroids, distributed forces, beam stress and strain diagrams, friction, cables, moments, and products of inertia, and virtual work. This course is usually followed by a course in dynamics, offered at the university upper-division level.

ENGR 37  STATICS FOR ENGINEERING TECHNICIANS AND CONSTRUCTION MANAGEMENT – 3 Units
Prerequisite: A grade of C or higher in MATH 10, or Math Placement Level 5 or higher
Class Hours: 54 lecture total

This course analyzes the external forces induced in structures and machines by various types of loading. Basic vector analysis is used to determine equivalent force-couple systems and equilibrium of two-dimensional bodies. Analysis of simple frames and machines and trusses is discussed. Frictional forces within wedges and belts are considered. Moments, centroids and Area Moments of Inertia are calculated for composite objects.

ENGR 38  STRENGTH OF MATERIALS FOR ENGINEERING TECHNICIANS AND CONSTRUCTION MANAGEMENT – 3 Units
Prerequisite: A grade of C or higher in ENGR 37 or a grade of C or higher in ENGR 35
Class Hours: 54 lecture total

This course analyzes the internal forces induced in structures and machines by various types of loading. Simple stresses, strains, basic mechanical properties of materials, tension of circular shafts, shear forces and bending moments in beams, stresses in beams and beam design will be covered. Topics in deflection of beams and statically indeterminate beams may be covered.

ENGR 45  PROPERTIES OF MATERIALS - 3 Units
Prerequisite: A grade of C or higher in PHYS 4A
Class Hours: 36 lecture/54 lab total

Study of atomic and crystal structures of metallic materials and their physical, mechanical and chemical properties, and the application of basic principles to the selection and use of engineering materials.

ENGR 64  ENGINEERING MATERIAL TESTING - 3 Units
Prerequisite: A grade of C or higher in ENGL 270 or English Placement Level 4 or higher, and a grade of C or higher in MATH 220 or Math Placement Level 1 or higher
Class Hours: 36 lecture/54 lab total

This course will provide the basic understanding and experience in testing civil engineering/construction materials. Various types of test equipment and testing procedures will be covered as well as the computations associated with the individual tests.

ENGR 94  ENGINEERING WORKSITE LEARNING - 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksire Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit

The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student's major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

ENGR 97  SPECIAL TOPICS IN ENGINEERING – 5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total

This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in engineering. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Since subject matter varies each time the course is taught, this course is repeatable 3 times for a total of 4 enrollments.

ENGR 98  SPECIAL LAB TOPICS IN ENGIN. – .5-2 Units (P/NP Option)
Class Hours: 27-108 lab total

This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in engineering. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable 3 times for a total of 4 enrollments.

ENGR 118  BLUEPRINT AND SPECIFICATION READING (MECHANICAL) – 2 Units (P/NP Option)
Class Hours: 36 lecture total

A beginning blueprint reading class for the student in the metal and mechanical trades. Basic visualization and drawing concepts, including orthographic projection, detailing, sketching and communication skills that are needed for employment, are developed in the class.

ENGR 119  BLUEPRINT AND SPECIFICATION READING (ARCHITECTURAL) – 2 Units (P/NP Option)
Class Hours: 36 lecture total

This course is designed to provide the student who expects to enter a skilled trade with a working knowledge of architectural and construction drawings and specifications and basic communication skills that will be needed for employment.

ENGR 197  SPECIAL TOPICS IN ENGINEERING – 5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total

This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in the field of engineering. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for engineering majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of 4 enrollments.

ENGR 198  SPECIAL LAB TOPICS IN ENGIN. – .5-2 Units (P/NP Option)
Class Hours: 27-108 lab total

This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in the field of engineering. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for engineering majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of 4 enrollments.

ENGLISH (ENGL)

Please note Assessment Testing Policy. English assessment testing is required for entry into the following courses: Basic Skills English classes and ENGL 1A. The College administration will establish test dates in advance of registration each semester. Contact the Assessment Office for information on testing dates. If you think for some reason that your assessment test score does not reflect your English competency, please make an appointment with a counselor to discuss your options.

ENGL 1A  COLLEGE COMPOSITION - 4 Units
Prerequisite: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher, or a grade of C or higher in ESL 138
Class Hours: 72 lecture total (when offered in the Distance Education format, hours total 216)

This course develops the reading, critical thinking, and writing skills necessary for academic success, emphasizing expository and argumentative writing as well as research and documentation skills. As a transferable course, it presupposes that students already have a substantial grasp of grammar, syntax, and organization, and that their writing is reasonably free from errors. A research paper is required for successful completion of this course. This course may be offered in a distance education format.

ENGL 1B  LITERATURE AND COMPOSITION – 3 Units
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours total 162)

Course emphasizes the development of critical thinking and writing skills through close study of the major genres of literature: poetry, drama, short story and novel. Students receive further instruction and practice in analytical writing, developing arguments about literary works and the critical reception of those works. In discussion and writing, students will also examine arguments as such, learning to identify sound as well as fallacious reasoning in critical assessments of literature. This course may be offered in a distance education format.
ENGL 1C CRITICAL REASONING, READING, AND WRITING – 3 Units
Prerequisite: A grade of C or higher in ENGL 1A or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Course focuses on critical thinking skills, close textual analysis, and expository and argumentative writing. Students apply critical thinking skills in reading non-fiction and fiction, and in writing essays of definition, cause/effect analysis, argumentation, refutation, and advocacy. Students will learn to use research strategies in analyzing others' ideas and supporting their own. This course may be offered in a distance education format.

ENGL 10A WORLD LITERATURE (to 1500) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course introduces students to some representative masterpieces in world literature beginning with the ancient world and continuing to 1500. A majority of the works will be selected from non-Western literary traditions. The course involves critical analysis of these works within the context of the culture and time in which they were written. Emphasis centers on identifying and analyzing important themes that shape and define the human experience. This course may be offered in a distance education format.

ENGL 10B WORLD LITERATURE (after 1500) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course introduces students to some representative masterpieces in world literature beginning with 1500 and continuing to the present. A majority of the works will be selected from non-Western literary traditions. The course involves critical analysis of these works within the context of the culture and time in which they were written. Emphasis centers on identifying and analyzing important themes that shape and define the human experience. ENGL 10A is not a prerequisite to ENGL 10B. This course may be offered in a distance education format.

ENGL 11A A SURVEY OF AMERICAN LITERATURE—Pre-Colonial to 1860 – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
The course involves a study of representative authors in the literary history of the United States from the pre-colonial period to the Civil War. This course may be offered in a distance education format.

ENGL 11B A SURVEY OF AMERICAN LITERATURE—1860 to Present – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course involves a study of representative authors in the literary history of the United States from the Civil War to the present day. This course may be offered in a distance education format.

ENGL 12 INTRODUCTION TO SHORT FICTION – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
An introduction to the genre of the short story in English and translation, including the elements of the form: structure, narration, point of view, setting, character, plot, and metaphorical language. This course may be offered in a distance education format.

ENGL 13A SURVEY OF ENGLISH LITERATURE (Old English Period through Neoclassicism) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
ENGL 13A is the first semester of the basic two-semester English Literature survey course commonly offered in the sophomore year at colleges and universities. It involves the intensive study of and reading and writing upon representative masterpieces of the literary history of England from the Anglo-Saxon period to the end of the 18th century. This course may be offered in a distance education format.

ENGL 13B A SURVEY OF ENGLISH LITERATURE (from the Romantic Period to Present) – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
ENGL 13B is the second part of the basic two-semester English Literature survey course, commonly offered in the sophomore year at colleges and universities. It involves the intensive study of and reading and writing upon representative masterpieces of the literary history of England from the Romantic Period to the present. This course may be offered in a distance education format.

ENGL 14 A SURVEY OF DRAMA AS LITERATURE – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A course designed to provide the student with an awareness of the origin and development of Western drama through an examination of representative plays from classical Greece to the present. Aesthetic values as well as social, political, and psychological implications expressed through the drama will be examined in order to enhance the student’s understanding and appreciation of dramatic literature. Therefore, students will be required to watch as well as read plays which are representative of the various movements in Western civilization. This course may be offered in a distance education format.

ENGL 15 INTRO. TO LITERATURE BY AND ABOUT WOMEN – 3 Units
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A survey of literature by and about women in different periods and countries. Genres studies include stories, diaries and letters, poetry and drama. Emphasis is on the human condition, especially among women, as expressed in literature. This course may be offered in a distance education format.

ENGL 16 POETRY - 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
An intensive course analyzing the techniques and forms of poetry in English with stress on the genre. Interpretation and appreciation are the primary goals. Emphasis is on extensive reading for pleasure, various types of writing including analytical, responsive and experiential, as well as group experiences in listening. In addition, this course seeks to equip the college literature student to understand literary materials in a new way. The course includes a number of written exercises. This course may be offered in a distance education format.

ENGL 17 INTRODUCTION TO SHAKESPEARE - 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course offers an introduction to the representative works by Shakespeare including the characteristics of the different genres such as comedy, history, and tragedy, as well as a study of the sonnets. A particular focus on sacred stories and the historical and sociological influences of the Elizabethan/Jacobean era will highlight the study of the dramatic and literary conventions. This course may be offered in a distance education format.

ENGL 18 AFRICAN AMERICAN LITERATURE - 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 1A or English Placement Level 7
Class Hours: 54 lecture total
This course is primarily a genre study of African American Literature from the colonial period to the present— including oral tradition, poetry, slave narratives, essays, short stories, plays, novels, and music. Included is an examination of the historical, cultural and social forces influencing these works.

ENGL 19 A SURVEY OF THE BIBLE AS LITERATURE – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total
A course designed to provide the student with an understanding of the origin and development of the bible canon and its rendering into English. Major Bible books will be examined from the perspectives of content, form, and scholarly criticism. This course may be offered in a distance education format.

ENGL 20 WORLD MYTHOLOGY – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course introduces students to some representative masterpieces in world mythology, including the elements of the form: structure, narration, point of view, setting, character, plot, and metaphorical language. This course may be offered in a distance education format.

ENGL 24 MULTICULTURAL PERSPECTIVES IN AMERICAN LITERATURE – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is an introduction to multithematic literary currents in American literature and will focus on African-American, Asian-American, Hispanic-American, Pacific-Islander, and/or Native-American literature (minimum of two works) within “mainstream” American literature. Poetry, essays, short stories, novels, memoirs, and biography will be studied as works of individual artists and from a cultural perspective. An integral part of the course is an understanding of the multiple perspectives of the literature. This course stresses critical and analytical thinking, reading, and writing skills. Students from all backgrounds should benefit from the unique insights into American life afforded by these rich and varied traditions. This course may be offered in a distance education format.
ENGL 25 LINGUISTICS – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)

The course is an introduction to the study of language. Course content surveys linguistic concepts of the nature and diversity of language: morphology, syntax, semantics, phonetics, and phonology; language acquisition; social variation, and historical change. This course may be offered in a distance education format.

ENGL 31 CREATIVE WRITING – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or ESL 139, or English Placement Level 6 or higher
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
The student learns the craft and principles of dramatic narrative and poetry through a variety of short assignments. A final project may be written in any field of interest: short story, article, movie/TV script, stage play, or book. Analysis and lecture are presented both for those desiring to write experimentally, and for those interested in the demanding world of publication. This course may be offered in a distance education format.

ENGL 33 FICTION AND FILM – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
An examination of fiction and film as literary art forms. Course emphasizes critical reading of literature and viewing of film, with comparative, expository, and argumentative writing about those works. Through in-depth analysis of examples from both literature and film, students will become familiar with the major literary conversations in fiction and film, and learn to appraise a work on the basis of literary merit. This course may be offered in a distance education format.

ENGL 36 CHILDREN’S LITERATURE – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course provides an overview of the origins and developments of children’s literature and acquaints the student with different genres of literature written for and read by children. In addition to exploring ways of promoting children’s development through literature, students will also learn how to approach children’s literature from a critical and theoretical perspective. This course may be offered in a distance education format.

ENGL 61 CRITICAL READING – 3 Units
Prerequisite: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 54 lecture total
The overall emphasis is to ensure reading adequacy that will enable the transfer student to succeed in upper-division academic work at any college or university. This course provides training in assessment and test taking skills, reading speed with comprehension, concentration, reading and study strategies, graphic illustrations, main idea, organizing text information, inference, point of view, critical thinking, and textbook study applications. The student will study and practice the academic skills necessary for success in most fields of study.

ENGL 91 ADVANCED COMPOSITION – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Advanced instruction and practice in effective writing, with intensive study of the established rhetorical principles. Emphasis is upon excellence in writing and the application of grammar to the improvement of writing. Intended primarily for students who are working toward an elementary teaching credential; meets state certification requirements for an advanced course in writing. This course may be offered in a distance education format.

ENGL 97 SPECIAL TOPICS IN ENGLISH – 5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics not necessarily covered in other English courses. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Open to anyone with an interest in the topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

BASIC SKILLS
ENGL 129 GRAMMAR REVIEW 1: CORRECT AND EFFECTIVE SENTENCES – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total (when offered in the Distance Education format, hours will total 81)
Emphasizes structure, variety, effectiveness and style of the English sentence. Includes methods of proofreading, the rules of punctuation, and techniques of revision. Includes comparison with sentence structure of other languages such as Spanish. This course may be offered in a distance education format.

ENGL 161 EFFECTIVE READING – 2 Units
Prerequisite: A grade of C or higher in ENGL 280, or English Placement Level 4 or higher
Class Hours: 36 lecture total
The course is designed to provide training in AA degree level reading skills. This class will focus on increasing reading speed and comprehension. Instruction and practice will be provided for developing effective study skills, efficient and analytical reading skills, vocabulary improvement, the ability to identify the main idea, determining supporting details and organizational patterns, knowledge of textbook learning, test-taking strategies, and critical thinking. The course includes skills training for standardized admission tests such as SAT/ACT and ASVAB, with emphasis on reading comprehension, analogies, sentence completion, math reading problems and basic essay skills for writing assignments.

ENGL 190 READING AND WRITING II - 4 Units
Prerequisite: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 72 lecture total (when offered in the Distance Education format, hours will total 216)
This course is designed to improve critical reading skills and to increase writing abilities so that students are able to read a text closely and produce organized, well-supported, and generally smoothly written essays. The course places emphasis on writing both as a process and as a presentable product. In addition, the course introduces students to academic research and the use of source materials in writing. This course may be offered in a distance education format.

ENGL 191 WRITING IN THE WORKPLACE: GRAMMAR IN CONTEXT AND BASIC ESSAY STRUCTURE – 2 Units
Prerequisite: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 36 lecture total
ENGL 191 is designed as the first in a module series specifically for those students who desire direct applications of writing skills to the workplace environment with a special emphasis on basic essay structure and the correct and effective use of grammar and mechanics required in vocational fields. Emphasis will be on both correctness and the writing process. If passed with a grade of “C” or higher, this course can be used in combination with ENGL 192, ENGL 193 and/or ENGL 194 (for a total of four units) to meet the A.A. General Education Requirement and admit a student into ENGL 1A. The flexible scheduling of this course and the module approach allows students more freedom in choosing both their schedules and their curriculum.

ENGL 192 WRITING IN THE WORKPLACE: NARRATION – 1 Unit
Prerequisite: A grade of C or higher in ENGL 191
Class Hours: 18 lecture total
ENGL 192 is designed specifically for those students who have completed ENGL 191 and who desire direct applications of writing skills to the workplace environment with a special emphasis on narrative writing skills utilized in vocational fields. Emphasis will be on both correctness and the writing process. If passed with a grade of “C” or higher, this course can be used in combination with ENGL 191 and either ENGL 192 or ENGL 194 (for a total of four units) to meet the A.A. General Education Requirement and admit a student into ENGL 1A. The flexible scheduling of this course, along with its module approach, allows students more freedom in choosing both their schedules and their curriculum.

ENGL 193 WRITING IN THE WORKPLACE: PROCESS AND REPORT WRITING – 1 Unit
Prerequisite: A grade of C or higher in ENGL 191
Class Hours: 18 lecture total
ENGL 193 is designed specifically for those students who have completed ENGL 191 and who desire direct applications of writing skills to the workplace environment with a special emphasis on process and report writing skills utilized in vocational fields. Emphasis will be on both correctness and the writing process. If passed with a grade of “C” or higher, this course can be used in combination with ENGL 191 and either ENGL 192 or ENGL 194 (for a total of four units) to meet the A.A. General Education Requirement and admit a student into ENGL 1A. The flexible scheduling of this course, along with its module approach, allows students more freedom in choosing both their schedules and their curriculum.

ENGL 194 WRITING IN THE WORKPLACE: COMPARISON/ CONTRAST AND BASIC ARGUMENTATION – 1 Unit
Prerequisite: A grade of C or higher in ENGL 191
Class Hours: 18 lecture total
ENGL 194 is designed specifically for those students who have completed ENGL 191 and who desire direct applications of writing skills to the workplace environment with a special emphasis on comparison/contrast and argumentative writing skills utilized in vocational fields. Emphasis will be on both correctness and the writing process. If passed with a grade of “C” or higher, this course can be used in combination with ENGL 191 and either ENGL 192 or ENGL 193 (for a total of four units) to meet the A.A. General Education Requirement and admit a student into ENGL 1A. The flexible scheduling of this course, along with its module approach, allows students more freedom in choosing both their schedules and their curriculum.
ENGL 260  ELEMENTS OF READING 260 – 3 Units
Prerequisite:  English Placement Level 2 or higher
Corequisite:  Students must be concurrently enrolled in ENGL 260L, or have completed ENGL 260L with a grade of C or higher
Class Hours:  54 lecture total
This course is constructed to help students enhance personal reading and work-related language skills. Instruction will include word attack strategies, vocabulary development, word usage, study skills, sentence writing, paragraph writing, critical thinking opportunities, and interpretive comprehension. Materials at the sixth and seventh grade levels will be used. The student must be capable of working independently and in small groups.

ENGL 260L  READING LAB I – 5 Unit (P/NP Option)
Prerequisite:  English Placement Level 2 or higher
Corequisite:  Students must be concurrently enrolled in ENGL 270L, or have completed ENGL 270L with a grade of C or higher
Class Hours:  27 lab total
This course is intended to help vocational and transfer-oriented students to augment academic reading and writing ability to successfully complete college-level courses. Students will be evaluated in class to determine strong and weak skill areas. Instruction will focus on college-appropriate vocabulary development, writing, grammar and spelling, plus comprehension focused on in-depth analysis and abstract reasoning. Materials at the eighth and ninth grade levels will be used. The student must be capable of working independently and in small groups.

ENGL 270  ELEMENTS OF READING 270 – 3 Units
Prerequisite:  A grade of C or higher in ENGL 260 or English Placement Level 3 or higher
Class Hours:  54 lecture total
This course is designed to give students practice applying the concepts introduced in ENGL 260, Elements of Reading 260. Students will practice word attack strategies, vocabulary development, word usage, study skills, sentence writing, paragraph writing, critical thinking, and interpretive comprehension. Students will work on individual and small group assignments with guidance from tutors and the instructor. Materials at the sixth and seventh grade levels will be used.

ENGL 270L  READING LAB II – 5 Unit (P/NP Option)
Advisory:  A grade of C or higher in ENGL 270L, or have completed ENGL 270L with a grade of C or higher
Class Hours:  27 lab total
This course is designed to give students practice applying the concepts introduced in Elements of Reading 270. Students will practice making inferences, using graphic organizers, analyzing information, synthesizing information, and writing. Students will work on individual and small group assignments with guidance from tutors and the instructor. Materials at the eighth and ninth grade levels will be used.

ENGL 280  READING AND WRITING I – 4 Units
Prerequisite:  A grade of C or higher in ENGL 270, or English Placement Level 4 or higher
Class Hours:  72 lecture total (This course may offered as partial Internet and hours will total 54 lecture and 54 Internet)
This course builds towards college-level reading and writing skills. The reading component emphasizes such skills as previewing, locating main ideas and supporting evidence, and drawing sound inferences. The writing component consists primarily of narrative, reading responses, and summaries. The course aims to increase reading and writing fluency, with some attention to correctness and the ability to develop ideas in an organized fashion in various kinds of writing. Part of this course may be offered in a distance education format.

ENGL 297  SPECIAL TOPICS IN READING – 5-3 Units (P/NP Option)
Class Hours:  9-54 lecture total
This course is designed to allow experimental approaches to helping students who need help in their reading and writing skills. Methods and content would not duplicate any existing courses. Note: Since subject matter varies each time the course is taught, the course is repeatable three times for a total of four enrollments.

ENGL 348  ADULT LITERACY I – 0 Units
Class Hours:  54-108 lab total
This course is designed to help students reading below the fourth grade level improve their reading skills. The course will provide one-on-one tutoring in basic reading skills including symbol, sound, and letter relationships; phonics; short and long vowel sounds; consonant blends; letter formation; basic capitalization and punctuation rules; reading for details; and sequencing. Students will use materials below the fourth grade level. Students must be capable of working independently and in small groups to complete the program. Enrollment in sequential courses is based on measurable progress.

ENGL 350  ADULT LITERACY II – 0 Units
Advisory:  English Placement Level 1 or higher
Class Hours:  54-108 lab total
This course is designed to help students reading below the sixth grade level improve their reading skills and prepare them to enter the credit English course sequence. The course will provide one-on-one and small group instruction in basic reading skills including decoding, sight vocabulary, basic writing conventions, comprehension at the literal level, and improved fluency. Students will use materials at the fourth and fifth grade levels. The student must be capable of working independently and in small groups to complete the program.

ENGL 382  READING AND WRITING WORKSHOP – 0 Units
Class Hours:  1-200 lab total
Students receive individualized tutoring to address problems they are having either in written expression or in reading.

ENGLISH AS A SECOND LANGUAGE (ESL)

ESL 136  ORAL COMMUNICATION FOR COLLEGE SUCCESS – 4 Units (P/NP Option)
Prerequisite:  A grade of C or higher in ESL 236 or ESL Placement Level 7 or higher
Class Hours:  72 lecture total
This is a course designed to assist non-native speakers of English build both fluency and accuracy in their listening and speaking skills. Activities integrating listening, speaking and pronunciation provide relevant practice necessary for business and academics.

ESL 137  COMPOSITION I – 6 Units (P/NP Option)
Prerequisite:  A grade of C or higher in ESL 236 or ESL Placement Level 7 or higher
Class Hours:  90 lecture/54 lab total
This is an academic course for non-native speakers of English designed to develop writing fluency. Emphasis is on writing short compositions, developing process-writing skills and learning common methods of organization. This course includes an intensive review of English grammatical patterns. Development of these skills enhances students' fluency and proficiency in college-level writing.

ESL 138  COMPOSITION II – 6 Units (P/NP Option)
Prerequisite:  A grade of C or higher in ESL 137 or ESL Placement Level 8 or higher
Class Hours:  90 lecture/54 lab total
This is the second of two academic ESL writing courses designed to develop college level writing skills. Emphasis is on writing longer compositions including expository, analytic and argumentative essays. The course will also cover sentence structure as well as advanced grammatical patterns as they relate to refining writing skills.

ESL 220  ORAL COMMUNICATION (formerly ENGL 220) – 2 Units (P/NP Option)
Class Hours:  18 lecture/54 lab total
Designed for the upper beginning to upper intermediate student of English as a Second Language. Major emphasis will be on refining and expanding the listening and speaking skills, aural-oral coping skills, and oral critical thinking and expression skills, which are necessary to function in routine social interactions, entry-level jobs, and/or further academic work.

ESL 234  INTERMEDIATE HIGH (form. ENGL 234) – 5 Units (P/NP Option)
Advisory:  Successful completion of ESL 333, or ESL Placement Level 5 or higher
Class Hours:  36 lecture/162 lab total
This course reviews and expands the intermediate language skills learned in the previous level. Students will develop the ability to communicate in oral and written English beyond the familiar. They will read authentic materials on everyday topics, identify the main ideas and draw conclusions, and write routine correspondence and brief compositions with increasing complexity.

In the event of a discrepancy between the online edition of the catalog and the printed version of the catalog, the online version is the official version.
ESL 236  ADVANCED (formerly ENGL 236) – 5 Units (P/NP Option)
Prerequisite: Successful completion of ESL 334, a grade of C or higher in ESL 234, or ESL Placement Level 6 or higher
Class Hours: 36 lecture/162 lab total
At this level, students develop the ability to understand and engage in extended conversations and discussions and communicate with increasing fluency and grammatical accuracy. This course stresses the language skills necessary for further academic study. Students read authentic materials beyond the familiar, develop academic vocabulary, and write paragraphs and short compositions.

ESL 247  ENGLISH AS A SECOND LANGUAGE VOCATIONAL MATH
(formerly ENGL 247) – 1 Unit (P/NP Only)
Class Hours: 54 lab total
A course designed to help ESL students develop math skills needed for entry level employment. The course will provide one-on-one tutoring in basic vocational math skills including: basic computation of whole numbers and fractions, order of operations, decimals and percents; time lineal, weight and volume measurements (U.S. standard and metric), basic money skills graphs and calculator use. Based on individual assessments, programs of study will be written for each student. Delivery will be multi-sensory with direct teaching and self exploration. Independent work skills are necessary to complete the study program. No math credit will be given for this course.

ESL 249  ENGLISH AS A SECOND LANGUAGE READING LAB
(formerly ENGL 249) – 1 Unit (P/NP Only)
Class Hours: 54 lab total
A course designed to help students with problems related to second language acquisition to improve their reading, writing, spelling and vocabulary skills. The course will provide one-on-one tutoring in reading related skills including symbolism, word relationships, sight word and spelling, and understanding at the concrete level. Based on individual assessments, programs of study will be developed for each student. Delivery will be multi-sensory with direct teaching along with individual exploration. Independent work skills are necessary to complete the study program.

ESL 320  ORAL COMMUNICATION – 0 Units
Class Hours: 72 lab total
Designed for the upper beginning to upper intermediate student of English as a Second Language. Major emphasis will be on refining and expanding the listening and speaking skills, aural-oral coping skills, and oral critical thinking and expression skills, which are necessary to function in routing social interactions, entry-level jobs, and/or further academic work.

ESL 331  BEGINNING LOW – 0 Units
Class Hours: 180 lab total
This is a course designed for the absolute beginner with zero competency in English. Emphasis is on oral language skills and basic vocabulary related to daily living.

ESL 332  BEGINNING HIGH – 0 Units
Advisory: Successful completion of ESL 331
Class Hours: 180 lab total
This course builds on the basic language skills from ESL 331. Language skills are expanded in communicative contexts. Emphasis is placed on development of "social English."

ESL 333  INTERMEDIATE LOW – 0 Units
Advisory: Successful completion of ESL 332 or ESL Placement Level 4 or higher
Class Hours: 180 lab total
This course integrates intermediate language skills. Students at this level build the communicative ability to function in practical areas of daily life.

ESL 334  INTERMEDIATE HIGH – 0 Units
Advisory: Successful completion of ESL 333 or ESL Placement Level 5 or higher
Class Hours: 180 lab total
This course reviews and expands the intermediate language skills learned in the previous level. Students will develop the ability to communicate in oral and written English beyond the familiar. They will read authentic materials on everyday topics, identify the main ideas and draw conclusions, and write routine correspondence and brief compositions with increasing complexity.

ESL 336  ADVANCED – 0 Units
Advisory: Successful completion of ESL 334, a grade of C or higher in ESL 234, or ESL Placement Level 6 or higher
Class Hours: 180 lab total
At this level, students develop the ability to understand and engage in extended conversations and discussions and communicate with increasing fluency and grammatical accuracy. This course stresses the language skills necessary for further academic study. Students read authentic materials beyond the familiar, develop academic vocabulary, and write paragraphs and short compositions.

ESL 378  AMERICAN CITIZENSHIP – 0 Units
Advisory: A grade of C or higher in ESL 234 or ESL Placement Level 4 or higher
Class Hours: 90 lab total
This is a course designed to prepare prospective citizens for citizenship. Class activities will focus on U.S. history, government, basic geography and American culture and customs as it relates to the knowledge required to become an American citizen. While improving their English language skills, students will learn how to complete naturalization forms and prepare for the written and oral test for citizenship.

ESL 385  LITERACY (formerly ENGL 385) – 0 Units
Class Hours: 54-216 lab total
This course emphasizes aural-oral language skills and basic literacy.

ENVIRONMENTAL RESOURCES
See AG, AGMA, AGNR, AGPS and CONS for course listings

FAMILY STUDIES AND SERVICES (FSS)

FSS 10  INTRODUCTION TO HUMAN SERVICES – 3 Units
Class Hours: 54 lecture total
This course is an introduction to the Human Services field of study. It provides information to students who are interested in careers in the fields of welfare, mental health, adult/child protective services, vocational rehabilitation, social services, employment and training, education, child care services, job development and others. Historical and theoretical perspectives of human services will be covered. The significance of social policy and prevention will be stressed throughout the course. Workplace attitudes, values, ethics and professionalism will also be covered.

FSS 12  STANDARDS AND PRACTICES IN HUMAN SERVICES – 3 Units
Advisory: A grade of C or higher in FSS 10
Class Hours: 54 lecture total
This course explores the theoretical perspectives and professional standards involved in Human Services – with particular emphasis on Social Work Practices. Students will be introduced to the practices of engagement, assessment, intervention, documentation and conflict resolution while consistently integrating these with the systems framework and strengths perspective. Professional and personal ethics will be stressed throughout the course. Multicultural competence and policy development will also be covered.

FSS 16  MARRIAGE AND FAMILY (formerly HEOC 16) – 3 Units
Class Hours: 54 lecture total
An introductory course to marriage and family. Topics studied include dating, courtship, marriage, family life, dual career marriages, divorce, single parenting, domestic violence and other contemporary issues.

FSS 18  ADULTHOOD AND AGING – 3 Units (P/NP Option)
Class Hours: 54 lecture total
A study of the developmental changes that occur during early, middle and late adulthood, as well as the continuities that exist within individuals throughout this time frame. The physical, cognitive and psychosocial domains will be explored with a particular emphasis upon patterns that lead to successful aging within the societal context.

FSS 25  NUTRITION (formerly HOEC 25) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A study of the science of food, the nutrients and other substances therein, their actions, interactions and balance in relation to health and disease. The class emphasizes the positive contributions of nutrition to life and health. This course may be offered in a distance education format.

FSS 26  NUTRITION THROUGH THE LIFE SPAN (formerly HOEC 26) – 3 Units
Class Hours: 54 lecture total
A course emphasizing the basic principles of nutrition as they apply to different age groups throughout the life cycle. The special concerns and nutritional needs of pregnancy and lactation, infancy and the preschool years, childhood and adolescence, adulthood and aging will be addressed. The course will also emphasize meal planning for the various stages of life utilizing current dietary recommendations and the most current revisions of nutrition labels.

FSS 27  NUTRITION AND DISEASE – 2 Units
Prerequisite: A grade of C or higher in FSS 25
Note: Upon successful completion of the course (a grade of B or better), licensed nurses will receive 30 CE hours under BRN Provider #306.
Class Hours: 36 lecture total (when offered in the Distance Education format, hours will total 108)
A comprehensive therapeutic study of the relationship between a patient, their diet and optimum health. Physiological conditions that necessitate dietary modifications in the clinical setting will be stressed. This course may be offered in a distance education format.
FSS 46 PERSONAL FINANCE (formerly HOEC 46) – 3 Units
Class Hours: 54 lecture total
Designed to provide students with the information and decision-making tools needed for planning and implementing a successful lifelong financial plan. Topics will include budgeting, debt management, savings and other investment vehicles, taxes, insurance, and retirement planning.

FSS 60 LIFE MANAGEMENT (form. HOEC 60) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course provides students with skills for understanding and using both internal and external resources to function effectively in our present and future society. The effects of cultural forces and future trends will be covered in reference to individuals and family values, standards, and goals. Students will be required to analyze and integrate established principles with self-understanding in both decision-making and creating lifetime goals for themselves. Strategies in time management, energy management, stress management and conflict management will also be covered.

FSS 94 FAMILY STUDIES AND SERVICES WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student's major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through participating in this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

FSS 95 WORKSITE INTEGRATION - 1 Unit
Advisory: Previous or concurrent enrollment in FSS 94
Class Hours: 18 lecture total
This course integrates Social Work Theory into field work. Topics covered include student role in worksite learning, understanding clients, confidentiality issues, preparing a client needs assessment, professional boundaries and agency policies.

FSS 197 SPECIAL TOPICS IN FAMILY STUDIES (formerly HOEC 197) – .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in family studies. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

FIRE TECHNOLOGY (FIRS)

FIRS 70 FIRE PROTECTION ORGANIZATION – 3 Units
Class Hours: 54 lecture total
Provides an introduction to fire protection; career opportunities and related fields; philosophy and history of fire protection; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of the local government; laws and regulations affecting the fire service; fire service nomenclature; specific fire protection functions; basic fire chemistry and physics; introduction to fire protection systems; introduction to fire strategy and tactics.

FIRS 71 FIRE BEHAVIOR AND COMBUSTION – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course of study presents theory and fundamentals of how and why fires start, spread, and are controlled; an in-depth study of fire chemistry and physics; fire characteristics of materials; extinguishing agents; and fire control techniques. This course may be offered in a distance education format.

FIRS 72 FIRE PREVENTION TECHNOLOGY – 3 Units
Class Hours: 54 lecture total
Provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, identification and correction of fire hazards, and the relationships of fire prevention with built-in fire protection systems, fire investigation and fire safety education.

FIRS 73 WILDLAND FIREFIGHTER I ACADEMY – 4 Units (P/NP Only)
Class Hours: 36 lecture/108 lab total
Review of fire behavior, equipment, and apparatus; cover basic wildland firefighting tactics and strategy, methods of attack, and pre-planning fire problems. Course meets or exceeds the minimum requirements for entry-level firefighter positions in the California Department of Forestry (CDF) and the United States Forest Service (USFS). Note: To be considered for seasonal Firefighter positions by CDF, you must also hold additional certificates. Students should contact CALFIRE for additional information.

FIRS 74 FIRE PROTECTION EQUIPMENT AND SYSTEMS – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Provides information relating to the features of design and operation of fire detection and alarm systems, heat and smoke control systems, special protection and sprinkler systems, water supply for fire protection and portable fire extinguishers. This course may be offered in a distance education format.

FIRS 76 FIRE HYdraulICS – 3 Units (P/NP Option)
Class Hours: 54 lecture/4 lab total
Review of basic mathematics, hydraulic laws and formulas as applied to the fire service, application of formulas and mental calculation to hydraulic problems, underwriters' requirements for pumps recommended.

FIRS 79 FUNDAMENTALS OF PERSONAL FIRE SAFETY – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course will introduce the student to fundamental issues relating to fire fighting safety and survival. Students will evaluate case studies in which firefighters have been killed or injured. In addition, each student will be required to give an oral presentation based on an analysis of a “near miss” fatal fire/rescue scenario. This course may be offered in a distance education format.

FIRS 85 FIRE COMMAND IA (formerly FIRS 85A) – 2 Units (P/NP Only)
Class Hours: 40 lecture total
This course provides an in-depth analysis of the principles of fire command and fire control through utilization of personnel, equipment, and extinguishing agents on the fire ground.

FIRS 86 BUILDING CONSTRUCTION FOR FIRE PROTECTION – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is the study of the components of building construction that relate to fire safety. The elements of construction and design of structures are shown to be key factors when inspecting buildings, preplanning fire operations, and operating at fires. The development and evolution of building and fire codes will be studied in relationship to past fires in residential, commercial, and industrial occupancies. This course may be offered in a distance education format.

FIRS 87 FIRE COMMAND IB (formerly FIRS 85B) – 2 Units (P/NP Only)
Class Hours: 40 lecture total
This course covers company and multi-company fire command issues including wildland fires, hazardous materials incidents, and major medical incidents.

FIRS 94 FIREFIGHTER TRAINEE WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student's major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through participating in this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

FIRS 100 BASIC FIRE COMPANY OPERATIONS – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
To provide the student with first hand knowledge of actual fire conditions. Student will learn terminology used in the field, and how to work in the chain of command under emergency conditions, company procedures, shift routine, and engine company evolutions. Note: This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

FIRS 101 FIRE TECHNOLOGY CAREER PLACEMENT – 1 Unit (P/NP Option)
Class Hours: 54 lab total
Designed to assist the student in the final semester of vocational program to learn interview techniques, to develop an employment portfolio, and to interview with several potential employers with the express purpose of assisting the student to obtain the best employment upon graduation.

FIRS 102 APPRENTICESHIP ACADEMY – 1.5 Units (P/NP Option)
Class Hours: 18 lecture/27 lab total
This course will cover hazardous building materials/construction methods, risk strategies, ventilation techniques, pre-plan methods, cautions regarding lab fires and instructional techniques for new personnel. Note: This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.
This course exceeds the minimum educational requirements established by the California State Fire Marshal’s Office for State Certification as a Firefighter I. This academy is an accredited regional academy approved by the California State Board of Fire Service. Final certification as a Firefighter I is verified by the State Fire Marshal’s Office after the student completes the Academy, works as a volunteer Firefighter for one year or a full-time paid Firefighter for six months. Students successfully completing this course will receive numerous stand-alone certificates such as: CalFire Wildland Firefighter; State Fire Marshal’s Auto Extrication, Confined Space Awareness, EMS First Responder and others. Note: Based on scheduling and instructor availability issues, this course may meet one to five days a week with occasional night classes, and additional weekend days may be required. Preset/scheduled dates and times may be shifted as needed to accommodate facility usage, equipment demands, weather, skills development needs and instructor availability. When dates and times are shifted, the total amount of required class time will not differ from those hours as listed on the first class handout.

**FIRS 105 DRIVER/OPERATOR 1A: EMERGENCY VEHICLE OPERATIONS – 1.5 Units**

*Note:* Student must provide a fire engine for the driving portion of the course. Student must possess a valid Class B California Driver’s License.

**Class Hours:** 18 lecture/27 lab total

**Notes:**
1. Students will have to provide their own safety equipment, which meets NFPA standards. Equipment will include: helmet, gloves, structural fire fighting coat and pants, boots, eye protection, etc.
2. To receive a California State Fire Marshal’s Certification, students must have completed FIRS 104 prior to enrollment in FIRS 108.

**Class Hours:** 72 lecture/54 lab total

This course provides the student with the information, theory, methods and techniques for operating fire service pumps, including: types of pumps, engine and pump house maintenance, unsafe pumping conditions, pressure relief devices, cooling systems, water supplies, drafting field hydraulics, and pumping operations.

**FIRS 108 FIREFIGHTER II ACADEMY – 5 Units**

*Notes:*
1. Students will have to provide their own safety equipment, which meets NFPA standards. Equipment will include: helmet, gloves, structural fire fighting coat and pants, boots, eye protection, etc.
2. To receive a California State Fire Marshal’s Certification, students must have completed FIRS 104 prior to enrollment in FIRS 108.

**Class Hours:** 72 lecture/54 lab total

An extended format of the Firefighter I course with advanced skills. Designed to provide the Firefighter I with both manipulative and technical skills. Course approved by the California State Board of Fire Services and California State Fire Marshal’s Office. Upon successful completion of course work, Firefighter II certification will be granted. **Note:** This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

**FIRS 113 FIRE CREW SUPERVISOR – 1 Unit (P/NP Option)**

**Class Hours:** 18 lecture total

The course is designed to complement existing fire crew captain training by presenting techniques for supervision of inmates, wards, and residents; conducting investigations; effective report writing; and understanding the legal rights of inmates, wards, and residents. The practical application of these supervision skills will be emphasized using simulated training exercises. **Note:** This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

**FIRS 116 ENGINE ACADEMY – 3 Units (P/NP Option)**

*Note:* Students must have completed the following course prior to enrollment in FIRS 116 in order to receive a USDA certification; Crew Boss 5-230. This course is designed to provide classroom training, field familiarization, and drills of all water-use and related equipment used in wildland fire suppression. The student will obtain information, practical experience and a working knowledge of all water-use and related equipment used in wildland fire suppression, fire safety suppression tactics, engine company operations standards. A USDA certificate of training will be issued upon successful completion of this course.

**FIRS 118 INTRODUCTION TO WILDLAND FIRE FIGHTING – 1.5 Units**

**Class Hours:** 18 lecture/27 lab total

This course meets requirements in the natural resources and fire science programs. A review of fire chemistry, equipment, and manpower, basic fire fighting strategy, methods of attack, pre-planning problems, and fire line safety are included in the course. A U.S. Forest Service USDA Certificate of Training (Basic Firefighter’s Training) will be issued after satisfactory completion of this course. Approximately 50 percent of labs will be in the field.
FIRS 134 HAZARDOUS MATERIALS TECHNICIAN 1D – 1.5 Units (P/NP Option)
Class Hours: 18 lecture/27 lab total
Hands-on training in tactical field operations with various tools and specialized equipment involving the collection of evidence, containment methods, and techniques. Methods for identifying hazardous materials transported by rail car and highway motor vehicles are examined as well as clandestine drug labs, pipelines, and fixed facilities. Module 4 of 4 of Haz-Mat Technician certification series. Note: To receive a California State Fire Marshal’s Office (CSFMO) Certification or a California Specialized Training Institute (CSTI) Certification the student is strongly encouraged to take these courses in the following sequence: Hazmat Operations followed by FIRS 131, 132, 133, and 134 in that order. Students who want to receive CSFMO or CSTI Certification will be required to take a supplemental certification test and pay a certification fee to the CSFMO or CSTI.

FIRS 135 INTERMEDIATE INCIDENT COMMAND SYSTEM: FOR EXPANDING Crews 1D – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
A course of study describing the responsibilities of the organizational elements within each section of the ICS, staffing considerations, and reporting relationships. Note: While any student may take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Div. or at the National Interagency Fire Center Web Site (NIFC.gov).

FIRS 136 ADVANCED INCIDENT COMMAND SYSTEM 1-I400 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
A course of study that presents Incident Command System relationships and duties of Command Staff members, Agency Representatives, and activation of the Command and General Staff positions. Note: While any student can take this course, this course for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Tech. Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FIRS 139 HAZMAT FIRST RESPONDER OPERATIONS-LEVEL REFRESHER – .5 Unit (P/NP Option)
Limitation on Enrollment: Any OSHA approved HAZMAT operations course
Class Hours: 9 lecture total
This course is designed for students who are currently trained to the Hazardous Materials, First Responder, Operations-level. Students will complete mandated annual refresher training of sufficient content and duration to maintain competencies at the First Responder, Operational level.

FIRS 140 JUVENILE FIRESETTER – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course will focus on psychodynamics and treatment options, interviewing techniques, legal issues, and community resources and networking concerning juvenile fire setters. The target audience for this class is fire service personnel, burn care professionals, mental health counselors, RNs, social workers, psychologists, psychiatrists, judicial system personnel and other health care professionals. Note: This may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

FIRS 145 LOW ANGLE RESCUE – .5 Unit (P/NP Option)
Class Hours: 9 lecture/9 lab total
A course designed to train firefighters and emergency medical personnel in low angle rescue techniques. Students will learn about equipment, identification, and care. Note: Students will have to provide their own safety equipment which meets NFPA standards. Equipment will include helmet, gloves, structural fire fighting coat and pants, boots, eye protection, etc.

FIRS 146 STANDARD FOR SURVIVAL – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course examines significant areas of firefighter fatalities and injuries associated with emergency and non-emergency situations. The course addresses causative factors, the roles of hazards and injuries, and methods to implement recommended solutions. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

FIRS 147 CONFINED SPACE AWARENESS AND RESCUE – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This introductory level training will familiarize public safety personnel with codes and laws impacting confined space rescues, define terms, identify hazards, and prepare students for operational level training. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

FIRS 148 RESCUE SYSTEMS I – 1.5 Units
Note: Students are required to provide personal safety equipment at a significant cost to the student. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.
Class Hours: 18 lecture/27 lab total
A course designed to train firefighters, in paid or volunteer fire departments and emergency medical personnel, in vertical rescue techniques. Students will learn about equipment, identification, and care, applying techniques, belaying and raising and lowering the rescue basket, and safety. This course is designed to train students for vertical or high angle or rope rescue situations. Students may be required to train at heights of up to 200' above ground.

FIRS 149 AUTO EXTRICATION – .5 Unit (P/NP Only)
Note: Student should be a member of fire or rescue service or currently enrolled in the Fire Technology Program.
Class Hours: 9 lecture/9 lab total
To introduce principles of Auto extrication; use of basic hand tools, rescue tools, pulling and spreading operations, patient handling, and vehicle stabilization. Actual practice and application of the methods are taught in class. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

FIRS 150 FIRE CONTROL 1: BASIC FIRE CHEMISTRY – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course is a basic overview of fire chemistry and fire behavior designed for the beginning or volunteer firefighter. Includes classes of fire, fundamentals of heat transfer, fire characteristics of materials, products of combustion, hazardous and explosive materials, extinguishing agents, size up, and exposure protection. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

FIRS 152 FIRE CONTROL 2: STRUCTURAL – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
A course designed to provide the student with information, methods and techniques for operating basic fire fighting tools and carrying out basic fire fighting evolutions. Areas covered include hose, nozzles, and fitting; ground ladders, self contained breathing apparatus; pump operations in theory; pump operations in the field; and the use of fire extinguishers. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

FIRS 153 FIRE CONTROL 3: STRUCTURAL FIRE FIGHTING – 5 Unit (P/NP Option)
Notes: (1) Student must provide evidence of having met necessary respirator fit testing standards prior to first day of class. (2) Student must provide evidence of having met department’s physical fitness standards for fire fighting. (3) Student must provide NFPA compliant personal protective equipment and self contained breathing apparatus.
Class Hours: 9 lecture/9 lab total
This course utilizes the burning of derelict buildings to provide students with hands-on fire fighting experience in fire behavior within a building, ventilation; SCBA use and survival techniques, interior fire attack, exterior fire attack, and basic fire investigation as it relates to fire fighting. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

FIRS 154 FIRE CONTROL 4: GAS & OIL FIRE FIGHTING – 5 Unit (P/NP Option)
Class Hours: 9 lecture/9 lab total
Classroom and field instruction on Basic Fire Control relating to Emergency Operations. To develop the knowledge and attitude necessary to safely, in emergency and non-emergency modes, control gas and liquid fires.

FIRS 156 FIRE CONTROL 6: WILDLAND FIREFIGHTING ESSENTIALS – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This wildland fire fighting course provides information, methods and techniques for operating basic fire fighting tools and carrying out basic fire fighting evolutions. Areas covered include hose, nozzles, and fitting; ground ladders, self contained breathing apparatus; pump operations in theory; pump operations in the field; and the use of fire extinguishers. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.
FIRS 157 FIRE ENGINE DRIVER TRAINING – 1 Unit (P/NP Option)
Limitation on Enrollment: In order to complete the requirements of this course and be able to participate in the hands-on-driving portion of the course, all students must obtain from the DMV a Class “B” Restricted Firefighter Drivers License Permit, or possess a valid California Class “B” license, or obtain a California Class “B” permit.

Notes: (1) Fire engines must be provided by the students sponsoring agency for drivers training and are responsible for all costs incurred as a result of the use of the vehicle in the training program including insurance which meets district standards. (2) All engines must be equipped with seat belt devices for driver and passenger seat in main cab. (3) Student must provide documentation that engine successfully completed a department “pre-trip” inspection.

FIRS 158 PUMP OPERATIONS – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
A course designed to develop a knowledge of fire pumps. Subjects to be covered are pumping principles, practical hydraulics, and the ability to drive apparatus and operate pumps.

FIRS 159 FIRE ENGINE DEFENSIVE DRIVING – 5 Unit (P/NP Option)
Class Hours: 9 lecture total
Classroom instruction on basic driving laws relating to Emergency Vehicle Operations. To develop: Emergency Vehicle Operations, driving knowledge, and attitude necessary to operate their vehicles safely in emergency and non-emergency modes. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of continued paid or volunteer employment.

FIRS 179 FIRE ATTACK STRATEGY & TACTICS – 1 Unit (P/NP Option)
Class Hours: 9 lecture/27 lab total
This course will overview the technical and practical management of fire ground operations of commercial and residential structures by company officers. This course meets NFPA 1021 Standards for Fire Officer I.

FIRS 180 FIRE MANAGEMENT 1 – 2.5 Units
Class Hours: 45 lecture total
To provide fire service personnel with the basic understanding of supervision and management concepts, practices, and theories. Designed for both in-service and pre-service personnel to develop skills that can be used presently and in future career goals.

FIRS 183 FIRE PREVENTION 1A, INTRODUCTION TO THE CALIFORNIA FIRE CODE – 2 Units
Class Hours: 40 lecture total
This course is designed to instruct students in the areas of fire prevention functions. Topics include: responsibilities, authority for code enforcement, occupancy classification, building preparation, records management, existing requirements, plan review, and fire safety education. This course is one of a series for fire officer course work to meet State of California Fire Officer and Fire Prevention Officer certification.

FIRS 184 FIRE PREVENTION 1B, INSPECTION OF FIRE PREVENTION SYSTEMS & SPECIAL HAZARDS – 2 Units
Class Hours: 40 lecture total
Designed to instruct student in the operation and inspection of extinguishers, fixed system, sprinklers, standpipes and alarm systems. Provide technical information on hazardous materials, flammable and combustible liquids and compressed liquefied gasses. Course is one of a series for fire officer course work to meet State of California Fire Officer Certification.

FIRS 185 FIRE COMMAND 2A, COMMAND TACTICS AT MAJOR FIRES – 1.5 Units
Class Hours: 18 lecture/27 lab total
Course prepares the officer to use management techniques and Incident Command Systems when commanding multiple alarms or large suppression forces.

FIRS 189 FIRE INVESTIGATION 1A - 2 Units (P/NP Option)
Class Hours: 40 lecture total (when offered in the Distance Education format, hours will total 112)
This course of study presents theory and fundamentals of fire/explosion investigation techniques. The course material includes theory of legal search and seizure, burn pattern analysis, collection of evidence, ignition sources, fire investigations of structures, vehicles and wildland, report writing, and testifying in court as a fire cause and origin expert. This course may be offered in a distance education format.

FIRS 191 FIRE INVESTIGATION 1B – 2 Units
Class Hours: 36 lecture/9 lab total (when offered in the Distance Education format, hours will total 117)
This course concentrates on fire evidence identification, preservation and collection including blood stains, paint and fiber evidence, volatile flammables, soil and electrothermal residue, fingerprints/shoe print and the track impressions, etc. In addition, this course covers interviewing, fire information sources, and investigation of fatal fires. This course may be offered in a distance education format.

FIRS 192 FIRE INVESTIGATION REVIEW – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This is a review course to update fire service personnel in the latest techniques utilized in fire investigation. It will give information on the following: juvenile fire setter, report writing, evidence collection, preservation procedures, law and legal problems.

FIRS 193 TRAINING INSTRUCTOR 1A (COGNITIVE) (formerly FIRS 181) – 1.5 Units
Class Hours: 18 lecture/27 lab total (when offered in the Distance Education format, hours will total 54 for the lecture portion of the class and an additional 27 hours of lab, totaling 81 hours for this course)
This is the first of a three-course series. Topics include methods and techniques for training in accordance with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching cognitive lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations. Two (2) student instructor teaching demonstrations are required of all. The lecture portion of this course may be offered in a distance learning format.

FIRS 194 TRAINING INSTRUCTOR 1B (PSYCHOMOTOR) (formerly FIRS 182) – 1.5 Units
Prerequisite: A grade of C or higher in FIRS 193
Class Hours: 18 lecture/27 lab total (when offered in the Distance Education format, hours will total 54 for the lecture portion of the class and an additional 27 hours of lab, totaling 81 hours for this course)
This is the second of a three-course series. Topics include methods and techniques for training in accordance with the latest concepts in career education; selecting, adapting, organizing, and using instructional materials appropriate for teaching psychomotor lessons; criteria and methods to evaluate teaching and learning efficiency; and an opportunity to apply major principles of learning through teaching demonstrations. Two (2) student instructor teaching demonstrations are required of all. The lecture portion of this course may be offered in a distance learning format.

FIRS 195 TRAINING INSTRUCTOR 1C (INSTRUCTIONAL DEVELOPMENT TECHNIQUES) – 1.5 Units
Prerequisite: A grade of C or higher in FIRS 193 and FIRS 194
Class Hours: 18 lecture/27 lab total (when offered in the Distance Education format, hours will total 54 for the lecture portion of the class and an additional 27 hours of lab, totaling 81 hours for this course)
This is the third of a three-course series. Topics include methods and techniques for developing lesson plans, ancillary components, and tests in accordance with the latest concepts in career education. The course offers the opportunity to develop, receive feedback, and finalize instructional materials and deliver a teaching demonstration. Two (2) student instructor teaching demonstrations are required of all. The lecture portion of this course may be offered in a distance learning format.

FIRS 197 SPECIAL TOPICS IN FIRE TECHNOLOGY – .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in fire technology. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

FIRS 198 SPECIAL SKILLS TOPICS IN FIRE TECHNOLOGY – .5-2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in fire technology. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

FIRS 360 LIVE FIRE TRAINING, BASIC STRUCTURAL OPERATIONS – 0 Units
Class Hours: 9 lecture/9 lab total
This course provides the student with hands-on fire fighting experience in fire behavior, ventilation, overhaul, interior and exterior fire attack operations.
FIRS 361 ROPE RIGGING FOR RESCUE – 0 Units
Class Hours: 9 lecture total
This course provides the student with hands-on rescue experience in utilizing ropes and related rope rescue equipment. Topics will include: incident and scene assessment, ropes and hardware, knots, rappelling techniques and mechanical advantage systems.

FIRS 362 BASIC BEHAVIOR AND CHEMISTRY – 0 Units
Class Hours: 18 lecture total
This course provides the student with the concepts of the fire triangle and tetrahedron, fire chemistry, fire behavior, products of combustion, types of extinguishing agents, hazardous materials properties and effects, and oxidizing agents.

FIRS 363 BASIC STRUCTURAL OPERATIONS FOR VOLUNTEERS – 0 Units
Class Hours: 18 lecture total
This course is designed to provide the volunteer firefighter with the fundamental concepts and skills for operating at residential and light commercial structure fires. Topics include the use of handlines, ground ladders, self-contained breathing apparatus, pump operations and the use of fire extinguishers.

FIRS 364 PUMP OPERATIONS FOR VOLUNTEERS – 0 Units
Class Hours: 18 lecture total
A course designed to develop knowledge of fire pumps. Subjects to be covered include pumping principles, practical hydraulics, and the ability to drive apparatus and operate pumps.

FIRE TECHNOLOGY/WILDLAND FIRE TECHNOLOGY LOGISTICS (FTWL)

FTWL 101 WILDLAND FIRE BEHAVIOR – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course of study is to provide the information necessary to understand wildland fire behavior. The course includes influences that affect basic wildland fire behavior, the seven wildland fire environment factors which must be continuously monitored in making wildland fire behavior predictions, and providing the tools to make spot fire behavior predictions.

FTWL 102 WILDLAND FIREFIGHTER SAFETY AND SURVIVAL – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course of study places emphasis on avoiding situations and conditions which have resulted in fire shelter deployments, serious injuries and fatalities for wildland firefighters.

FTWL 103 WILDLAND FIRE OPERATIONS – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course of study presents the command structure and operational processes for ground and air operations in the control of wildland fires.

FTWL 104 WILDLAND PUBLIC INFORMATION OFFICER, PREVENTION, AND INVESTIGATION – 3 Units (P/NP Option)
Class Hours: 54 lecture total
A course of study, which presents the information necessary to understand the roles and functions of the wildland fire information officer, wildland fire prevention, and investigation of wildland fires.

FTWL 105 WILDLAND FIRE PLANNING, LOGISTICS, AND FINANCE – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course of study explains the roles, responsibilities and functions of the planning, logistics, and finance sections that are utilized during the control of wildland fires.

FTWL 106 INTRODUCTION TO INCIDENT COMMAND SYSTEM I-100 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
Introduction to Incident Command System I-100 is designed to teach the principles of the Incident Command System and the basic ICS structure and terminology. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 110 DISPLAY PROCESS S-245 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
A course of study that presents information to enable the student to be able to function as a Display Processor on a wildland fire incident. The course includes how to determine logistical needs, including work materials and work area, how to identify sources of information and collect data, and to identify and be able to communicate directed maps, spreadsheets, text and displays. Note: Any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 111 CHECK-IN RECORDER/STATUS RECORDER S-248 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to understand the duties and responsibilities of a Check-in Recorder/Status Recorder on a wildland fire. The course presents how to record information on location and status of equipment, record information of personnel on appropriate forms, and develop organization charts and assignment lists based on information recorded. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 112 ORDERING MANAGER J-252 - .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study presents the necessary information for the student to function as a Receiving and Distribution Manager on a wildland fire incident. The course includes establishing ordering procedures, set up filing system, identify times and locations for delivery of supplies and equipment, and submission of all ordering documents to documentation control unit before demobilization. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 113 RECEIVING AND DISTRIBUTION MANAGER J-253 – 5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study presents the necessary information for the student to function as a Receiving and Distribution Manager on a wildland fire. The course includes establishing procedures for receiving supplies and equipment, review incident action plan and operational instructions provided by logistics section concerning scope and duration of incident operations that may involve supply requirements, determine supply unit personnel requirements, inspect and accept supplies, and provide inventory records to documentation unit before demobilization of supply unit. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 114 BASE/CAMP MANAGER J-254 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study presents the information necessary for the student to be able to function as a Base Camp Manager on a wildland fire incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 115 EQUIPMENT MANAGER J-255 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study presents the information necessary for the student to be able to function as an Equipment Manager on a wildland fire incident. This course includes obtaining necessary equipment and supplies, how to provide maintenance and fueling according to schedule, preparation of schedules to include pumping principles, practical hydraulics, and the ability to drive apparatus and operate pumps.

In the event of a discrepancy between the online edition of the catalog and the printed version of the catalog, the online version is the official version.
maximize use of available transportation, inspection of equipment, and preparation and use of proper equipment agreements. NOTE: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 116 TOOL & EQUIPMENT SPECIALIST J-256 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study presents the necessary information for the student to function as a Tool and Equipment Specialist on a wildland fire incident. The course includes utilization of work space, work assignment, numbers and kinds of tools ordered/ond hand, determine personnel requirements, establish a tool inventory and accountability system, ensure that all appropriate safety measures are taken in tool conditioning area, and demobilize tool area in accordance with incident demobilization plan. NOTE: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 117 INCIDENT COMMUNICATIONS CENTER MANAGER J-257 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study presents the information needed by the student to function as a Communications Manager on a wildland fire incident. This includes how to establish the incident communications/message center, acquire supplies to set up and operate the incident communications/message center, and how to organize and manage the incident communications/message center. NOTE: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 118 INCIDENT COMMUNICATIONS TECHNICIAN S-258 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study presents information necessary for the student to be able to function as a Communications Unit Leader on a wildland fire incident. This course includes establishing and maintaining radio transmissions, interrelationships between ICS functions and the Communications Unit Leader, organize and staff the Communications Unit, and develop an effective communications plan based on the needs for each operational period and complete the necessary paperwork and forms. NOTE: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 119 SECURITY MANAGER J-259 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study presents the information needed by the student to function as a Security Manager on a wildland fire incident. This course includes briefing information from facilities unit leader, how to establish contacts with local law enforcement agencies as required, special custodial requirements which may affect security operations, and develop a security plan. NOTE: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 120 INTERAGENCY INCIDENT BUSINESS MANAGEMENT S-260 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study presents an understanding of the fiscal issues of wildland firefighting. It includes employee responsibilities and conduct, be able to recruit personnel, and equipment and personnel requirements of the fire organizational structure and provide financial reports for equipment and personnel time recording. NOTE: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 121 PERSONNEL TIME RECORDER J-261 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to function as a personnel time recorder on a wildland fire incident. This course includes establishing and maintaining employee time reports within the first operational period; how to initiate, gather, or update a time report from all applicable personnel assigned to the incident for each operational period, and ensure that all employee identification information is verified to be correct. Includes contractor and commissary records, and personnel time reports. NOTE: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 122 EQUIPMENT TIME RECORDER J-262 – 1 Unit (P/NP Option)
Class Hours: 16 lecture total
This course of study presents the information necessary for the student to be able to function as an Equipment Time Recorder on a wildland fire incident. This course includes how to establish and maintain equipment time reports within the first operational period; how to initiate, gather or update a time report from all applicable equipment assigned to the incident for each operational period and how to close out equipment time documents prior to personnel or equipment leaving the incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 123 CLAIMS MANAGER J-263 - 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to function as a Claims Manager on a wildland fire incident. This course presents what is required for handling all claims related activities (other than injury) for the incident, utilization of proper support for conducting a claims investigation, preparation of claim reports, and provide information to protect the interest of the government. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 124 COMPENSATION FOR INJURY MANAGER J-264 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to function as a Compensation for Injury Manager on a wildland fire incident. This course includes how to handle all claims related activities (other than injury) for the incident, utilization of proper support for conducting an injury or death investigation, and preparation of compensation for injury documents in accordance with agency policy and procedures. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 125 INTERAGENCY RELATIONS J-265 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study presents a helpful understanding of the role of national incident coordination for wildland fire incident. The course includes conducting and preparing national incident coordination documents in accordance with agency policy and procedures. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).
FTWL 125 COMMISSIONARY MANAGER J-266 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to function as a Commissionary Manager on a wildland fire incident. The course includes how to set up and provide commissionary operation to meet incident needs. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 126 DOCUMENTATION UNIT LEADER J-342 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to function as a Documentation Unit Leader on a wildland fire incident. This course includes how to establish and organize incident files, retention and filing of duplicate copies of official forms and reports, preparation of incident documentation, and personnel functions. This course includes the section chief, traffic platoon leader, and store incident files for after incident use. NOTE: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 127 SITUATION UNIT LEADER S-346 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to function as a Situation Unit Leader on a wildland fire incident. This course includes how to collect all incident related data for the duration of the incident, utilization of infrared data as applicable, post data on unit work displays and command post displays at scheduled intervals or as requested by command post personnel and provide resources and situation status information in response to specific requests. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 128 DEMOBILIZATION UNIT LEADER S-347 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to function as a Demobilization Unit Leader on a wildland fire incident. This course includes objectives, priorities, and constraints on demobilization from the planning section chief, agency representatives, and contractors as applicable, how to obtain identification and description of surplus resources and probable release times, developing release procedures in coordination with other sections/units and agency dispatch center, and coordinate and closely supervise the demobilization process. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 129 RESOURCES UNIT LEADER S-348 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study presents the information necessary for the student to be able to function as a Resources Unit Leader on a wildland fire incident. This course covers how to gather, post, and maintain incident resource status, gather, post, and maintain resource status of transportation and support vehicles and personnel, and maintain master list of all resources checked in at the incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 130 FACILITIES UNIT LEADER S-354 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study presents an understanding of the duties and responsibilities of the Facilities Unit Leader on a wildland fire incident. The course presents factors in determining requirements for each facility, layout of incident facilities and activation of incident facilities. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 131 GROUND SUPPORT UNIT LEADER S-355 – 5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study presents the information necessary for the student to be able to function as a Support Unit Leader on a wildland fire incident. The course presents factors in determining requirements for each facility, layout of incident facilities and activation of incident facilities. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 132 SUPPLY UNIT LEADER S-356 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study presents the information necessary for the student to be able to function as a Supply Unit Leader on a wildland fire incident. This course includes description of the activities of the Supply Unit, what is needed to set up and staff Supply Unit, organization of and staffing of Supply Unit, and demobilization. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 133 FOOD UNIT LEADER S-357 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study presents the information necessary for the student to be able to function as a Food Unit Leader on a wildland fire incident. This course includes how to determine the method of feeding to best fit each situation, obtain the necessary equipment and supplies to operate food service facilities at base and camps, and ensure that all appropriate health and safety measures are taken. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 134 COMMUNICATIONS UNIT LEADER S-358 – 4 Units (P/NP Option)
Class Hours: 72 lecture total
This course of study presents the information necessary for the student to be able to function as a Communications Unit Leader on a wildland fire incident. This course includes how to assess communications capabilities/limitation during preparation of the incident action plan, preparation and implementation of the incident radio communications plan, and supervise communications unit activities. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).
Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 135 MEDICAL UNIT LEADER S-359 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study presents the information necessary for the student to be able to function as a Medical Unit Leader. This course covers how to determine level of emergency, prepare for operation of the Medical Emergency Team, and respond to requests for medical aid. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 136 COST UNIT LEADER I-362 – 5 Units (P/NP Option)
Class Hours: 9 lecture total
This course of study presents the information necessary for the student to be able to function as a Cost Unit Leader on a wildland fire incident. The course includes how to set up a system for collecting and documenting all expenses relating to a wildland fire incident, establishing procedures for collecting cost data, coordination with appropriate personnel, and prepare reports in accordance with agency policy and procedures. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 137 COMPENSATION/CLAIMS UNIT LEADER I-363 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to function as a Compensation/Claims Unit Leader on a wildland fire incident. The course includes how to set up system for investigating, documenting, and processing claims, initiate investigations on claims, and preparation of claim reports in accordance with agency policy and procedures. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 138 TIME UNIT LEADER I-365 – 5 Unit (P/NP Option)
Class Hours: 12 lecture total
This course of study presents the information necessary for the student to be able to function as a Time Unit Leader on a wildland fire incident. The course includes how to set up system for documenting all personnel assigned to a wildland fire incident, establish procedures for collecting time data, set up comparry operation, and prepare reports in accordance with agency policy and procedures. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 139 PROCUREMENT UNIT LEADER I-368 – .5 Unit (P/NP Option)
Class Hours: 12 lecture total
This course of study presents the information necessary for the student to be able to function as a Procurement Unit Leader on a wildland fire incident. This course includes how to set up a system for collecting and documenting all equipment assigned to a wildland fire incident, how to administer vendor contracts, establish procedures for collecting time data, and prepare reports in accordance with agency policy and procedures. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 140 PLANNING SECTION CHIEF S-440 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study presents the information necessary for the student to be able to function as a Planning Section Chief on a wildland fire incident. The course includes how to develop the relationship between the other General Staff members and the Planning Section Chief, supervise the planning function, and receive information routinely or as requested about operations activities from State/Unit field observations and operations personnel. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 141 LOGISTICS SECTION CHIEF S-450 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study presents the information necessary for the student to be able to function as a Logistics Section Chief on a wildland fire incident. The course includes how to organize and staff the Logistics Section to meet the needs of a wildland fire incident, mobilize the Logistics Section according to the demobilization process at a wildland fire incident, and be able to perform as a Logistics Section Chief at a wildland fire incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 142 FINANCE SECTION CHIEF S-460 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study presents the information necessary for the student to be able to function as a Finance Section Chief on a wildland fire incident. The course includes how to establish and be responsible for all financial and cost analysis aspects of the incident, supervising members of the finance section, and ensure that all obligation documents initiated at the incident are properly prepared and completed. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 143 MULTI-AGENCY COORDINATION I-401 – 5 Unit (P/NP Option)
Class Hours: 9 lecture total
A course of study describing the major elements associated with developing and implementing an effective multi-agency coordination system. This course describes essential differences between Area Command, Multi-Agency Coordination Systems, and Jurisdictional Emergency Operations Centers. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWL 144 INCIDENT COMMAND SYSTEM FOR EXECUTIVES I-402 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study presents an ICS orientation for executives, administrators, and policy makers. It provides a basic understanding of ICS, unified and area command, and multi-agency coordination to those persons responsible for establishing or implementing policy, but who normally are not a part of the on-scene ICS organization. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-1 standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-1 standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-1 can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).
certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FIRE TECHNOLOGY/WILDLAND FIRE TECHNOLOGY OPERATIONS (FTWO)**

**FTWO 110 BASIC WILDLAND FIRE ORIENTATION S-110 – .5 Unit (P/NP Option)**
Class Hours: 9 lecture total
This course of study provides information that is essential for a non-operations individual assigned to a wildland fire incident to have a successful first assignment. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 111 FIREFIGHTER TRAINING S-130 – 2 Units**
Class Hours: 36 lecture total
This course of study is designed to train new firefighters in basic firefighting skills, and the knowledge necessary to effectively handle wildland firefighting situations. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 112 ADVANCED FIREFIGHTER TRAINING S-131 – .5 Unit**
Class Hours: 9 lecture total
This course of study provides advanced wildland firefighting training and education for those who wish to become qualified in the first level supervision position of Advanced Firefighter/ Squad Boss. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 113 INTRODUCTION TO WILDLAND FIRE BEHAVIOR S-190 – .5 Unit (P/NP Option)**
Class Hours: 9 lecture total
This course of study provides an introduction to wildland fire behavior issues that are important to wildland fire spread and safety to firefighters involved in suppression. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 114 INITIAL ATTACK INCIDENT COMMANDER TYPE 4 (ICT4) S-200 – 1.5 Units (P/NP Option)**
Class Hours: 27 lecture total
This course of study is designed to provide the initial attack commander of small non-complex wildland fires with the ability to safely suppress the fire within the guidelines of the Incident Command System, and agency guidelines. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 115 SUPERVISORY CONCEPTS AND TECHNIQUES S-201 – 1 Unit (P/NP Option)**
Class Hours: 18 lecture total
This course of study is for the experienced wildland firefighter to be able to apply the principles of communication and supervision required of a single resource boss to perform on a wildland fire incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 116 FIRE OPERATIONS IN THE WILDLAND/ URBAN INTERFACE S-215 – 2 Units (P/NP Option)**
Class Hours: 36 lecture total
A course of study to prepare initial attack incident commanders and company officers to effectively deal with wildland fires that threaten life, property, and improvements. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 117 PORTABLE PUMPS AND WATER USE S-211 – 1.5 Units**
Class Hours: 27 lecture total
This course of study is for firefighters needing formal training in order to gain competency in the use of portable pumps and water in wildland fire fighting. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 118 WILDFIRE POWERSAWS S-212 – 1 Unit**
Class Hours: 16 lecture/12 lab total
Wildfire Powersaws is a required course for those planning to operate, or directly supervise, the operation of chainsaws on wildfires. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 119 DRIVING FOR THE FIRE SERVICE S-216 – 2 Units (P/NP Option)**
Class Hours: 36 lecture/12 lab total
This course of study is designed to instruct fire personnel on proper methods and procedures for driving fire equipment on the highway and off-road conditions. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWO 120 INTERAGENCY HELICOPTER TRAINING GUIDE S-217 – 2.5 Units (P/NP Option)**
Class Hours: 45 lecture total
A course of study of the tactical and logistical use of helicopters in wildland fire control operations. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

In the event of a discrepancy between the online edition of the catalog and the printed version of the catalog, the online version is the official version.
FTWO 121 CREW BOSS S-230 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study is to identify the hazards and risks on wildland fires and teach the tactics which are appropriate for the crew boss during the various wildland fire situations. The course also identifies crew boss responsibilities prior to, during and following mobilization, on the incident and during demobilization. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 122 ENGINE BOSS S-231 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study is to prepare advanced firefighters/squad bosses with the ability to understand the function as an engine boss in the control of wildland fires. This course presents the issues of tactics and safety in the control of wildland fires, and identifies the mobilization and demobilization procedures of an engine crew on a wildland fire incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 123 DOZER BOSS S-232 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study is to prepare advanced firefighters/squad bosses with the ability to understand and function as a dozer boss in the control of wildland fires. This course presents the issues of tactics and safety in the control of wildland fires, and identifies the mobilization and demobilization procedures of a dozer on a wildland fire incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 124 TRACTOR PLOW BOSS S-233 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study is to prepare advanced firefighters/squad bosses with the ability to understand and function as a tractor/plow boss in the control of wildland fires. This course presents the issues of tactics and safety in the control of wildland fires, and identifies the mobilization and demobilization procedures of a tractor/plow on a wildland fire incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 125 IGNITION OPERATIONS S-234 – 1 Unit (P/NP Option)
Class Hours: 18 lecture/8 lab total
This course of study presents the application of safety considerations involved in a firing operation. It also provides the student with the necessary information to operate, maintain and use firing devices, and to use backfire as an indirect attack method against a rapidly spreading wildfire. The student will also learn the proper application of fire suppression firing methods and practices. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 126 FELLING BOSS S-235 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
The felling boss has the responsibility of building fireline in areas where saws are needed to build fire control lines. The felling boss must determine the capabilities and limitations of the felling crew, identify the special equipment necessary for the assignment, understand the issues of tactics and safety in the control of wildland fires, and identify the mobilization and demobilization procedures of a felling crew on a wildland fire incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 127 STAGING AREA MANAGER J-236 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
The Staging Manager is responsible for establishing and maintaining staging areas where resources are assigned prior to being given a specific assignment. The Staging Manager is responsible for all activities in the staging area including determining if there is need for temporary assignment of logistics service and support (fuel tender, food delivery, sanitation) to staging areas and managing equipment and supplies for those areas. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 128 FIELD OBSERVER S-244 – 1.5 Units
Class Hours: 18 lecture/27 lab total
A course of study providing the student with the necessary skills to function as a Field Observer on a wildland fire incident. This course presents an understanding of the various types of maps used in wildland fire control, map scale and use in determining location of wildland fire, topographic maps and how to use them, and be able to perform calculations to determine the size of fire on a map. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 129 INTERAGENCY INCIDENT BUSINESS MANAGEMENT S-260 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study is designed to teach the basic concepts of fiscal management of wildland fire agencies. It includes an understanding of budgeting and finance, recording and financial statement preparation, service and support (fuel tender, food delivery, sanitation) to staging areas and managing equipment and supplies for those areas. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 130 BASIC AIR OPERATIONS S-270 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
This course of study presents an understanding of the duties and responsibilities of the Facilities Unit Leader in a wildland fire incident. The course presents factors in determining requirements for each facility, layouts of incident facilities and activation of incident facilities. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).
FTWO 131 HELISPOT MANAGER J-272 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study presents the information necessary for the student to be able to function as a Ground Support Unit Leader on a wildland fire incident. The course includes how to implement traffic plan developed by planning section, establishing position and analyzing communications, assessing needs for refueling, maintaining communication equipment, and implementing fire behavior. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 132 INTERMEDIATE WILDLAND FIRE BEHAVIOR S-260 – 2 Units
Class Hours: 36 lecture total
This course of study presents the information necessary for the student to be able to function as a Supply Unit Leader on a wildland fire incident. This course includes description of the activities of the Supply Unit, what is needed to both support and staff Supply Unit, organization of and staffing the Supply Unit, and demobilization. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 133 INCIDENT COMMANDER EXTENDED ATTACK S-300 – 1 Unit
Class Hours: 18 lecture total
This course of study presents the information necessary for the student to be able to function as an Incident Commander with the description of the activities of the Supply Unit, what is needed to both support and staff Supply Unit, organization of and staffing the Supply Unit, and demobilization. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 134 LEADERSHIP & ORGANIZATIONAL DEVELOPMENT – 3 Units
Class Hours: 27 lecture/81 lab total
This course of study is designed to provide the experienced wildland firefighter with the communication and supervision skills necessary to perform as a unit leader on a wildland fire incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 135 TASK FORCE/STRIKE TEAM LEADER S-330 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
A course of study for experienced wildland firefighters single resource or crew boss qualified to undertake the role of the Task Force/Strike Team Leader in the control of wildland fires. This includes utilization of increments of equipment in saving lives and property, and to develop the skills necessary to supervise the various types of equipment in the wildland fire control. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 136 FIRE SUPPRESSION TACTICS S-336 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
A course of study that presents the experienced wildland firefighter with the tactics necessary for the safe utilization of resources to control wildland fires. This course covers the review and comparison of tactical assignments with incident commander, and how resources are to work assignments for each resource to accomplish the tactical objectives in an assigned area. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 137 DIVISION/GROUP SUPERVISOR S-339 – 1 Unit (P/NP Option)
Class Hours: 24 lecture total
A course of study for Initial Attack Incident Commanders, Task Force/Strike Team Leaders to be able to function as a Division/Group Supervisor on a wildland fire incident. This course defines and differentiates between the division and group supervisor positions, and teaches the difference in the two positions. The relationships of Division/Group Supervisor is contrasted with Strike Team Leader, Task Force Leader, and Initial Attack Incident Commander. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 138 INTERMEDIATE AVIATION OPERATIONS S-370 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study is to provide Incident Commanders and other fire line supervisors with an understanding of the aviation tools and knowledge to effectively use aviation resources safely, effectively and efficiently on a wildland fire incident. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 139 HELIBASE MANAGER S-371 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
A course of study that provides the information necessary for an advanced fire helicopter crew boss or helibase manager to take over the function of a helibase on a wildland fire incident. The course covers reporting to assigned helibase and how to determine if staffing and aircraft needs are satisfactory, properly review and implement helibase checklist, identify problems that may necessitate a safety briefing and coordination with Air Support Group Supervisor and Air Tactical Group Supervisor. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 140 HELICOPTER COORDINATOR J-374 – 1.5 Units (P/NP Option)
Class Hours: 27 lecture total
This course of study teaches the duties and responsibilities of the Helicopter Coordinator on a wildland incident. The course includes how to determine aircraft (air tankers and helicopters) operating within incident area of assignment, implementing air safety requirements and procedures, and coordinate activities with air attack supervisor, air tanker coordinator, air support supervisor, and ground operations personnel. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, education requirements and current employee recommendations for certification as stated in the United States Forest Service NWCG 310-I standards. This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).
A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 142 AIR TANKER COORDINATOR S-376 – 2 Units (P/NP Option)

The Air Tanker Coordinator is responsible for coordinating air tanker operations, and is always airborne. Duties include if the restricted air space declaration has been requested through FAA, determine the location of fixed-wing facilities supporting air tanker operations, and determine if all aircraft including air tankers and helicopters operating within incident area are assigned. Survey the area to determine situation, aircraft hazards, and other potential problems. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 143 AIR TACTICAL GROUP SUPERVISOR S-378 – 2 Units (P/NP Option)

Air Tactical Group Supervisor is primarily responsible for the coordination of aircraft assigned to the National Interagency Fire Center and in-ranger aircraft operated as a fire helicopter. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 144 INTRODUCTION TO WILDLAND FIRE BEHAVIOR CALCULATIONS S-390 – 2 Units (P/NP Option)

This course of study teaches the concepts required in calculating wildland fire behavior, and the safe and effective fire management operations. It includes various aspects of the relationship among general, local (convective), 20-foot, and mid-flame winds is presented along with a description of how topography affects fuels and their availability for combustion. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 145 INCIDENT COMMANDER S-400 – 2 Units (P/NP Option)

This course of study presents the duties and functions of the wildland fire incident Incident Commander. This includes how to set up organizational elements necessary to mitigate the emergency, request additional resources as needed, how to ensure planning meetings are held as necessary, details relating to coordination of staff activity, and how and when to assume command of an incident after the overall situation is reviewed, sufficient information is available to make logical decisions, and takeover coordination can be accomplished. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 147 SAFETY OFFICER S-404 – 2 Units (P/NP Option)

This course of study presents the necessary information that is required for an individual to function as a Safety Officer on a wildland fire incident. This course includes how to make recommendations that will address those risks or hazards with respect to potential fire, injury and illness. In addition, the student shall be able to work with lesser degree, how to develop and present alternatives, and present issues related to direct intervention to immediately correct a dangerous situation. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 148 STANDARDS FOR SURVIVAL – .5 Unit (P/NP Option)

This course presents the necessary information that is required for an individual to function as a Survival Officer on a wildland fire incident. This course includes how to make recommendations that will address those risks or hazards with respect to potential fire, injury and illness. In addition, the student shall be able to work with lesser degree, how to develop and present alternatives, and present issues related to direct intervention to immediately correct a dangerous situation. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 149 HAZMAT AWARENESS FOR FIREFIGHTERS – .5 Unit (P/NP Option)

This course presents advanced training for those individuals who will be assigned to the Command and General Staff positions on a wildland fire incident. This course presents topics that will develop the skills and knowledge that are necessary to perform on wildland Type 2 incidents in a command or general staff position, information required to set up organizational elements necessary to mitigate a wildland fire incident, how to request additional resources as needed, and supervision issues related to coordination of staff activity. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 150 COMMAND & GENERAL STAFF S-420 – 2 Units (P/NP Option)

This course of study presents advanced training for those individuals who will be assigned to a leadership position on a wildland fire incident. This course presents topics that will develop the skills and knowledge that are necessary to perform on wildland fire incidents in a command or general staff position, information required to set up organizational elements necessary to mitigate a wildland fire incident, how to request additional resources as needed, and supervision issues related to coordination of staff activity. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 151 LOOK UP, LOOK DOWN, LOOK AROUND S-133 – 5 Unit (P/NP Option)

This course of study presents the necessary information that is required for an individual to function as a wildland fire behavior refresher for experienced wildland firefighters. It presents the three principle environmental elements affecting wildland fire behavior, three factors of fuel that affect the start and spread of wildland fire, three factors of weather that affect fuel moisture, how wind affects wildland fire spread, four factors of topography that affect wildland fire behavior,
and descriptions of the dangerous conditions that can develop in a box canyon and steep narrow canyons. While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 154 OPERATIONS SECTION Chief S-430 – 1 Unit (P/NP Option)
Class Hours: 24 lecture total
This course of study presents the information necessary to meet the training requirements of the Operations Section Chief. This course presents the information necessary to assess incident assignments and determine immediate needs and actions, a description of the six principles of command and the six basic rules of emergency operations management, description of the relationship between General Staff and the Operations Section Chief, and supervision of the operations function. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 155 INCIDENT TRAINING SPECIALIST S-445 – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
A course of study that presents the information needed to organize and implement an incident training program. This course includes how to analyze and prescribe training requirements, to meet individual developmental needs of trainees, to properly document individual trainee performance and the incident training program. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 156 AIR OPERATIONS BRANCH Director S-470 – 2 Units (P/NP Option)
Class Hours: 40 lecture total
This course of study presents a detailed study of the ICS Aviation Organization. It includes understanding the latest Regional Aviation Program and direction, the ability to apply the aviation tools and techniques needed in the suppression of wildfires, application of the principles of safety when using aviation resources, recognition of the importance of following aviation regulation when using call-when-needed aircraft, and the interaction among the aviation organization on an incident level. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 157 ADVANCED WILDLAND FIRE BEHAVIOR CALCULATIONS S-490 – 2 Units (P/NP Option)
Class Hours: 40 lecture total
This course of study is the fourth National Wildfire Coordinating Group course in wildland fire behavior. This course is designed to give state-of-the-art capability to determine inputs for fire behavior determination and in-depth knowledge of interpretations of model outputs. The material presented teaches participants to project fire perimeter growth based on weather predictions and knowledge of fuels and topography. A variety of fire scenarios are presented for participants to make fire behavior calculations and interpretations. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 158 FACILITATIVE INSTRUCTOR M-410 – 2 Units
Class Hours: 40 lecture total (when offered in the Distance Education format, hours will total 112)
This course of study is to provide experienced wildland firefighting personnel with technical competence in fire management and other disciplines to become effective wildland fire education instructors. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov). This course may be offered in a distance education format.

FTWO 160 HAZARDOUS MATERIALS FIRST RESPONDER UPDATE – 5 Units (P/NP Option)
Class Hours: 9 lecture total
This course of study prepares the student to respond to a Hazardous Materials incident in a safe and competent manner and be able to function at an operational level. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 161 MEDICAL FIRST RESPONDER UPDATE – 5 Unit (P/NP Option)
Class Hours: 9 lecture total
A course of study that provides an understanding of the fuel flammability issue in predicting wildland fire behavior. The course presents information on how to predict fire behavior in wildland fire situations using flammability variations by time and aspect, learn how to analyze fire situations, to communicate evaluations, and to use logic in making field fire behavior predictions, and to develop the ability to do a rapid assessment of the fire environment. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWO 162 CAMPBELL PREDICTION SYSTEM – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
A course of study of wildland fire behavior that meets the fire behavior prediction criteria in the Supervised by the United States Forest Service for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 110 PRESCRIBED FIRE FOR BURN BOSSES RX-300 – 3 Units (P/NP Option)
Class Hours: 44 lecture/lab total
This course of study identifies the requirements and components for developing burn prescriptions and operational plans. It includes identification of burning techniques that need be applied to meet burn plan requirements, and how to execute the operational plan by meeting local management objectives, smoke dispersal, and visibility objectives within public health standards. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).
FTWP 111 INTRODUCTION TO WILDFIRE PREVENTION P-101 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study is to provide the student with an introduction to wildland fire prevention. The role of wildland fire prevention continues to be important in order to protect property, prevent loss of life, and reduce undesirable damages to property and natural resources. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 112 INSPECTING FIRE PRONE PROPERTY P-110 – .5 Unit (P/NP Option)
Class Hours: 9 lecture total
This course of study is to provide the student who has little or no experience in inspecting property, how to conduct inspections of fire prone property, including houses and surrounding structures in forested or rural areas. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 113 CALIFORNIA BASIC FIRE PREVENTION P-140 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study presents the information necessary for the student to be able to function as a fire prevention technician in the prevention of wildland fires. This course presents the responsibilities of fire prevention personnel, the role of Cooperative Forest Fire Prevention, development of a sign and poster plan, interagency cooperation, the role of the National Fire Danger Rating System and fire prevention, and how to conduct inspections of residential and commercial operations. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 114 WILFIRE ORIGIN AND CAUSE DETERMINATION P-151 – 1.5 Units (P/NP Option)
Class Hours: 18 lecture/27 lab total
This course of study presents the information necessary for the student to be able to conduct a wildland fire investigation. This course includes how to identify and collect evidence, equipment and supplies to conduct a wildfire investigation, record information about the fire, determine the origin of the fire, determine the cause of the fire, properly collect and preserve evidence, interview witnesses and obtain suspect information, prepare and write reports, and how to present testimony before a judge and/or jury. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 115 INTRODUCTION TO INCIDENT INFORMATION S-203 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study provides the introductory information necessary for the student to be able to function as a Public Information Officer on a non-complex wildfire incident. This course includes a description of a Type 3 Information Officer, the kinds and sources of information needed, how to gather and distribute information to meet the needs of print and electronic media, internal audiences, cooperators, communities, landowners, homeowners, local government leaders, and the steps and materials needed to operate an information center and field work site. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 117 INTERMEDIATE FIRE PREVENTION P-240 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study presents additional wildland fire prevention information required for the fire prevention technician. The materials presented include application of federal and state fire laws, an overview of national and regional fire programs and their focus for the future, and an overview of fire prevention planning and its significant components at district and forest level. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 120 WILDLAND FIRE PREVENTION PLANNING P-301 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study is designed for fire managers, fire prevention specialists and planning officers, and other persons who have fire prevention planning responsibility. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 121 WILDLAND FIRE PREVENTION MARKETING P-303 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study is designed to provide the field Fire Prevention Specialist with the necessary tools to develop a wildfire prevention-marketing plan. It includes methods to generate ideas and provide information to assist in the development of a successful wildfire prevention-marketing program. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 122 ADVANCED FIRE PREVENTION P-340 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study presents advanced techniques for the wildland fire prevention officer. It includes a definition of fire’s role in ecosystem management, application of the principles of ecology, sociology, economics, communications, and marketing, to the development and implementation of a fire protection plan, and demonstrate how to gain support for the fire protection plan from management and adjacent landowners. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

FTWP 123 INTRO. TO FIRE EFFECTS RX-340 – 2 Units (P/NP Option)
Class Hours: 36 lecture total
This course of study presents an understanding of land use activity and controlled fire situations. This course includes a description of fire as an ecological process, applications and limitations of fire use, first order fire effects and how to measure them, and the interaction of fire characteristics on natural and cultural resources components that determines first order fire effects. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employees recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).
States Forest Service NWCG 310-I standards). This document changes frequently. Students must ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWP 124 INFORMATION OFFICER S-403 – 2 Units (P/NP Option)**
Class Hours: 36 lecture total
This course of study presents the information necessary for the student to be able to function as an Information Officer in a wildland fire. The course includes news release issues, inquiries from media, participate in briefings, meetings, special sessions as a member of the incident management team, and prepare and disseminate information internally to personnel on incident and appropriate agency offices. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employee recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FIRST AID/CPR/EMT (FAID)**

**FAID 130 PUBLIC SAFETY FIRST AID (EMS) – 1 Unit**
Class Hours: 9 lecture/27 lab total
This course meets Public Safety Training Standards covered by the U.S. Department of Transportation and is recognized by the local EMS Agency.

**FAID 132 EMERGENCY MEDICAL RESPONDER (EMR) – 2 Units**
Class Hours: 27 lecture/27 lab total
This course teaches techniques in emergency medical care for the First Responder, which includes Automatic External Defibrillator training. This course also meets Public Safety Training Standards covered by the U.S. Department of Transportation curriculum and approved by the local EMS agency. Note: Students must make application through NorCal E.M.S. for certification.

**FAID 133 CERTIFICATION CPR FOR THE PROFESSIONAL RESCUER – .5 Unit (P/NP Option)**
Note: Meets criteria for either the American Red Cross or American Heart Association.
Class Hours: 9 lecture total
This course will cover CPR and how to treat for foreign body obstruction in adults, children, and infants. Designed for the professional responder. Upon successful completion of this course, students may apply to be certified in CPR by the agency having jurisdiction.

**FAID 134 RECERTIFICATION CPR FOR THE PROFESSIONAL RESCUER – .5 Unit (P/NP Option)**
Class Hours: 9 lecture total
This course will cover CPR and how to treat for foreign body obstruction in adults, children, and infants. Designed for the professional responder who needs recertification. Upon successful completion of this course, students may apply to be re-certified in CPR by the agency having jurisdiction. This course may be repeated any number of times for credit by persons who are legally mandated to meet training requirements as a condition of paid or volunteer employment.

**FAID 175 EMERGENCY MEDICAL TECHNICIAN 1 BASIC – 3.5 Units**
Prerequisite: A grade of C or higher in FAID 133, Certification CPR for the Professional Rescuer or any course equivalent to the 2005 American Heart Association’s Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Vascular Care at the Healthcare Provider Level. Contact Fire Technology Program for question on prerequisites.
Notes: 1. Ten hours of clinical experience at a hospital emergency room or on an ambulance or an authorized rescue squad will be required. Some providers in the area have requirements for participation in ambulance observation time. 2. American Medical Response requires proof of a current TB skin test, Hepatitis vaccine, vaccination, or declination. A proof of vaccination, past history of or titer for MMR. Proof of Tetanus vaccination less than ten years old and either a past history of or a titer for Varicella (Chicken Pox). Check with the instructor for details.
2. State certification as an EMT requires that the student is at least 18 years old, has a current “Healthcare provider” CPR card or “CPR for the Professional Rescuer” CPR card, passed the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FTWP 126 SMOKE MANAGEMENT TECHNIQUES RX-410 – 2 Units (P/NP Option)**
Class Hours: 36 lecture total
This course of study is for experienced Prescribed Fire Managers and Prescribed Fire Behavior Analysts, and presents in detail the legal, professional, and ethical reasons for managing smoke. Note: While any student can take this course, for National Wildland Coordinating Group Certification, the student must meet a complex set of prior training, prior certification, field trainee assignments, previous education requirements and current employee recommendations for certification (as stated in the United States Forest Service NWCG 310-I standards). This document changes frequently. Students shall ensure that they meet the current NWCG 310-I standards for this course if they desire to receive a course completion certificate. A copy of NWCG 310-I can be found in the Fire Technology Division or at the National Interagency Fire Center Web Site (NIFC.gov).

**FAID 197 SPECIAL TOPICS IN FIRST AID/CPR/EMT – 5-.2 Units**
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in first aid/CPR/EMT. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

**FAID 198 SPECIAL SKILLS TOPICS IN FIRST AID/CPR/EMT – 5-.2 Units**
(P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in first aid/CPR/EMT. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

**FRENCE (FREN)**

**FREN 1 ELEMENTARY FRENCH – 5 Units (P/NP Option)**
Class Hours: 90 lecture total
This introductory course is designed to give the student intense practice in speaking and listening to French, and reading and writing in French, with additional emphasis on grammar and pronunciation. The class will focus on communication relating to daily life and routine activities, such as people and places, family life, weather, leisure-time activities, and the foods we eat. Also, students are introduced to the culture of French-speaking people.

**FREN 2 ELEMENTARY FRENCH – 5 Units (P/NP Option)**
Class Hours: 90 lecture total
In this continuation of Elementary French, there is continued emphasis on listening to oral French and on speaking the language, along with writing and reading French. Through their language skills and vocabulary, improving their ability to ask and answer questions, to discuss daily life, events in the past or present, travel, leisure-time activities and shopping. Students will read short texts about French history and culture, as well as watch videos about French-speaking countries.

In the event of a discrepancy between the online edition of the catalog and the printed version of the catalog, the online version is the official version.
FREN 3  INTERMEDIATE FRENCH – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in FREN 2, or Foreign Language Placement Level 3 or higher
Class Hours: 54 lecture total
A thorough review of basic communication skills (speaking, listening, reading, and writing), and formal study of the patterns of French. Students continue to strengthen their speaking skills as they work toward mastery of the language. The course includes reading expository writing along with pieces of French literature.

FREN 4  INTERMEDIATE FRENCH – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in FREN 3 or Foreign Language Placement Level 4 or higher
Class Hours: 54 lecture total
The fourth semester of the language emphasizes conversation, contemporary literature, French culture and composition. Reading selections include poetry, theatre, and journalistic expressions.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

GIS 1  SURVEY OF DIGITAL MAPPING – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in GIS 1, or demonstrated general computer literacy
Class Hours: 18 lecture total (when offered in the Distance Education format, hours will total 54)
This course will give students a basic overview of digital mapping technologies, including geographic information systems (GIS), global positioning systems (GPS), Internet mapping services (IMS), and other spatially-oriented solutions.

GIS 2  INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS (formerly NR 84) – 3 Units (P/NP Option)
Advisory: A grade of C or higher in CIS 1, or demonstrated general computer literacy
Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)
Geographic information systems (GIS) are used in a range of fields including urban planning, public health, natural resource management, and emergency response. This course will introduce students to fundamental capabilities of GIS along with the underlying conceptual framework. Students will learn about the essential qualities of GIS data, including spatial and attribute characteristics. Essential procedures for accessing, updating, and summarizing attribute tables will be undertaken. Students will work with different GIS data formats and their integration through georeferencing. Students will produce effective and well designed map layouts. Basic analysis through the use of queries and overlays will also be covered. ArcGIS software will be used for the course. This course may be offered in a distance education format.

GIS 20  SPATIAL DATABASES – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in GIS 10
Class Hours: 9 lecture/22 lab total (when offered in the Distance Education format, hours will total 54)
This course covers database principals, structure and processes as they apply to geographic information systems (GIS). Data management is a critical aspect of GIS. Students will work with various data to learn database fundamentals such as design, indexing, access, and reports. Integration of non-spatial data with GIS data will be a key component of the course. Students will also explore the use of the ArcGIS geodatabase. Microsoft Access and ArcGIS software will be used in the course. This course may be offered in a distance education format.

GIS 21  GIS-CAD INTEGRATION – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in GIS 10 or working experience with CAD or GIS
Class Hours: 9 lecture/27 lab total (when offered in the Distance Education format, hours will total 54)
This course covers computer-aided drafting (CAD) structure, principles and processes as they apply to geographic information systems (GIS). CAD data management is a critical aspect of GIS. Students will work with various CAD data to learn processing and manipulation techniques for displaying and working with CAD data in a GIS. Preparation and georeferencing of CAD data will be key components of the course. AutoCAD and ArcGIS software will be used in this course. This course may be offered in a distance education format.

GIS 22  GIS DATA CREATION (formerly GIS 13) – 2 Units (P/NP Option)
Advisory: A grade of C or higher in GIS 19 and a grade of C or higher in GIS 20
Class Hours: 18 lecture/54 lab total (when offered in the Distance Education format, hours will total 108)
This course explores essential methods for GIS data creation. Students will implement common procedures to meet GIS data creation objectives. Digitizing and editing will be implemented using a variety of software procedures, tools and techniques. Data creation will also be implemented through geocoding of address and coordinate data. Global positioning systems (GPS) technologies for GIS data creation will be undertaken using both mapping-grade and mobile GIS methods. Students will perform pre-planning, field and post-processing procedures for effective GIS data creation. Measures and methods of quality assurance and quality control will be emphasized. This course will use ArcGIS software, along with Trimble GPS hardware and software. Course may be offered in distance education format.

GIS 23  RASTER GIS – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in GIS 10 or working experience with GIS
Class Hours: 9 lecture/27 lab total (when offered in the Distance Education format, hours will total 54)
This course provides students skills for access, representation and manipulation of raster data in a range of different formats. Students will learn various methods for the display of raster data. Students will perform manipulation and analysis of raster datasets, and an introduction to GIS as a foundation GIS dataset will be covered. This course may be offered in a distance education format.

GIS 24  CUSTOMIZING GIS – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in GIS 10
Class Hours: 9 lecture/27 lab total (when offered in the Distance Education format, hours will total 54)
This course introduces students to customizing GIS applications to improve efficiency for specific editing and data manipulation scenarios. Several methods for customizing ArcGIS will be introduced including loading pre-built third party tools, creating custom toolbars, custom buttons, geoprocessing toolboxes, geoprocessing models and script tools. Preparation and management of data, along with project documentation, will also be covered. Students will apply these skills through the design and implementation of a project. Projects will be presented to other GIS users. ArcGIS, ArcPad, and ArcIMS will be the primary software used for the course. This course may be offered in a distance education format.

GIS 25  GIS PROJECTS – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in GIS 10 or working GIS experience
Class Hours: 9 lecture/27 lab total (when offered in the Distance Education format, hours will total 54)
This course provides students with skills in GIS project design, implementation and management. Successful GIS projects require a systematic approach to identification of system objectives, required resources and implementation approach. Acquisition and management of data, along with project documentation, will also be covered. Students will apply these skills through the design and implementation of a project. Projects will be presented to other GIS users. ArcGIS, ArcPad, and ArcIMS will be the primary software used for the course. This course may be offered in a distance education format.

GIS 94  GEOGRAPHIC INFORMATION SYSTEMS WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksites Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student's major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

GIS 97  SPECIAL TOPICS IN GEOGRAPHIC INFO. SYSTEMS (GIS) – 1-4 Units (P/NP Option)
Class Hours: 18 lecture hours per unit
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in Geographic Information Systems (GIS). A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for agriculture, natural resources, and environmental horticulture majors; open to anyone with an interest in the topic. This course may be repeated three times for a total of four enrollments since subject matter varies.

GEOGRAPHY (GEOG)

GEOG 1A  PHYSICAL GEOGRAPHY – 4 Units
Class Hours: 54 lecture/54 lab total
This course explores Earth's physical systems, their dynamic processes, and surface expressions. Topics include weather, climate, hydrology, geotectonics, geomorphology, and the atmosphere. Attention is given to spatial patterns and impacts of human activities. Lab activities will explore scientific data, its collection, display, and interpretation, for a range of Earth processes and formations. Scientific method of inquiry is employed through the development, testing, and defense of hypotheses to explain observed phenomena. Physical properties of radiation, temperature, pressure, gases, humidity, flowing water, and rocks, will be observed, measured and interpreted.
GEORGE 1B CULTURAL GEOGRAPHY – 3 Units
Advisory: A grade of C or higher in ENGL 280 or English Placement Level 5 or higher.
Class Hours: 54 lecture total
This course examines the relationships among world cultures in order to investigate population, religion, language, and other societal characteristics. It also analyzes spatial differences among cultures including housing types, family usage of space within the house, and city planning. The role that physical geography plays in determining cultural attitudes and the influence that cultural geography has on the natural ecology are also discussed.

GEORGE 2A FIELD GEOGRAPHY (PHYSICAL) – 1 Unit (P/NP Option)
Note: Field excursions will vary throughout California, Southern Oregon and Western Nevada over a three-day weekend or over a series of three Saturdays.
Class Hours: 9 lecture/27 lab total
Field observation of physical processes and formations are essential to the study of geography. Landforms, waters resources, erosion hazards, soil conditions, and vegetation patterns are among the topics that illustrate the interactions between humans and the environment. Each course offering will emphasize a particular topic in physical geography, with unique field sites selected to demonstrate the topics in question. Students will be exposed to a range of field techniques including sampling and the use of various types of measurement equipment. Field excursions will vary throughout California, Southern Oregon and Western Nevada over a three-day weekend or over a series of three Saturdays. Students will also attend three 3-hour lecture sessions. Additional field trip fees for lodging, entrance fees and related items will be specified in the course schedule.

GEORGE 2B FIELD GEOGRAPHY (CULTURAL) – 1 Unit (P/NP Option)
Note: Field excursions will vary throughout California, Southern Oregon and Western Nevada over a three-day weekend or over a series of three Saturdays.
Class Hours: 9 Lecture/27 Lab total
Field observation and analysis of human landscapes is essential to the student cultural geography. Cultural landscapes, including human and transportation systems, wealth disparities, cultural practices and historical legacies will be explored in the field. Each course offering will emphasize a particular topic in cultural geography, with unique field sites selected to demonstrate the topic in question. Students will be exposed to field techniques including note taking, interviews, field mapping, and document research. Field excursions will vary throughout California, Southern Oregon and Western Nevada over a three-day weekend or over a series of three Saturdays. Students will also attend three 3-hour lecture sessions. Additional field trip fees for lodging, entrance fees and related items will be specified in the course schedule.

GEORGE 5 DIGITAL PLANET – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher.
Class Hours: 54 lecture total (when offered in the Distance education format, hours will total 162)
This course will explore the technologies and the societal implications of our digital planet. Specific attention is given to geospatial technologies which provide locational services, imagery, mapping and other capabilities. In addition to use in industry, government, and non-profit sectors, these technologies are also common on mobile devices and in Internet applications. Investigation of issues related to society, population, and geo-politics will be undertaken using a variety of Internet-based technologies that are ideally suited to analyzing sociological data and geographic patterns. This course will also consider issues of geographic perception, social justice, equity, privacy, and representational accuracy of our digital planet. This course may be offered in a distance education format.

GEORGE 7 CALIFORNIA GEOGRAPHY – 3 Units
Advisory: A grade of C or higher in ENGL 280 or English Placement Level 5 or higher.
Class Hours: 54 lecture total (when offered in the Distance education format, hours will total 162)
This course provides an introduction to California’s diversified geography including climate, landforms, natural vegetation, and mineral and water resources. The cultural landscapes of ethnic diversity, our Native American past, urban and agricultural regions and the economic challenges of the future are also examined. California Geography examines these topics, their spatial distributions and their impact on the environment. Class includes a Saturday field trip; instructors offering include a virtual field trip. This course may be offered in a distance education format.

GEORGE 8 WORLD REGIONAL GEOGRAPHY – 3 Units
Advisory: A grade of C or higher in ENGL 280 or English Placement Level 5 or higher.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course will introduce students to the world’s major geographic regions. This course will increase student awareness of geographic concepts by examining the physical, cultural, economic and political characteristics of the major realms of the world through the unifying concept of the geographic region. This course will illustrate the importance of the world’s geographic regions and how they interrelate. The location of important geographic features such as mountain ranges, rivers, countries, and major cities will be an important part of the course. This course may be offered in a distance education format.

GEORGE 11 MAP PRINCIPLES – 1 Unit (P/NP Option)
Class Hours: 18 lecture total (when offered in the Distance Education format, hours will total 54)
This course will cover essential map principles. A variety of different types of maps and their uses will be explored, along with methods of data collection and representation employed. Students will explore the concept of map scale and its applicability to using maps for measurement. Map projections, coordinate systems, and datums will be explored with respect to their effective use and potential pitfalls. Map abstraction, symbology, and cartographic principles will be covered as well. This course may be offered in a distance education format.

GEOLGOGY
See Earth Science – ECSI

GERMAN (GERM)
Two years of high school foreign language with grades of "C" or better is equivalent to one semester of foreign language at Shasta College.

GERM 1 ELEMENTARY GERMAN – 5 Units (P/NP Option)
Class Hours: 90 lecture total
This course is designed to give the student training in spoken German at a basic level, including some reading, writing, and much speaking. Students gain aural comprehension level of German through basic conversation and listening skill development. Customs and culture are also emphasized.

GERM 2 ELEMENTARY GERMAN – 5 Units (P/NP Option)
Prerequisite: A grade of C or higher in GERM 1, or Foreign Language Placement Level 2 or higher.
Class Hours: 90 lecture total
This course takes the student on to a more proficient level of German. Comprehension and speaking levels are increased through participation in many oral activities (role playing, skits, plays, etc). Further information on culture and traditions are provided, including information regarding Germany’s position in the world today.

GERM 3 INTERMEDIATE GERMAN – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in GERM 2 or Foreign Language Placement Level 3 or higher.
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher.
Class Hours: 54 lecture total
This course is designed to give the student advanced training in German pronunciation, essentials of German grammar, reading, writing and speaking. Composition and literature are introduced. The student also learns about customs and culture of German-speaking people.

GERM 4 INTERMEDIATE GERMAN – 3 Units (P/NP Option)
Prerequisite: A grade of C or higher in GERM 3 or Foreign Language Placement Level 4 or higher.
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher.
Class Hours: 54 lecture total
This course builds on the higher language skills acquired in GERM 3 with greater emphasis on the linguistic diversity of the language. Emphasis is placed on a more extensive study of composition and conversation together with greater stress on extensive reading in German literature.

GERONTOLOGY (GERO)

GERO 24 ETHNIC DIVERSITY AND AGING – 2 Units
(P/NP Option)
Class Hours: 36 lecture total
This course examines general trends in minority aging with a look at how culture influences their utilization of available resources. The role of diet and nutrition are studied. Topics include stereotypes, social bonds, environmental factors, sexuality, mental health, diet, nutrition, and utilization of available resources.

GERO 64 COPING WITH MENTAL ILLNESS AND DEMENTIA IN OLD AGE – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course provides a basis for those interested in understanding more about different mental health issues of individuals during the aging process. The course will explore how the healthy brain functions. Information will be given on how to identify mental disease in the elderly along with treatments available. The role of diet and nutrition are studied. Topics include stereotypes, social bonds, environmental factors, sexuality, mental health, diet, nutrition, and utilization of available resources.

GERO 75 DEATH AND DYING – 3 Units (P/NP Option)
Note: Upon successful completion of this course, licensed nurses may be eligible to receive 45 CE hours under BRR 396.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course investigates the beliefs, attitudes, anxieties and behaviors associated with dying and death. Various theoretical, cultural and historical perspectives on the subject will be included, as well as information on bereavement, life-
threatening illnesses, euthanasia and suicide. Students will be encouraged to integrate their relevant experiences and particular focus on issues throughout the course. This course may be offered in a distance education format.

GERO 77 FAMILY DYNAMICS AND AGING – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course examines older persons in a family context. The dynamics of family ties throughout life will be explored. Topics include the evolution of sibling relations and intimate ties will be covered, the costs and benefits of caregiver roles will be assessed as well as the effects of divorce and remarriage in later life.

HEALTH (HLTH)
HLTH 1 HEALTH AND WELLNESS (formerly PE 1, HPE 11) - 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course focuses upon those elements of human behavior which influence the health status of both the individual and the community. Topics include personal fitness, nutrition, sexuality, sexually transmitted disease, drug dependence including alcohol and tobacco. Also included are topics dealing with lifestyle disease, especially cancer, cardiovascular disease and lung disease.

HLTH 2 NUTRITION AND FITNESS (formerly PE 2, HPE 17) – 3 Units (P/NP Option)
Class Hours: 54 lecture
Analysis and evaluation of current practices and theories regarding nutrition and exercise, and their relationship to weight control and physical fitness. Each student will learn to prepare an individual physical assessment, exercise prescription and nutritional analysis to promote optimum healthful living.

HLTH 3 SUBSTANCE ABUSE AWARENESS (formerly PE 3, HPE 57) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
An introductory course for individuals who wish to increase their knowledge and understanding of substance abuse and chemical addiction. This course will introduce students to a variety of substances that can become abused and can lead to addiction. The substances covered in this course include: Tobacco (including smokeless tobacco), alcohol, street/recreational drugs, performance enhancing drugs, and sexual stimulants. Information will focus on the physical and societal affects of the misuse and abuse of these substances and methods that can lead to the control and/or elimination of use of these substances.

HLTH 10 BEGINNING ATHLETIC TRAINING (formerly PEAT 1, HPE 91) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Theory and practice in care and prevention of athletic injuries. Course will cover basic injury prevention, recognition, emergency care and treatment of injuries. Students will have the opportunity to become certified in an American Red Cross "Sport Safety Training" course.

HEALTH OCCUPATIONS (HEOC)
See Also: REGN, and VOCN
HEOC 10 APPLIED PHARMACOLOGY (formerly HEOC 197) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
HEOC 10 is designed to introduce the principles of applied pharmacology to the current or prospective nursing and allied health student. Students will explore the names, classifications, actions, uses, side effects, pharmacokinetics, pharmacodynamics, contraindications, and drug to drug interactions of medications presented using a body systems approach. Implications for medication administration are discussed using a case study approach. Topical pharmacological issues will be discussed. Additionally, students will learn how to use a drug guide to gain basic knowledge about medications and to prepare patient drug education plans. This course may be offered in a distance learning format.

HEOC 94 HEALTH OCCUPATIONS WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

HEOC 100 PREPARING FOR A NURSING CAREER – 2 Units
Class Hours: 36 lecture total (when offered in the Distance Education format, hours will total 108)
This course presents the role of the Associate Degree Nurse and the Vocational Nurse within various healthcare settings. Students will assess their own learning styles and compare their abilities to those required in nursing. Critical thinking skills will be introduced and applied to various scenarios using the knowledge base acquired from prerequisite courses and life experiences. Written, verbal, and math skills will be emphasized, along with exercises in examination, presentation, and interview skills. Learning resources, study strategies and stress management will be addressed to prepare the Associate Degree Nursing and Vocational Nursing candidate for the rigors of being a nursing student. This course may be offered in a distance learning format.

HEOC 101 NURSE UPDATE – 5 Units
Limitation on Enrollment: Call or Licensed Vocational Nurse
Class Hours: 54 lecture/108 lab total
This course has been designed to orient and update registered nurses and licensed vocational nurses on current techniques of nursing care including medications, I.V. therapy, nursing care plans and team leader duties. Supervised hands on training. Course content consists of the RN/LVN role and nurse duties upon completion of the course. The program allows for individual differences of learning. Approved for 30 hours Continuing Education credit.

HEOC 160 STRESS MANAGEMENT (formerly HEOC 185) – 2 Units
Class Hours: 36 lecture total
This class is designed to teach students the skills needed to recognize that all stress is not working against us but perhaps driving us by our beliefs and values and how they affect the choices we make in dealing with stress. It will provide students with the opportunity to practice a variety of coping techniques that will assist them in making their lives less stressful. These techniques will include relaxation, the development of a support system, effective communication and listening. Students will gain the knowledge necessary to recognize their uniqueness and the importance of developing their personal power. Upon completion of this course, students will have the skills necessary to know how choices affect the quality of their lives and how to bring about positive life-style change.

HEOC 180 NURSE AIDE/HOME HEALTH AIDE – 13 Units
Limitation on Enrollment: Students must meet health and safety clinical requirements. See www.shastacollege.edu/HSUP/NA-HHA/generalinformation or call 530-339-3600 for detailed information on requirements.
Note: All students enrolling in a NA/HHA Program must be fingerprinted and cleared of all criminal convictions before they can be certified.
Class Hours: 144 lecture/288 clinical total
Course is designed to prepare students to perform the basic nursing skills required in acute hospitals, long-term care facilities, and home health agencies. Special emphasis is placed on health care provisions and modifications in the community health settings. The State Department of Health Services approves this course, and certificates will be issued upon successful completion of the course. Students are then eligible to apply for the state competency examination for certification.

HEOC 181 NURSE AIDE – 9 Units
Limitation on Enrollment: Students must meet health and safety clinical requirements. See www.shastacollege.edu/HSUP/NA-HHA/generalinformation or call 530-339-3600 for detailed information on requirements.
Note: All students enrolling in a NA Program must be fingerprinted and cleared of all criminal convictions before they can be certified.
Class Hours: 96 lecture/192 clinical total
This course is designed to prepare students to perform the basic skills required of a nurse aide. Course content includes principles of theory, laboratory, and clinical experience in long term care facilities. The course is approved by the State Department of Health Services. A certificate will be issued upon successful completion of the course. Students are then eligible to apply for the state competency examination for certification.

HEOC 186 HOME HEALTH AIDE – 3 Units
Limitation on Enrollment: Nurse Aide Certification
Class Hours: 36 lecture/54 lab total (2 weeks)
Designed to prepare Certified Nurse Assistants to perform the basic nursing skills required in the home. The State Department of Health Services has approved this course. Students will be awarded a certificate upon successful completion of the course.

HEOC 192 PERIOPERATIVE NURSING – 3 Units
Limitation on Enrollment: Valid California RN license
Class Hours: 18 lecture/108 lab total
This course is designed to provide the licensed RN with an introduction to both the theory and clinical aspects of the perioperative nursing role. Theory will encompass a scope of topics from exploring the surgical setting to professionalism and ethics in the perioperative environment. Each student will arrange a clinical rotation in an approved OR to experience the various aspects of the RN’s role in the perioperative environment. This course is designed to provide the licensed RN with a limited OR experience to allow them to explore the field of OR nursing and to provide an opportunity to move into the field of OR nursing.
HEOC 194 OBSTETRICAL NURSING UPDATE – 3 Units
Lectures: 54 lecture total
Advisory: May advise certain clinical experience or length of time working as a nurse depending upon the course.

Class Hours: 9-54 lecture total
This course is designed to provide students an opportunity to explore a variety of topics and concepts not covered in other Health Occupations courses. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

HEOC 196 SPECIAL TOPICS IN HEALTH OCCUPATIONS THEORY – 5-3 Units (P/NP Option)
Advisory: May advise certain clinical experience or length of time working as a nurse depending upon the course.

Class Hours: 54 lecture total
This course is designed to give students an opportunity to explore a variety of topics and concepts not covered in other Health Occupations courses. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

HIST 1A HISTORY OF WESTERN CIVILIZATION – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A survey of the origins and development of civilization in the western world from pre-history to 1600, with special emphasis on institutions, thought, and culture. The course is designed to show the continuity of western civilization and to explore the heritage of the present generation. This course may be offered in a distance education format.

HIST 1B HISTORY OF WESTERN CIVILIZATION – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A survey of the development of civilization in the western world from 1600 to the present, with special emphasis on institutions, thought, and culture. The course is designed to show the continuity of western civilization and to explore the heritage of the present generation. This course may be offered in a distance education format.

HIST 2 WORLD CIVILIZATION TO 1500 C.E. – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A comparative survey of the major ancient world civilizations which developed between 3500 B.C.E. and 1500 C.E. Political institutions, religious ideologies, rise and fall of empires, and the major cultural innovations of each of the major world civilizations will be considered. This course may be offered in a distance education format.

HIST 3 WORLD CIVILIZATION: 1500 to Present – 3 Units
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A survey of the development of the major civilizations of the world from 1500 to the present. The focus is on the political, economic, social, intellectual and religious forces present in the rise of Africa, the Americas, Asia and Europe from 1500 to the present day. This study of the dynamic interaction of peoples and cultures will give a multi-perspective view of world history. This course may be offered in a distance education format.

HIST 17A UNITED STATES HISTORY – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is a survey of the history of the United States from Pre-Columbian Peoples to the end of Reconstruction. Topics include contact and settlement of America, the movement toward independence, the formation of a new nation and Constitution, westward expansion and manifest destiny, the causes and consequences of the Civil War, and Reconstruction. This course satisfies the CSU requirement for US History (US-1). This course may be offered in a distance education format.

HIST 17B UNITED STATES HISTORY – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is a survey of the history of the United States from 1877 to the present. The course covers the rise of industrialization, the expansion of America into world affairs, the causes and results of the Great Depression, the world wars of the 20th century, the Cold War, and post-9/11 America. This course satisfies the CSU requirement for US History (US-1). This course may be offered in a distance education format.

HIST 25 AFRICAN AMERICAN HISTORY – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is a survey of the historical development and contributions of African Americans in the United States. Topics include African civilizations, the African slave trade and Diaspora, the development of African American culture, colonial and Antebellum slavery, Emancipation and Reconstruction, Jim Crow, the Harlem Renaissance, civil rights, African Americans at war, and the concepts of race, ethnicity, race relations, and social activism. This course may be offered in a distance education format.

HIST 35 HISTORY OF MEXICAN AMERICANS – 3 Units
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

Class Hours: 54 lecture total
This course traces the cultural, economic, literary, and political history of the Mexican and Mexican American in the U.S. up to the present. Focus will be on the development and nature of Mexican and Chicano culture and the Chicano movement, emphasizing especially significant historical movements and their contribution to understanding current cultural problems. Socioeconomic and political forces that shaped U.S. policies and practices in relation to the Mexican immigrant and Mexican Americans will be developed.

HIST 36 HISTORY OF THE FAR EAST – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

Class Hours: 54 lecture total
An introduction to the contemporary Far East. Designed primarily for the student who has had no previous contact with the region. Survey of the people, cultures, economics, and current problems, with major emphasis on China and Japan. The majority of the survey deals with events since 1800.

HIST 38 HISTORY OF WORLD RELIGIONS – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6, or higher or a grade of C or higher in ESL 138

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A course designed to give the student an understanding of the beliefs systems and historical development of the world’s religions and an appreciation of the contribution of religion to the cultural heritage in which he lives. This course may be offered in a distance education format.

HIST 40 HISTORY AND GOVERNMENT OF CALIFORNIA – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6, or higher or a grade of C or higher in ESL 138

Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A survey of the development of California from the Spanish period to the present day. Emphasis will be placed on contemporary development. The role of government is given particular attention. This course may be offered in a distance education format.
HIST 55  HISTORY OF THE AMERICAN FRONTIER – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6, or  
higher, or a grade of C or higher in ESL 138  
Class Hours: 54 lecture total (when offered in the Distance Education format,  
hours will total 162)  
This course is designed to cover the aspects of frontier life from 1600 to 1900 in  
America. The course covers traditional attitudes such as manifest destiny and  
the Protestant ethic on the frontier, as well as policies of the frontier like the  
Indian policy after 1830. The course is broken down into eras of frontier  
movement and examines cultural evolution on the frontier. The course ends with  
a discussion of the "Wild West", which is post-Civil War and culminates with  
acquisition of areas beyond the continental United States. This course may be  
offered in a distance education format.

HIST 57  RUSSIAN HISTORY – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or  
higher, or a grade of C or higher in ESL 138  
Class Hours: 54 lecture total (when offered in the Distance Education format,  
hours will total 162)  
A general survey of the Russian State from the beginning of the Kievan era  
(1054) to modern Soviet Russia. Included will be an analysis of the cultural,  
religious, economic, and social institutions of each century. Particular emphasis  
will be placed on contemporary Soviet Russia. Contributions of individual  
Russian Leaders will be discussed. This course may be offered in a distance  
education format.

HOSP 10  INTRODUCTION TO THE HOSPITALITY INDUSTRY – 3 Units (P/NP Option)  
Class Hours: 54 lecture total (when offered in the Distance Education format,  
hours will total 162)  
This is a course in experiencing Shasta County history through oral interviews,  
responses and commentary. Emphasis is placed on interpreting events, major  
industries, places and people within Shasta County. The class will hear  
performances from political, economic, and cultural leaders. Students will learn  
how to collect, interpret and record history in order to preserve and communicate  
local historical knowledge.

HOSP 35  COMPUTER APPLICATIONS IN THE HOSPITALITY INDUSTRY – 3 Units (P/NP Option)  
Class Hours: 54 lecture total (when offered in the Distance Education format,  
hours will total 162)  
Provides an overview of the information needs of lodging properties and food  
service establishments; addresses essential aspects of computer systems, such  
as hardware, software, and generic applications; focuses on computer-based  
property management systems for both front office and back office functions;  
and focuses on computer-based restaurant management systems for both  
service-oriented and management-oriented functions. This course may be  
offered in a distance education format.

HOSP 40  HUMAN RESOURCE MANAGEMENT IN THE HOSPITALITY INDUSTRY – 3 Units (P/NP Option)  
Class Hours: 54 lecture total (when offered in the Distance Education format,  
hours will total 162)  
Practical approach to the problems of human resource management in the  
hotel industry. Introduction to the personnel function; selection and  
placement of personnel; the role of supervision with emphasis on induction,  
training, communications, performance, appraisal, and leadership style. Study  
of age and salary administration; motivation; and discussion of union-management  
relations. This course may be offered in a distance education format.

HOSP 45  RESTAURANTS, HOTELS, AND LAWFUL MANAGEMENT – 2 Units  
Class Hours: 36 lecture total (when offered in the Distance Education format,  
hours will total 108)  
This course explores potential legal issues and pitfalls that might impact the  
hotel industry. The course covers legislation, such as the Civil Rights Act of  
1964, and other federal discrimination laws dealing with employment and sexual  
harassment, Occupational Safety and Health Administration (OSHA) regulations,  
the Family and Medical Leave Act of 1993, the Americans with Disabilities Act,  
the Hotel and Motel Fire Safety Act of 1990, antitrust regulations, the National  
Labor Relations Act, contract and tort law, leases, service agreements, legal  
pitfalls, liability laws, this course is not intended to make the student a legal  
expert on the subject reviewed nor is it intended to be a substitute for the  
services or legal opinion of an attorney. Students will, however, be better able to  
recognize potential legal problems or potential lawsuits, which will assist them  
when consulting with an attorney on strategies to prevent legal issues from  
becoming more serious in their hospitality organization. This course may be  
offered in a distance education format.

HOSP 50  HOSPITALITY MARKETING, SALES AND ADVERTISING – 3 Units (P/NP Option)  
Class Hours: 54 lecture total (when offered in the Distance Education format,  
hours will total 162)  
Application of marketing principles and techniques in the hospitality industry.  
Emphasis on developing an understanding of consumers and using that  
knowledge to provide value and create consumer satisfaction while meeting  
financial goals. This course will also focus on practical sales techniques, proven  
approaches to selling to targeted markets, and advertising’s role in sales.  
This course may be offered in a distance education format.

HOSP 60  HOSPITALITY AND FINANCIAL MANAGEMENT – 3 Units (P/NP Option)  
Class Hours: 54 lecture total (when offered in the Distance Education format,  
hours will total 162)  
This course focuses on the generation and analysis of quantitative information  
for the purpose of planning, control and decision-making by managers at various  
levels in the hospitality industry. Emphasis is placed on the need for and  
use of timely and relevant information as a vital tool in the management process.  
Also examines accounting functions to support hospitality management  
analysis. Special attention on: internal controls, cost-volume profit relationships,  
relevant costs for special decisions, flexible budgets, profit centers and tax  
implications of decisions. This course may be offered in a distance education  
format.

HOSP 65  HOSPITALITY SUPERVISION – 3 Units (P/NP Option)  
Class Hours: 54 lecture (when offered in the Distance Education format, hours  
will total 162)  
This course offers insight into the various aspects of supervision in the  
hotel industry. Supervisory roles, responsibilities, and essential managerial  
skills shall be discussed. The goal of the course is to equip students with the  
Recessary authoritative and decision-making skills to be used in the workplace.  
This course may be offered in a distance education format.

HOSP 94  HOSPITALITY WORKSITE LEARNING – 1-8 Units  
Limitation on Enrollment: Financial aid students must maintain concurrent  
enrollment in seven (7) units which include worksite learning units. Students not  
receiving financial aid do not need to enroll in other courses in order to  
participate in Worksite Learning Classes.  
Class Hours: 75 hours paid or 60 hours non-paid per unit  
The Vocational Worksite Learning course allows the student to gain on-the-job  
experience through employment/volunteerism at an approved job site that is  
acquired by the student and related to the student’s major. A faculty member
supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

**HOSP 97 SPECIAL TOPICS IN HOSPITALITY – .5-.2 Units (P/NP Option)**
**Class Hours:** 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in hospitality. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

**HOSP 98 SPECIAL LAB TOPICS IN HOSPITALITY – .5-.2 Units (P/NP Option)**
**Class Hours:** 27-108 lab total
This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in hospitality. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

**HUMAN SERVICES (HUSV)**

**HUSV 130 PRINCIPLES AND PRACTICES OF RESIDENTIAL CARE COUNSELORS – 3 Units**
**Class Hours:** 54 lecture total
A study of the principles and practices of child care. Research theories identifying developmental planning, developmental needs, separation, creative life, discipline, group process and the job. Concepts will be identified with practical applications and implications for use in the child care setting.

**HUSV 131 CRISIS MANAGEMENT – 3 Units**
**Class Hours:** 54 lecture total
A study of interventions and techniques utilized to provide positive and effective behavior management in residential and acute care setting.

**HUSV 132 INTRODUCTION TO MENTAL DISORDERS – 3 Units**
**Class Hours:** 54 lecture total
A course of study to develop a working knowledge of mental disorders, particularly as described by Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.

**HUSV 133 RESIDENTIAL CARE REGULATIONS – 3 Units**
**Class Hours:** 54 lecture total
An in depth view and working knowledge of licensing of Community Care Facilities. The counselor's role as upholder of regulations as defined in Title 22, Division 6, Community Care Act.

**HUSV 134 RESIDENTIAL CARE PRACTICUM SEMINAR – 2 Units**
**Class Hours:** 36 lecture total
Explore the actual working experiences of counselors working with individuals in residential care. Students will be assisted in converting classroom experiences and knowledge into usable, practical skills for the work place.

**HUSV 135 COUNSELING & COMMUNICATION IN RESIDENTIAL CARE – 3 Units**
**Note:** This course will not train someone to do counseling
**Class Hours:** 54 lecture total
Designed for persons working or wanting to work in residential care facilities. It will provide an overview of basic counseling and counseling skills and theories practiced in residential care facilities. Concepts will be identified and practical applications used to help the student develop an understanding of counseling and communication techniques.

**HUSV 139 CHILD ABUSE PREVENTION - 2 Units**
**Class Hours:** 36 lecture total
Designed for persons who work with children placed in care. It is particularly applicable for residential care workers (counselors) who are responsible for the safety and protection of children on a day-to-day basis. The course work will emphasize the "how to" rather than the "why." It will concentrate on abuse detection, reporting, prevention, communication, and crisis management.

**HUMANITIES (HUM)**

A series of interdisciplinary courses designed to meet Humanities General Education requirements for Transfer and the Associate in Arts Degree. Courses in the Fine Arts, Literature and Philosophy also meet this requirement. See a complete listing of courses in the current College class schedule.

**HUM 2 EXPLORING THE HUMANITIES - 3 Units**
**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours total will be 162)
This course is designed to explore the humanities by examining expression of human values, ideas, concerns, and experience through the arts, literature, media and the social sciences. The reading of important works in the humanities, written

In the event of a discrepancy between the online edition of the catalog and the printed version of the catalog, the online version is the official version.
INDE 150 INTRODUCTION TO ENGINE MACHINING (formerly AUTO 150) – 3 Units
Class Hours: 54 lecture total
This course is designed to introduce the student to the basic fundamentals of the internal combustion engine. The subjects will cover the operation and design of various engine systems and the repair and rebuilding of these engines.

INDE 152 ENGINE MACHINING LABORATORY (form. AUTO 152) – 3 Units
Corequisite: Students must be concurrently enrolled in, or have completed INDE 150 with a grade of C or higher
Class Hours: 162 lab total
This course will introduce the student and provide instruction in the disassembly, cleaning and inspection of the internal combustion engine. The student will be oriented in the use of general and specialty tools used in the rebuilding of internal combustion engines. ASE and AERA based tasks utilize hand and power tools and modern machining equipment. Completion of this course along with INDE 150 will prepare students to become certified in ASE areas A-1, M-1, M-2 and M-3.

INDE 180 ENGINE MACHINIST I (formerly AUTO 180, AUTO 180A) – 4 Units
Prerequisite: A grade of C or higher in INDE 150 and INDE 152, or a grade of C or higher in DIES 164
Note: Basic hand tools required
Class Hours: 36 lecture/108 lab total
This course is designed to give the student instruction in the use of precision equipment required in the reconditioning of modern automotive engines. Students completing this course will have the manipulative skills and the knowledge of the various machine tools required to completely remanufacture automotive engines.

INDE 181 ENGINE MACHINIST II (form. AUTO 180, AUTO 180B) – 4 Units
Prerequisite: A grade of C or higher in INDE 180
Note: Basic hand tools required
Class Hours: 36 lecture/108 lab total
This course will build on the skills obtained in INDE 180, Engine Machinist I, and will provide new skills in the following areas: advanced machining techniques, high performance machines, changing fixtures, maintenance and service of machine tools.

APPRENTICESHIP TRAINING
These classes are for apprentices as well as any person interested in any of the below listed trade areas as a career, and is supervised by the Department of Apprenticeship Standards, State of California. This course is not intended for the student who is interested in any of the below listed trade areas as an avocation. The complete course is ten semesters in duration. A student must consult with the College Apprenticeship Coordinator prior to enrolling.

INDE 161 ELECTRICITY – 2 Units (P/NP Only)
Class Hours: 18 lecture/54 lab total
The course is for electrical apprentices as well as any person interested in the electrical trades. The course is supervised by the Department of Apprenticeship Standards, State of California, and is not intended for the student who is interested in the electrical trade as an avocation. Course contains related technical instruction, supplementary to the apprentice’s on-the-job training, beginning with knowledge of the trade, safety, related mathematics and basic processes and progressing through ten semesters (INDE 162, INDE 163) of related instruction. A student must consult with the College Apprenticeship Coordinator prior to enrolling. Note: This course may be repeated three times for a total of four enrollments since course content varies and skills are enhanced by supervised repetition and practice.

INDE 162 ELECTRICITY – 2 Units (P/NP Only)
Prerequisite: A grade of C or higher in four semesters of INDE 161
Class Hours: 16 lecture/54 lab total
INDE 162 is a continuation of the material taught in INDE 161. The course is for electrical apprentices as well as any person interested in the electrical trades. The course is supervised by the Department of Apprenticeship Standards, State of California, and is not intended for the student who is interested in the electrical trade as an avocation. A student must consult with the College Apprenticeship Coordinator prior to enrolling. Note: This course may be repeated three times for a total of four enrollments since course content varies and skills are enhanced by supervised repetition and practice.

INDE 163 ELECTRICITY – 2 Units (P/NP Only)
Prerequisite: A grade of C or higher in four semesters of INDE 162
Class Hours: 16 lecture/54 lab total
INDE 163 is a continuation of the material taught in INDE 162. The course is for electrical apprentices as well as any person interested in the electrical trades. The course is supervised by the Department of Apprenticeship Standards, State of California, and is not intended for the student who is interested in the electrical trade as an avocation. A student must consult with the College Apprenticeship Coordinator prior to enrolling. Note: This course may be repeated one time for a total of two enrollments since course content varies and skills are enhanced by supervised repetition and practice.

JAPANESE (JAPN)
Two years of high school foreign language with grades of "C" or better is equivalent to one semester of foreign language at Shasta College.

JAPN 1 ELEMENTARY JAPANESE – 5 Units (P/NP Option)
Class Hours: 90 lecture total
This course is designed to give the student training in pronunciation, essentials of grammar, reading, writing, and speaking. The student is also introduced to the customs and culture of the Japanese people.

JAPN 2 ELEMENTARY JAPANESE – 5 Units (P/NP Option)
Prerequisite: A grade of C or higher in JAPN 1 or Foreign Language Placement Level 2 or higher
Class Hours: 90 lecture total
This course is a continuation of JAPN 1. Greater emphasis is placed on writing and the writing system in JAPN 2. Students will learn 90 Kanji characters. Further Japanese culture, history and traditions are provided.

JAPN 3 INTERMEDIATE JAPANESE – 5 Units (P/NP Option)
Prerequisite: A grade of C or higher in JAPN 2 or Foreign Language Placement Level 3 or higher
Class Hours: 90 lecture total
This course will give the student higher level language skills necessary to function in an adult environment. Great emphasis is placed on learning how to read and write a number of Kanji characters, and understanding Japan and its people through further Japanese culture, history, life and traditions.

JAPN 4 INTERMEDIATE JAPANESE – 5 Units (P/NP Option)
Prerequisite: A grade of C or higher in JAPN 3 or Foreign Language Placement Level 4
Class Hours: 90 lecture total
This course builds on the higher level language skills acquired in JAPN 3 with greater emphasis on the linguistic diversity needed to function in an adult environment. Emphasis will be on learning to read and write an additional 150 Kanji characters. Stress is placed on Japanese culture.

JAPN 19 JAPANESE CONVERSATION 1 – 2 Units (P/NP Option)
Prerequisite: A grade of C or higher in JAPN 1 or Foreign Language Placement Level 2
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 18 lecture/54 lab total
Intensive practice in the spoken language. Course focuses on development of fluency by perfecting speech patterns, increasing vocabulary, and reinforcing pronunciation through simple sentence patterns, audio CDs, oral presentations, interactive communication in activities such as thematically centered conversations and conducting interviews. This course is for the practical use of Japanese. Cultural presentations will also be made through film, filmstrips, anime, music, TV programs, etc.

JAPN 20 JAPANESE CONVERSATION 2 – 2 Units (P/NP Option)
Prerequisite: A grade of C or higher in JAPN 19 or Foreign Language Placement Level 3
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 18 lecture/54 lab total
Continuation of JAPN 19. Further intensive practice in the spoken language. Course focuses on development of higher fluency by perfecting speech patterns, increasing vocabulary, and reinforcing pronunciation through additional sentence patterns, audio CDs, oral presentations, interactive communication in activities such as thematically centered conversations and conducting interviews. This course is for more advanced practical use of Japanese. Further cultural presentations will also be made through film, filmstrips, anime, music, TV programs, etc.

JOURNALISM (JOUR)

JOUR 21 INTRODUCTION TO MASS COMMUNICATIONS – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course is designed principally as a survey of the mass media, including newspapers, magazines, radio, television, motion pictures, books, the Internet and new technologies. The course will include studies of mass communication theories, the effect of new technologies on society and the history of mass communication media. Students will research and analyze current mass media phenomena and will produce a term paper reflecting their discoveries.

JOUR 24 NEWSPAPER PRODUCTION (form. JOUR 24A/24BD) – 2 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, and ability to type 25 wpm
Class Hours: 18 lecture/54 lab total
Designed as a practicum in print production, primarily newspaper. Students will be required to work for a print publication, typically the college newspaper. The two-hour instructional component is
a mixture of lectures, discussion and group work. The lab component will include staff members for the college print production. Assessment in the course is based on mastery of the instructional content and quality of work done for a print publication. Students are required to turn in weekly work activity reports and keep files of their published work during the semester. Students who work for a print publication other than the Shasta College Lance must sign up for 1 to 2 units of worksite learning to be taken concurrently with JOUR 24. Note: This course may be repeated three times for a total of four enrollments, since course content varies and skills are enhanced by repetition and practice.

JOUR 27 NEWSWRITING AND REPORTING – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6, and ability to type 25 wpm
Class Hours: 54 lecture total
Instruction and practice in writing news stories, feature articles, journalistic interviews, critical reviews and editorials. Prepares students for writing and reporting in mass media environments including: newspapers, television and radio news organizations, magazines, public relations agencies, Internet news services and other telecommunications media.

JOUR 29 PHOTOJOURNALISM – 2 Units
Note: Students are urged to furnish own camera
Class Hours: 18 lecture/54 lab total
This course covers the theory and skills needed in the practice of photography for the print media, including college publications and publicity. The program will employ professionally recognized picture-taking techniques and digital imaging procedures.

LEGAL ASSISTANT (LEGL)

LEGL 39 INTRODUCTION TO PARALEGALISM (formerly LEGL 139, BUSI 140) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This is an introductory course to the Legal Assistant program designed to familiarize the student with the basic principles and the nomenclature of various facets of the law. It includes an overview of legal terminology and classifications, legal ethics, sources of law, family law, probate, civil procedure and litigation, including the structure of the court system, torts, contracts, criminal law and procedure, and property and estate law. Required for Legal Assistant majors. This course may be offered in a distance education format.

LEGL 40 LEGAL RESEARCH AND WRITING I (formerly LEGL 140, BUSI 141A) – 3 Units
Prerequisite: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher
Class Hours: 54 lecture total
Designed to familiarize the student with the basic tools of legal research in both Federal and California law, with emphasis on California materials. The student will learn how to locate and update relevant authorities, interpret and apply that authority to fact patterns, and put it into a usable form. The student will be introduced to drafting basic legal documents based upon the research conducted. Required for Legal Assistant majors.

LEGL 41 LEGAL RESEARCH AND WRITING II (formerly LEGL 141, BUSI 141B) – 3 Units
Prerequisite: A grade of C or higher in LEGL 40
Class Hours: 54 lecture total
Covers both legal research and legal writing skills. Students conduct legal research and prepare in-depth legal documents. Emphasis is on legal writing. Required for Legal Assistant majors.

LEGL 42 DISCOVERY (formerly LEGL 142, BUSI 142) – 3 Units
Prerequisite: A grade of C or higher in LEGL 44
Class Hours: 54 lecture total
A complete study of all aspects of civil discovery procedures used in preparing a case for trial. Emphasis will be placed upon document production, depositions, interrogatories, expert witnesses, requests for admissions and inspection demands. Required for Legal Assistant majors.

LEGL 43 REAL ESTATE LAW (formerly LEGL 143, BUSI 143) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course analyzes forms and procedures of real property and studies the more common types of real estate transactions and conveyances, such as secured transactions, deeds, contracts and leases. Required for Legal Assistant majors. This course may be offered in a distance education format.

LEGL 44 CIVIL PROCEDURES AND LITIGATION (formerly LEGL 144, BUSI 144) – 3 Units
Class Hours: 54 lecture total
An introduction to the legal system with emphasis given to understanding the practical aspects of litigation, and the proper procedures required by statutes and rules of court. The student will become familiar with all phases of court procedure, including venue, jurisdiction, public relations, motions, appeals, and the proper means and forms by which matters are submitted to the court system. Required for Legal Assistant majors.

LEGL 45 TORTS (formerly LEGL 145, BUSI 145) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Provides students with the study of substantive law of torts with emphasis on California law. Required for Legal Assistant majors. This course may be offered in a distance education format.

LEGL 46 BANKRUPTCY PRACTICES, COLLECTIONS, AND JUDGMENTS (formerly LEGL 146, BUSI 146) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A comprehensive study of bankruptcy regulations, procedures, pleadings and forms. Also designed to acquaint the student with laws and procedures available to creditors in collecting existing money judgments, and pre-judgment collection remedies. Recommended as an elective in the Legal Assistant program. This course may be offered in a distance education format.

LEGL 47 CONTRACTS, EMPLOYMENT AND AGENCY (formerly LEGL 147, BUSI 147) – 2 Units
Class Hours: 36 lecture total
A study of the law related to contract and agency and the practical aspects of drafting contracts and agency employment agreements. Required for Legal Assistant majors.

LEGL 48 FAMILY LAW (formerly LEGL 148, BUSI 148) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A study of the law and procedures in California related to marriage, domestic violence, legal separation, spousal and child support, community property and disposition of the marriage estate. Emphasis is on preparation of documents for attorney review. Required for Legal Assistant majors. This course may be offered in a distance education format.

LEGL 49 COMMERCIAL LAW (formerly LEGL 149, BUSI 149) – 2 Units
Prerequisite: A grade of C or higher in LEGL 47
Class Hours: 36 lecture total (when offered in the Distance Education format, hours will total 108)
Analyzes forms and procedures of commercial practices with particular emphasis on common sales and lease transactions, secured sales transactions, creditors’ rights, and insurance. Required for Legal Assistant majors. This course may be offered in the distance learning format.

LEGL 50 BUSINESS ORGANIZATIONS (formerly LEGL 150, BUSI 170) – 2 Units
Class Hours: 36 lecture total (when offered in the Distance Education format, hours will total 108)
Substantive and procedural law of basic business organizations, including sole proprietorships, partnerships, limited partnerships and corporations, with an emphasis on California law. Recommended as an elective in the Legal Assistant program. This course may be offered in a distance education format.

LEGL 51 ESTATE PLANNING (formerly LEGL 151, BUSI 171) – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course will familiarize the student with the terminology of estate planning, explore the various devices for transfer of estates, including wills, trusts, intestacy, gifts, insurance and annuities, and joint tenancy, examine the impact of taxes and administrative costs on planning, and review adjuncts of the planning process, such as durable powers of attorney, directives to physician and anatomical gifts. Recommended as an elective in the Legal Assistant program. This course may be offered in a distance education format.

LEGL 53 PROBATE (formerly LEGL 153, BUSI 173) – 3 Units
Prerequisite: A grade of C or higher in LEGL 44
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
The course will explore various methods of administering decedents’ estates, the jurisdiction of the probate court, the process of estate administration and distribution, estate litigation and will contests. Appropriate use of the California Probate Code and probate forms is emphasized. The course will provide an overview of conservatorship and guardianships. Required for Legal Assistant majors. This course may be offered in a distance education format.

LEGL 55 TECHNIQUES OF INTERVIEW AND INVESTIGATION (formerly LEGL 155, BUSI 175) – 2 Units
Class Hours: 36 lecture total
A study of basic communication skills and their application to developing efficient and thorough interview techniques for use in a law office setting. Development of communication and the orderly assembling and collection of information necessary to assist in the evaluation of the case and issues. Recognition of the ethical considerations involved in the gathering of information and interviewing situations. Recommended as an elective in the Legal Assistant program.
LEGL 56 CRIMINAL LAW AND PROCEDURE (formerly LEGL 156, BUSI 177) – 3 Units
Class Hours: 54 lecture total (when offered in the distance Education format, hours will total 162)
Class Notes: 54 lecture total (when offered in the distance Education format, hours will total 162)
This course addresses various criminal offenses; the criminal court system; criminal investigation and prosecution; discovery and investigation; criminal pretrial motions, trial preparation; trial procedures; post-trial motions and relief. Recommended as an elective in the Legal Assistant program. This course may be offered in a distance education format.

LEGL 58 AMERICAN INDIAN LAW (formerly LEGL 158) – 2 Units
Class Hours: 36 lecture total
The class is designed to familiarize the student with the nature and scope of American Indian Law. The student will be introduced to the structures and laws that govern Indian tribal governments on Indian tribal land. Students will be introduced to Federal Indian Law including the Indian Civil Rights Act and the Indian Arts & Crafts Act. Criminal law topics covered include tribal constitutions, the tribal legislative process, the role of tribal traditions and customs, tribal courts, sources of tribal law, limitations on tribal law, and the application of tribal law in tribal courts.

LEGL 94 LEGAL ASSISTANT WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

LEGL 97 SPECIAL TOPICS IN LEGAL ASSISTANT – 5.2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in legal assistant. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

LEGL 98 SPECIAL LAB TOPICS IN LEGAL ASSISTANT – 5.2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in legal assistant. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

MARKETING (MKTG)
See Also: ACC, BUAD, MIS, OAS, and REAL

MKTG 72 ADVERTISING (formerly BUSI 72) – 3 Units (P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is designed to help the student develop proficiency in handling everyday advertising problems. Covers national and local retailing advertising with major emphasis on local advertising. Topics include budgeting, media selection, layout, copy writing, target identification, setting objective, planning, and desktop publishing availability. This course may be offered in a distance education format.

MKTG 76 EVENT MARKETING – 3 Units
Class Hours: 54 lecture total
Event Marketing is designed to provide students with the learning opportunity to plan and implement an actual marketing strategy for a local business. The strategy is planned, designed and directed by students, with the assistance of a marketing instructor, an established marketing consultant and a local business manager. Students will be required to research the market for the local business manager, develop a marketing promotional event, implement the event with a budget, and finally evaluate the results of the marketing strategy. This course may also be considered as an internship.

MKTG 94 MARKETING WORKSITE LEARNING – 1-8 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

MKTG 97 SPECIAL TOPICS IN MARKETING – 5.2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in marketing. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

MKTG 98 SPECIAL LAB TOPICS IN MARKETING – 5.2 Units (P/NP Option)
Class Hours: 27-108 lab total
This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in marketing. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

MATH 2 PRECALCULUS – 5 Units
Prerequisite: A grade of C or higher in MATH 102, or Math Placement Level 4 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 90 lecture total (when offered in the Distance Education format, hours will total 270)
A course to prepare the student for MATH 3A (Calculus) utilizing function graphing technology. The content includes linear, polynomial, rational, logarithmic, exponential and trigonometric functions, conic sections, matrices, parametric equations, and their applications. This course may be offered in a distance education format.

MATH 3A CALCULUS 3A – 4 Units
Prerequisite: A grade of C or higher in MATH 2, or a grade of C or higher in both MATH 10 and MATH 13, or Math Placement Level 5 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 72 lecture total (when offered in the Distance Education format, hours will total 216)
First semester of a four-semester sequence covering differentiation of single variable functions, applications of the derivative, introduction to integration, and introduction to differential equations. This course may be offered in a distance education format.

MATH 3B CALCULUS 3B – 4 Units
Prerequisite: A grade of C or higher in MATH 3A or Math Placement Level 6 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 72 lecture total (when offered in the Distance Education format, hours will total 216)
This course continues and extends the discussion of differentiations and integration begun in MATH 3A. Students will be introduced to properties of finite and infinite series. This course may be offered in a distance education format.

MATH 4A CALCULUS 4A – 4 Units
Prerequisite: A grade of C or higher in MATH 3B, or Math Placement Level 7 or higher
Class Hours: 72 lecture total
This course covers vectors in two and three dimensions, partial differentiation, multiple integrals, line integrals, divergence, gradient, curl, Stoke's and Green's Theorems.

MATH 4B DIFFERENTIAL EQUATIONS – 4 Units
Prerequisite: A grade of C or higher in MATH 3B, or Math Placement Level 7
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 72 lecture total
A course in ordinary differential equations covering first and second order differential equations, with applications; Laplace transforms; series solutions at an ordinary point; matrices and linear algebra; and systems of linear differential equations.
MATH 6  LINEAR ALGEBRA – 3 Units
Prerequisite: A grade of C or higher in MATH 4A
Class Hours: 54 lecture total
A first course in linear algebra, this course provides a thorough treatment of systems of linear equations, including row operations, Gaussian elimination, and matrix algebra. Properties of vectors and the theory of vector spaces are covered. Topics include linear independence, inner products, orthogonality, eigenvectors, eigenspaces, and linear transformations. Applications are included throughout the course.

MATH 8  FINITE MATHEMATICS – 3 Units
Prerequisite: A grade of C or higher in MATH 102, or Math Placement Level 4 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 54 lecture total
The course covers sets, matrices, and systems of equations and inequalities; linear programming; combinatorial techniques, introduction to probability; and mathematics of finance. The course is intended to provide (along with MATH 9) the mathematical skills needed for entry into upper division Business, Social, and Behavioral Science courses.

MATH 9  SURVEY OF CALCULUS – 4 Units
Prerequisite: A grade of C or higher in MATH 102, or Math Placement Level 4 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 72 lecture total
A course in analytical geometry, differential and integral calculus for students whose majors require a short course in calculus without the depth offered in MATH 3A.

MATH 10  PLANE TRIGONOMETRY – 3 Units
Prerequisite: A grade of C or higher in MATH 102, or Math Placement Level 4 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 54 lecture total
A basic course in trigonometry. Topics covered include angles, units of measurement, trigonometric functions, solutions of right and oblique triangles, identities, graphs, vectors, conic sections and polar coordinates. Algebraic and numerical methods are used in problem solving. Graphic calculators are utilized throughout the course.

MATH 11  PATTERNS OF MATHEMATICAL THOUGHT – 3 Units
Prerequisite: A grade of C or higher in MATH 102 or Math Placement Level 4 or higher
Class Hours: 54 lecture total
A one-semester survey course emphasizing mathematical reasoning. Various applications of mathematics are covered with topics selected from: Geometry, Statistics, Management Science, Number Theory, Social Science, and Computer Science. The course is designed to give students an understanding of some of the vocabulary and methods of mathematics with a focus on ideas.

MATH 13  COLLEGE ALGEBRA (formerly MATH 1) – 3 Units
Prerequisite: A grade of C or higher in MATH 102 or Math Placement Level 4 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course introduces functions and function algebra. The main focus is on linear, polynomial, rational, logarithmic and exponential functions. Students will learn algebraic techniques, modeling techniques and technology-based techniques for solving equations involving these functions and for investigating the graphs of these functions. This course may be offered in a distance education format.

MATH 14  INTRODUCTION TO STATISTICS – 4 Units
Prerequisite: A grade of C or higher in MATH 102, or Math Placement Level 4 or higher
Advisory: A grade of C or higher in ENGL 190 or English Placement Level 6 or higher
Class Hours: 72 lecture total (when offered in the Distance Education format, hours will total 216)
An introductory course in statistics designed to show the role of modern statistical methods in the process of decision making. Concepts are introduced by example rather than by rigorous mathematical theory. The following topics will be covered: measures of central tendency and dispersion, regression and correlation, probability, sampling distributions including the normal, t, and chi-square, statistical inference using confidence intervals and hypotheses testing. This course may be offered in a distance education format.

MATH 17  CALCULUS APPLICATIONS FOR SOCIAL AND LIFE SCIENCES – 4 Units
Prerequisite: A grade of C or higher in MATH 3A, or Math Placement Level 6 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 72 lecture total (when offered in the Distance Education format, hours will total 216)
Continued study of differential and integral calculus with applications to Social and Life Sciences. Includes integration methods, modeling with systems of differential equations, calculus of several variables, and partial derivatives. This course may be offered in a distance learning format.

MATH 41A  CONCEPTS OF ELEMENTARY MATHEMATIC – 3 Units
Prerequisite: A grade of C or higher in MATH 102, or Math Placement Level 4 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Note: This course is valuable for students intending to become elementary school teachers.
Class Hours: 54 lecture total
Survey of the elements of mathematics usually taught in the elementary schools. Emphasis is on development of the real number system by intuitive and semi-rigorous methods, discussion of sets, axiomatics, systems of numberation, arithmetic processes, inductive and deductive reasoning and problem solving.

MATH 41B  CONCEPTS OF ELEMENTARY MATHEMATICS – 3 Units
Prerequisite: A grade of C or higher in MATH 102 or Math Placement Level 4 or higher (MATH 41A is not a prerequisite for MATH 41B)
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Note: This course is valuable for students intending to become elementary school teachers.
Class Hours: 54 lecture total
Survey of the elements of mathematics usually taught in the elementary grades from an advanced standpoint. Emphasis is on geometry, probability and statistics.

MATH 97  SPECIAL TOPICS IN MATHEMATICS – .5-2 Units
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in mathematics. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

MATH 100  TECHNICAL APPLICATIONS OF MATHEMATICS – 3 Units
Prerequisite: A grade of C or higher in MATH 240, or Math Placement Level 2 or higher
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 54 lecture total
This course blends mathematical topics with practical technical applications. Emphasis is placed on the use of mathematics in solving problems involving arithmetic, algebra, and plane geometry. Practical applications are provided for specific technical occupations.

MATH 101  BASIC ALGEBRA – 3 Units
Prerequisite: A grade of C or higher in MATH 240, or Math Placement Level 2 or higher
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A first course in algebra designed to cover the basic concepts and operations of algebra including solving linear equations, exponent laws, arithmetic and factoring of polynomials, and graphing linear equations in two variables. Applications are encountered throughout the course. This course may be offered in a distance education format.

MATH 10L  BASIC ALGEBRA LAB – 1 Unit
Class Hours: 54 lab total
This course provides students with hands-on activities that reinforce the concepts of the lecture course, MATH 101. The laboratory is designed to provide students with an opportunity to further investigate the solving of linear equations, exponent laws, arithmetic and factoring of polynomials, and graphing linear equations in two variables.

MATH 102  INTERMEDIATE ALGEBRA – 5 Units
Prerequisite: A grade of C or higher in MATH 101 or Math Placement Level 3 or higher
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 90 lecture total (when offered in the Distance Education format, hours will total 270)
A second course in algebra at the developmental level. This course prepares the student to take a baccalaureate level general education mathematics course.
Topics covered include equations and functions of the following types: quadratic, exponential, logarithmic, rational, and radical. The course also covers systems of linear equations and inequalities in two variables and quadratic inequalities in one variable. Applied problems are encountered throughout the course. This course may be offered in a distance education format.

**MATH 110 ESSENTIAL MATH (FOR AN ASSOCIATE DEGREE) – 3 Units**

**Prerequisite:** A grade of C or higher in MATH 101, MATH 100, BUAD 106, or Math Placement Level 3 or higher

**Advisory:** A grade of C or higher in ENGL 280, or English Placement Level 5 or higher

**Class Hours:** 18 lecture total

This course is designed to assist students in learning mathematics through the development of successful study skills and exam-taking methods. This course addresses learning styles, how to read a math book, completing homework assignments, how to take notes and exams, strategies for solving word problems, and techniques for overcoming math anxiety.

**MATH 150 MATH STUDY SKILLS (formerly GS 100) – 1 Unit (P/NP Option)**

**Note:** Students do not necessarily need to be concurrently enrolled in a math class.

**Class Hours:** 18 lecture total

This course is designed to give students an opportunity to explore a variety of topics dealing with mathematics. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for mathematics majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of four enrollments.

**MATH 220 BASIC MATHEMATICS – 3 Units**

**Advisory:** A grade of C or higher in ENGL 260 or English Placement Level 3 or higher

**Class Hours:** 54 lecture total

This course is designed to provide a survey of mathematical topics that are appropriate for students pursuing an Associate Degree. Topics included are number sense, algebra, geometry, probability and statistics. This course may be offered in a distance education format.

**MUSIC (MUS)**

All music theory and literature courses: ENGL 190 eligibility. All other music classes have specific musical performance ability requirements which are listed in each course description.

**MUS 1 MUSIC FUNDAMENTALS – 3 Units (P/NP Option)**

**Advisory:** Concurrent enrollment in MUS 22

**Class Hours:** 54 lecture total

A course in music theory for the general student. Class includes pitch notation, melody, rhythm and meter, scales and modes, intervals, keys and key signatures, triads, chords, sight seeing and melodic dictation. Course is designed for Elementary Education majors and Pre-Music Core Program. Some math, especially fractions, is necessary. A computerized tutorial is included in the text, although not required. Piano skills are helpful in maximizing learning in this course.

**MUS 2 DIATONIC HARMONY AND MUSICIANSHP – 5 Units (P/NP Option)**

**Prerequisite:** A grade of C or higher in MUS 1

**Class Hours:** 72 lecture/54 lab

A study of scales and modes, key signatures and intervals. Anatomy of harmony and melody. Four-part harmonic writing, basic progression and integration of both ear training and sight-singing. Analysis of music will be concurrent with materials studied. Course is designed for the Music Core Program and is the first course of the four semester music theory sequence required to satisfy the Music Core Program and lower division music transfer. This course utilizes a lab period to build and apply keyboard skills. Course may be challenged and is transferable.

**MUS 3 DIATONIC HARMONY & MUSICIANSHP – 5 Units (P/NP Option)**

**Prerequisite:** A grade of C or higher in MUS 2

**Class Hours:** 72 lecture/54 lab

This course is designed for the Music Core Program. It is the second course of the four-semester Music Theory Sequence required to satisfy the Music Core Program and lower division music transfer, may be challenged and is transferable. Course content includes idiomatic work from selected historical periods with a critical approach to stylistic analysis. All diatonic chords through the introduction of the V7, the first truly chromatic chord will be studied. The syntax of all diatonic chords and their hierarchy in the harmonic language will be learned, along with all inversions. The course work utilizes a lab period to build and apply keyboard skills.

**MUS 4 CHROMATIC HARMONY – 5 Units (P/NP Option)**

**Prerequisite:** A grade of C or higher in MUS 3

**Class Hours:** 72 lecture/54 lab

This is the third course of the four semester music theory sequence required to satisfy the Music Core Program and lower division music transfer, may be challenged and is transferable. It must be taken for a grade by music majors. Course content includes modulation, pivot chords, chromatic chords containing tritones, secondary dominants, all sevenths, including minor, major, half diminished, fully diminished, dominant 7, 9th chords, major and minor 11th and 13th chords, with and without tritones. Chromatic alterations as used during the 18th and 19th Centuries. Continuation of 2 and 3 part forms, Neapolitan 6th Chords, Augmented 6th Chords, altered dominants and leads into the concept of Sonata-Allegro form. The course work utilizes a lab period to build and apply keyboard skills. This is the fourth semester music theory sequence required to satisfy the Music Core Program and lower division music transfer.

**MUS 5 TWENTIETH CENTURY HARMONY – 5 Units (P/NP Option)**

**Prerequisite:** A grade of C or higher in MUS 4

**Class Hours:** 72 lecture/54 lab

Analytical techniques: development of critical judgments about 20th Century styles. A study of the composition techniques and harmonic practices of the 20th century. This includes the whole-tone scale, church modes, pentatonic scale, 7th, 9th, 11th, 13th chords, chords of omission and addition, non-tonic chords, pan-diatonicism, chord cluster, meter changing, 12-tone techniques and other modern developments. The course may culminate in the writing of a composition, probably theme and variations. This course utilizes a lab period to build and apply keyboard skills. This is the fourth semester music theory sequence required to satisfy the Music Core Program and lower division music transfer.

**MUS 7 BEGINNING ARRANGING & SONGWRITING – 3 Units**

**Prerequisite:** A grade of C or higher in MUS 1

**Class Hours:** 54 lecture total

A course that covers the basic elements of arranging in all styles of popular music, but particularly in jazz, while exploring techniques that will assist the student in songwriting. The course gives the student the opportunity to become familiar with chord symbols, open and closed-block voicing of triads through thirteenth chords, instrumental transcription, rhythmic and articulation considerations, melodic embellishments, and the jazz and rock rhythm sections.

**MUS 10 MUSIC APPRECIATION – 3 Units (P/NP Option)**

**Class Hours:** 54 lecture total

A survey course that covers the characteristics of sound, sources of musical sounds and media, instruments, voices, texture, forms, program and dramatic music, vocal and instrumental music, sacred and secular music, folk, popular, jazz, music of other cultures, and historical music from primitive times to the present. Emphasis is placed on listening to music and attending performances and rehearsals. Recommended for AA Humanities elective, CSU General Ed arts elective, and Pre-Music Program.
MUS 11 HISTORY OF JAZZ AND ROCK – 3 Units  
Class Hours: 54 lecture total  
A survey course that covers the characteristics of jazz forms, including ragtime, dixieland, blues, swing, progressive jazz and rock. Course gives the student the opportunity to become familiar with all of the various styles of jazz and provides an understanding of the social and technical influences that cause stylistic change. This course is designed to create an interest in music for the non-music major. Course is recommended for the Humanities elective.

MUS 12 INTRODUCTION TO COMPUTERS AND ELECTRONIC INSTRUMENTS IN MUSIC – 1.5 Units  
Prerequisite: A grade of C or higher in MUS 1  
Class Hours: 18 lecture/36 lab total  
This course is an entry-level class designed to introduce the student to the basic elements and fundamental use of computers and electronic instruments in music. Course enrollment is open to music majors and non-music majors. Topics to be covered include: computer and electronic music terminology, computer applications, notation, computer and electronic music laboratory settings. This course is introductory level and is not designed for intermediate or advanced study.

MUS 14 WORLD MUSIC – 3 Units  
Class Hours: 54 lecture total  
World Music is a global exploration of musical traditions of various representative world musical cultures and musical techniques in a variety of cultural contexts not included in the broad genre of European based art music.

MUS 20 BRASS (formerly MUS 20AB) – 1 Unit (P/NP Option)  
Advisory: A grade of C or higher in MUS 1  
Class Hours: 9 lecture/27 lab  
A beginning course in the techniques of playing the trumpet, trombone, baritone, French horn, or tuba through the introduction of embouchure, breath, tone, pitch and timbre. Simple compositions, intervals, scales and articulation studies are used. This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

MUS 21 GUITAR (formerly MUS 21A21B) – 1 Unit  
Note: Students must provide their own instruments  
Class Hours: 9 lecture/27 lab  
A beginning course in the techniques of guitar, including basic chords, strums, finger picking, and tuning. Guitar history and style of music fundamentals are also presented. Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 22 BEGINNING PIANO (formerly MUS 22A) – 1 Unit (P/NP Option)  
Class Hours: 9 lecture/27 lab  
A fundamental course in keyboard techniques (simple piano music, accompaniments, chords, scales, and exercises) and music fundamentals (notation, melody, harmony and rhythm). Course is recommended for Music and Elementary Education majors.

MUS 23 INTERMEDIATE PIANO (form. MUS 22BD) – 1 Unit (P/NP Option)  
Prerequisite: A grade of C or higher in MUS 22  
Class Hours: 9 lecture/27 lab  
A developmental course in keyboard techniques (simple piano music, accompaniments, chords, scales, and exercises) and music fundamentals (notation, melody, harmony and rhythm). Course is recommended for Elementary Education majors. Note: This course may be repeated twice for a total of three enrollments since skills are enhanced by supervised repetition and practice.

MUS 24 PERCUSSION - 1 Unit  
Class Hours: 9 lecture/27 lab  
A beginning course on snare drum, which includes learning to play, count and write rhythm patterns in 4/4, 2/4, 3/4, and 6/8 time signatures through the study of the thirteen rudiments for the snare drum. The percussion family is studied by playing percussion ensemble compositions.

MUS 25 STRINGS (formerly MUS 25AB/25CD) - 1 Unit (P/NP Option)  
Advisory: A grade of C or higher in MUS 1  
Note: Instruments provided if available  
Class Hours: 9 lecture/27 lab  
A beginning course in violin, viola, violoncello and string bass organized to establish basic skills of tuning, pitch and tone production, both pizzicato and bowed, beginning in the first position until security in the frame of the hand and correct playing position is established. Elementary shifting first to third position on violins/viola. Normal and extended first position on the cello. Half and first position on string bass. Advanced positions and shifting on all instruments. Bowing techniques include on the string bowings, detaché, linked, legato and mixed bowings when appropriate. Later study of off the string bowings, vibrato, special effects. The major goals of the course are to establish intermediate and advanced skills with sound pedagogy while playing representative string solo music, simple chamber music, duos, trios, quartets, and orchestra music with correct bowings and string notation. This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 26 WOODWINDS (formerly MUS 26A) – 1 Unit  
Class Hours: 9 lecture/27 lab  
A beginning course in the techniques of playing the flute, oboe, clarinet, bassoon and saxophone through the introduction of embouchure, breath, tone, pitch and timbre. Simple compositions, intervals, scales and articulation studies are used. Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

MUS 29 BEGINNING VOICE (formerly MUS 27A) – 1 Unit  
Class Hours: 9 lecture/27 lab  
A beginning course in vocal technique, repertoire, stage deportment, and performance. Course utilizes a variety of vocal genres to teach tone quality, breath control, posture, lyric diction and interpretation. Class performances required. Course recommended for Music Core Program, Theatre Arts majors and Elementary Education majors.

MUS 30 INTERMEDIATE VOICE (form. MUS 27B) - 1 Unit (P/NP Option)  
Prerequisite: A grade of C or higher in MUS 29  
Class Hours: 9 lecture/27 lab  
An intermediate course in vocal technique and performance. Course utilizes a variety of vocal literature to teach tone quality, breath control, posture, lyric diction and interpretation. Class performances required. Course recommended for Music Core Program, Theatre Arts majors and Elementary Education majors.
MUS 41 SHASTA COLLEGE WOMEN'S ENSEMBLE – 1 Unit (P/NP Option)
Note: Performances are required (SSA)
Class Hours: 54 lab total
A performing choir that sings choral works for women's chorus from all musical periods and styles. Works are selected from every era. Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 42 SHASTA COLLEGE CHORALE (formerly MUS 42AD) – 1 Unit
Limitation on Enrollment: Admission to this class will be by audition to determine performance capability. This course is a restricted elective for the Music Certificate and Music AA Degree. Non-audition courses that fulfill this requirement: MUS 40 Concert Choir, and MUS 41, Shasta College Women's Ensemble.
Note: Performances are required.
Class Hours: 54 lab total
A performing mixed choir (S.A.T.B.) that sings a variety of music, both historical and contemporary, with an emphasis on large choral forms such as oratorios and cantatas, accompanied by instruments. Note: Field trips and performances are required. This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 43 SHASTA COLLEGE SYMPHONY ORCHESTRA (formerly MUS 43AD) – 1 Unit (P/NP Option)
Limitation on Enrollment: Admission to this class will be by audition to determine performance capability. This course is a restricted elective for the Music Certificate and Music AA Degree. Non-audition courses that fulfill this requirement: MUS 46, Shasta College Symphonic Band or MUS 25, Strings.
Note: Field trips and performances are required.
Class Hours: 54 lab total
A college symphony orchestra providing an opportunity for instrumentalists to perform standard and contemporary orchestral literature. Field trips and performances are required. All groups rehearse every other week. Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 44 – SHASTA COLLEGE YOUTH SYMPHONY – 5-1 Unit (P/NP Option)
Limitation on Enrollment: Admission to this class will be by audition to determine performance capability. This course is a restricted elective for the Music Certificate and Music AA Degree. Non-audition courses that fulfill this requirement: MUS 46, Shasta College Symphonic Band or MUS 25 Strings.
Note: Field trips and performances are required.
Class Hours: 27-54 lab total
A college based symphony orchestra for the training of young musicians, providing an opportunity to perform standard and contemporary literature for younger musicians. Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 45 WIND BAND (formerly MUS 45AD) – 1 Unit
Limitation on Enrollment: Admission to this class will be by audition to determine performance capability. This course is a restricted elective for the Music Certificate and Music AA Degree. Non-audition courses that fulfill this requirement: MUS 46, Shasta College Symphonic Band.
Note: Field trips and performances are required.
Class Hours: 54 lab total
A course performing both standard and contemporary band literature. Field trips and performances are required. This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 46 SHASTA COLLEGE SYMPHONIC BAND (formerly MUS 46AD) – 1 Unit
Note: Field trips and performances are required.
Class Hours: 54 lab total
A course in performance techniques of both standard and contemporary band literature. Rehearses every week. Note: Field trips and performances are required. Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 47 SHASTA COLLEGE JAZZ ENSEMBLE (formerly MUS 47AD) – 1 Unit
Limitation on Enrollment: Admission to this class will be by audition to determine performance ability. This course is a restricted elective for the Music Certificate and Music AA Degree. Non audition courses that fulfill this requirement: MUS 33 Jazz Ensemble.
Note: Field trips and performances are required.
Class Hours: 54 lab total
This course offers experience in the study and performance of big-band jazz arrangements. Rehearses every week. Admission to the class will be by formal audition to determine performance ability. Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 50 VOCAL INSTITUTE – 1-3 Units
Note: Field trips and performance are required.
Class Hours: 9-27 lecture/27-81 lab total
The Vocal Institute is an intensive course of both vocal and dramatic instruction in an applied performance setting for students who are interested in dramatic vocal performance. Content includes repertoire instruction in art song, musical theater and opera. It is an applied activity course that includes lectures, assignments, rehearsals and studio tutorials. Students learn vocal technique, lyric diction, solo and ensemble performance, character development, stagecraft and movement, and score reading. Art songs and scenes are performed in original languages, including Italian, French, German and English. Skills are built through supervised application resulting in improved performance. Class includes staged performance of art song, opera and musical theater literature. Note: Course may be repeated for up to a maximum of 12 units.

MUS 51 OPERA IN PERFORMANCE – 1-3 Units
Note: Field trips and performance are required.
Class Hours: 54-162 lab total
This course provides for skill development, both vocal and dramatic, at all levels, beginning through advanced, in an applied performance setting for students who are interested in classical dramatic vocal performance. It is an applied activity course in which skills are built through supervised application resulting in improved performance. Emphasis is on solo, small ensemble and chorus performance. Class culminates with fully- or partially-staged performances of opera literature. Note: Course may be repeated for up to a maximum of 12 units.

MUS 55 PERFORMANCE ANALYSIS (formerly MUS 61AD) – 5 Unit (P/NP Option)
Class Hours: 27 lab
A course in the experience of listening, analyzing and criticizing classical music performances in class and community. Applied Music students, local musicians and professional musicians perform and lecture. Required for Pre-Music Program and Music Core Program. Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.

MUS 59 SPECIAL MUSIC TOPICS (formerly MUS 98AD) – 5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to study a variety of topics dealing with performance, musicology, changing knowledge and contemporary issues in the field of music. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for Music majors; open to anyone with an interest in the topic. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

MUS 120 VOCAL DEVELOPMENT - CLASSICAL – 1-2 Units (P/NP Option)
Limitation on Enrollment: Admission to this class will be by audition to determine performance ability. Note: Field trips and performances are required. Students are expected to progress in skill level to be able to master more advanced material.
Class Hours: 1 Unit=9 lecture/27 lab; 2 Units=18 lecture/54 lab
This class provides the student with vocal techniques and repertoire that are fundamental to achieving proficiency as a singer of classical art song repertoire at an advanced level. Emphasis is on solo performance, collaborative performance, and small ensemble performance of the solo repertoire in English, German and French. Note: Course may be repeated three times for a maximum of four enrollments.

MUS 121 VOCAL DEVELOPMENT – OPERA/MUSICAL THEATRE – 1-2 Units (P/NP Option)
Limitation on Enrollment: Admission to this class will be by audition to determine performance ability. Note: Field trips and performances are required. Students are expected to progress in skill level to be able to master more advanced material.
Class Hours: 1 Unit=9 lecture/27 lab; 2 Units=18 lecture/54 lab
This class is for the vocal student who wishes to acquire and practice vocal techniques and repertoire of a professional nature, by providing operatic or theatrical experiences learning and performing small and large roles, ensembles, and necessary stagecraft. Emphasis is on classical opera repertoire of the various eras, sometimes performed in original languages when appropriate. Broadway musical repertoire includes scenes with movement. Requires active performance and movement on stage. Note: Course may be repeated three times for a maximum of four enrollments.

MUS 301 ORCHESTRA FOR SENIORS – 8 Units
Note: While this is an enrollment class, an audition will be conducted by the instructor at the start of the class to determine if the student has the required ability to participate in performances.
Class Hours: 9-54 lab total
A course designed to offer opportunities for older adults to participate in ensemble music with the Symphony Orchestra.
MUS 302 SYMPHONIC BAND FOR SENIORS – 0 Units
Note: While this is an open enrollment class, an assessment will be conducted by the instructor at the start of the class to determine if the student has the required ability to participate in performances. Field trips and performances are required.
Class Hours: 54 lab total
A course designed to offer opportunities for adults to participate in ensemble music with the Symphonic Band.

MUS 303 MUSIC FOR SENIORS – 0 Units
Note: While this is an open enrollment class, an assessment will be conducted by the instructor at the start of the class to determine if the student has the required ability to participate in performances.
Advisory: Demonstrated proficiency in the performance medium.
Class Hours: 18-54 lab total
A course designed to offer opportunities for older adults to participate in music performance.

NATURAL HISTORY (NHIS)

NHIS 15 NATURAL HISTORY – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Designed to give the student a unified view of the natural history of Northern California and its relative place in the universe. The geology, freshwater and ocean environment, weather, lifezones, plant and animal species are emphasized.

NHIS 65 NATURAL HISTORY OF PATRICK’S POINT (formerly NHIS 65AB) – 1 Unit (P/NP Only)
Note: Students must provide their own camping gear and food. The college supplies and requires bus transportation for no additional cost.
Class Hours: 9 lecture/27 lab total - includes one orientation meeting plus one weekend
A three day, two night field trip to Patrick’s Point State Park to familiarize students with the organisms and ecological interactions occurring in the various plant communities and intertidal zones. One pre-trip introductory lecture will be held. This course is repeatable one additional time since students will be able to reflect a higher level of understanding with increased exposure.

NHIS 105 NATURAL HISTORY OF THE SOUTHERN CASCADES (formerly GEOG 105) – 1 Unit (P/NP Option)
Note: Required overnight field trip.
Class Hours: 9 lecture/27 lab total
This course is an introductory, short-term field class in which the development of land forms and occupation of niches associated with a volcanic site will be covered. Types of volcanoes, life zones, specimen identification (rock, plant, and animal), and reading topographic maps will be introduced in the classroom and expanded upon during a two-day overnight field trip.

NATURAL RESOURCES
See AGNR for course listings

NATURAL SCIENCE (NSCI)

NSCI 30 SCIENCE COLLOQUIUM (form. INTR 30) – 1 Unit (P/NP Only)
Note: Highly recommended for all science majors
Class Hours: 18 lecture total
This guest-lecture series will feature a broad range of professional scientists invited to summarize research and current issues from their disciplines. Topics will emphasize the bridge between the science (astronomy, biology, chemistry, environmental science, geology, physics and medicine) and society. A schedule of topics and invited speakers will be posted at the beginning of the semester.
Note: Due to the topics differing each semester, this class may be repeated three times for a total of four enrollments.

NSCI 97 SPECIAL TOPICS IN INTERDISCIPLINARY STUDIES (formerly INTR 97) – 5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with interdisciplinary Studies. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for anyone with an interest in the topic.
Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

NSCI 390 NATURAL SCIENCE LEARNING LAB – 0 Units
Class Hours: TBA
A program and facility designed to provide the student with the resources for self-paced auto-tutorial computer tutorial, and audio-visual learning within various courses in Natural Science. Tutorial assistance is also available for students in Natural Science courses who experience some difficulty in a particular course or subject area.

NURSING
See Registered Nursing or Vocational Nursing

OFFICE ADMINISTRATION (OAS)

OAS 10 EXCEL FOR WINDOWS – I (formerly CIS 10, MIS 73) – 1 Unit (P/NP Option)
Note: Internet and classroom students will require access to a computer with the same version of Microsoft Operating System and Office Suite being used in the course. Computer access is provided on campus at the Math and Business Learning Center.
Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
This is an introductory course that introduces the concepts, principles, and uses of the EXCEL spreadsheet through multi-media lecture, demonstration, and discussion. Instruction will include use of the Windows environment; creating, editing, formatting, and printing a worksheet; charts/graphs development; and formulas/functions using relative and absolute cell reference. This course may be offered in a distance education format.

OAS 11 EXCEL FOR WINDOWS – II (formerly CIS 11, MIS 74) – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in OAS 10.
Note: Internet and classroom students will require access to a computer with the same version of Microsoft Operating System and Office Suite being used in the course. Computer access is provided on campus at the Math and Business Learning Center.
Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
Designed to expand and improve worksheet skills through multi-media lecture, demonstration, and discussion. Instruction will include managing workbook data, using tables, analyzing table data, automating worksheet tasks, enhancing charts, and using what-if analysis. This course may be offered in a distance education format.

OAS 12 EXCEL FOR WINDOWS – III (formerly CIS 11, MIS 75) – 1 Unit (P/NP Option)
Advisory: A grade of C or higher in OAS 11.
Note: Internet and classroom students will require access to a computer with the same version of Microsoft Operating System and Office Suite being used in the course. Computer access is provided on campus at the Math and Business Learning Center.
Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
Designed to expand and improve worksheet skills to a more advanced level of proficiency through multi-media lecture, demonstration, and discussion. Instruction will include analyzing data using PivotTables, exchanging data between programs, sharing files using the web, customizing Excel, and advanced worksheet management and programming in Excel. This course may be offered in a distance education format.

OAS 30 CREATING AND MANAGING THE VIRTUAL OFFICE – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 280 or English Placement Level 5 or higher
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
There has been an increase in interest in using technology to work from home – telecommuting. Individuals may choose to work outside of their corporate/business office or may be entrepreneurs who wish to be self-employed. This course will explore issues that should be addressed when creating a virtual office. Topics will include managing your time, customizing your workplace, evaluating and buying technology, communicating with technology, and business ethics. This course may be offered in a distance education format.

OAS 31 MARKETING YOURSELF AS A VIRTUAL ASSISTANT – 3 Units (P/NP Option)
Advisory: A grade of C or higher in OAS 30, and a grade of C or higher in CIS 83, and a grade of C or higher in OAS 90
Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to the latest Microsoft Operating System and Office Suite.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Students will identify and evaluate various employment marketing techniques such as networking face-to-face, conducting virtual interviews, belonging to professional organizations, developing flyers and brochures, developing a professional Internet Web site, and using numerous Web-based resources. This course may be offered in a distance learning format.
OAS 51: INTRODUCTION TO KEYBOARDING AND WORD (formerly BUSI 51) – 3 Units (P/NP Option)

Note: Internet and classroom students will require access to a computer with the same version of Microsoft Operating System and Office Suite being used in the course. Computer access is provided on campus at the Math and Business Learning Center and the Tehama campus.

Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)

This introductory course in keyboarding and Microsoft Word. Class includes learning to type alphabetically, numeric and symbol keys by touch; developing speed and accuracy; and formatting business documents including letters, memos, reports, tables and labels. Recommended for all students who want to learn typing and Microsoft Word. No prior knowledge of computers is required making this course an excellent place to start for beginning computer users. This course may be offered in a distance education format.

OAS 52: INTERMEDIATE KEYBOARDING AND WORD (formerly BUSI 52) – 3 Units (P/NP Option)

Prerequisite: A grade of C or higher in OAS 51

Note: Internet and classroom students will require access to a computer with the same version of Microsoft Operating System and Office Suite being used in the course. Computer access is provided on campus at the Math and Business Learning Center and the Tehama campus.

Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)

This intermediate course in keyboarding and Microsoft Word. This course continues the development of keyboarding speed and accuracy while emphasizing the formatting of various kinds of business correspondence, reports, tables, forms, and desktop publishing projects from rough drafts. This course may be offered in a distance education format.

OAS 53: ADVANCED KEYBOARDING AND WORD (formerly BUSI 53) – 3 Units (P/NP Option)

Prerequisite: A grade of C or higher in OAS 52

Note: Internet and classroom students will require access to a computer with the same version of Microsoft Operating System and Office Suite being used in the course. Computer access is provided on campus at the Math and Business Learning Center and the Tehama campus.

Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)

An advanced course in keyboarding and Microsoft Word. This is the capstone course allowing the student to meet any business document requirement. The course is designed to give additional practice in building speed and accuracy and to apply previously learned document formatting competencies to a variety of integrated office projects in international marketing, hospitality, travel, energy, electronics, insurance, government, law, and medicine. This course may be offered in a distance education format.

OAS 58: WORD PROCESSING TRANSCRIPTION (formerly BUSI 58) – 3 Units (P/NP Option)

Advisory: A grade of C or higher in OAS 52 and a grade of C or higher in BUAD 166

Note: Class will require outside time using a computer with appropriate software.

Some computer access is provided on campus at the Math and Business Learning Center.

Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)

This course is designed to prepare students to become efficient operators of transcribing machines and be able to transcribe quickly and accurately a sizable business correspondence from pre-dictated material. Emphasis will be placed on the mechanics of letter styles, memos, reports, and tables, as well as grammar, punctuation, spelling, vocabulary, and proofreading. This course may be offered in a distance education format.

OAS 63: VOICE RECOGNITION SOFTWARE – 1 Unit (P/NP Option)

Class Hours: 18 lecture/9 lab total

This course introduces voice-recognition software to the student through multimedia lecture/demonstration/discussion and hands-on application using the IBM compatible microcomputer. Using voice-recognition software, the students will input information into the computer by voice rather than by keyboard. It will focus on learning dictation commands and techniques for continuous voice dictation. The course covers voice commands for inputting, formatting and editing documents in addition to using menus and mouse commands.

OAS 64: COMPUTERIZED TEN-KEY (form. BUSI 64) – 5 Units (P/NP Option)

Class Hours: 27 lab total (when offered in the Distance Education format, hours will total 27)

A course designed to teach the numeric 10-key pad by touch on the computer with speed and accuracy using industry standards for data entry. Proficiency on three employment tests used by three large interstate corporations help the student meet employment standards. The course has been designed to accommodate hearing impaired students. This course may be offered in a distance education format.

OAS 80: OUTLOOK – 1 Unit (P/NP Option)

Advisory: Ability to type 25 wpm

Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to the latest Microsoft Operating System and Office Suite.

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)

This course introduces the student to the use of Microsoft Outlook, a desktop information management program in the Microsoft Office Suite. Instruction will include managing email messages, scheduling appointments and activities with the Calendar, entering and updating names and addresses as contacts, creating and maintaining an electronic to-do list with Tasks, and using Categories to organize, sort, and search. This course may be offered in a distance education format.

OAS 84: OFFICE ADMIN. WORKSITE LEARNING – 1-8 Units

Advisory: Offered in a distance education format.

Note: Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes. Internet and classroom students will require access to a computer with the latest Microsoft Operating System and Office Suite.

Class Hours: 75 hours paid or 60 hours non-paid per unit

The Vocational Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student and related to the student’s major. A faculty member supervises all WSL courses to ensure that the work experience is of educational value. The course stresses good work habits and meeting of competencies through actual on the job performance. A student may earn up to 16 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 8 units may be earned in a single semester.

OAS 91: WORD FOR WINDOWS - I – 1 Unit (P/NP Option)

Advisory: Ability to type 25 wpm

Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to the latest Microsoft Operating System and Office Suite.

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)

This course introduces word processing through multi-media lecture/demonstration/discussion and hands-on use of Microsoft WORD for Windows on the IBM compatible microcomputer. Microsoft WORD will be used to complete the functions of creating, editing, saving, opening and printing documents with varying degrees of difficulty. Topics to be covered include: file management; creating new documents using both the blank Word document screen or wizards and templates; selecting text to move/copy/delete/format or utilize the clipboard; creating and formatting tables, including calculations; spelling and thesaurus tools; font, paragraph and page formatting; customized tabs; indents; bullets and numbering; borders and shading; headers, footers, and page numbering; finding and replacing. This course may be offered in a distance education format.

OAS 92: WORD FOR WINDOWS - II – 1 Unit (P/NP Option)

Advisory: A grade of C or higher in OAS 91 or OAS 51. Ability to type 25 wpm

Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to the latest Microsoft Operating System and Office Suite.

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)

Designed to expand and improve basic word processing skills to a higher level of proficiency through multi-media lecture/demonstration/discussion on an IBM compatible microcomputer. Instruction will include a review of basic concepts and commands, illustrating documents with graphics, creating a web site, merging word documents, working with styles and templates, developing multi-page documents; and integrating Word with other programs. This course may be offered in a distance education format.

OAS 93: WORD FOR WINDOWS - III – 1 Unit (P/NP Option)

Advisory: Ability to type 25 wpm

Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to the latest Microsoft Operating System and Office Suite.

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)

Designed to expand and improve word processing skills to a more advanced level of proficiency through multi-media lecture/demonstration/discussion on an IBM compatible microcomputer. Instruction will include a review of word processing concepts and commands; exploring advanced graphics, building forms, working with charts and diagrams, collaborating with workgroups, using macros and customizing Word. This course may be offered in a distance education format.
OAS 94  POWERPOINT – 1 Unit (P/NP Option)
Advisory: Ability to type 25 wpm. Familiarity with Word Processing.
Note: Class will require outside time using a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to the latest Microsoft Operating System and Office Suite.
Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 63)
This is a hands-on course designed to familiarize students with Microsoft PowerPoint. Students will learn how to create effective slide show presentations with emphasis on customizing text, graphics and charts. Students will work with embedded and linked objects as well as hyperlinks and use PowerPoint’s many slide show features. This course may be offered in a distance education format.

OAS 97  SPECIAL TOPICS IN OFFICE ADMINISTRATION – .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in office administration. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, it is repeatable three times for a total of four enrollments.

OAS 98  SPECIAL LAB TOPICS IN OFFICE ADMINISTRATION – .5-2 Units (P/NP Option)
Class Hours: 27-106 lab total
This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in office administration. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

OAS 110  BEGINNING MEDICAL TERMINOLOGY (formerly HEOC 110, MEDA 151) – 3 Units
Note: Internet and classroom students will require access to a computer with the same version of Microsoft Operating System and Office Suite being used in the course. Computer access is provided on campus at the Math and Business Learning Center.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course provides students with an understanding of the language of medicine through the study of basic word structures and anatomical, pathological and common terms used within the integumentary, musculoskeletal, nervous, cardiovascular, respiratory systems, blood and lymphatic systems and digestive system. This course may be offered in a distance education format.

OAS 111  ADVANCED MEDICAL TERMINOLOGY (formerly OAS 111, MEDA 152) – 3 Units
Prerequisite: A grade of C or higher in OAS 110
Note: Internet and classroom students will require access to a computer with the same version of Microsoft Operating System and Office Suite being used in the course. Computer access is provided on campus at the Math and Business Learning Center.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is a continuation of OAS 110 providing students with an understanding of medical terms used within the endocrine, special senses, urinary, reproductive and female reproductive systems, and specialty areas such as Obstetrics, Pharmacology, Mental health, and Gerontology. This course may be offered in a distance education format.

OAS 112  BASIC ICD-9-CM AND CPT-4 CODING (formerly HEOC 112, MEDA 156, MEDA 156A) – 3 Units
Corequisite: Students must be concurrently enrolled in, or have completed OAS 110 with a grade of C or higher
Class Hours: 54 lecture total
This course is basic introduction to ICD-9-CM and CPT-4 coding for medical billing. It is designed to provide the learner with fundamentals needed to use the systems correctly and consistently. The student will learn the structure and format of ICD-9-CM and CPT-4 coding books and develop skills in assigning accurate codes. The student will use acceptable coding guidelines through practical application.

OAS 113  ADVANCED ICD-9-CM AND CPT-4 CODING – 3 Units
Prerequisite: A grade of C or higher in OAS 112
Corequisite: Students must be concurrently enrolled in, or have completed OAS 111 with a grade of C or higher.
Class Hours: 54 lecture total
This course has been designed to enable the learner to interpret health record documentation for code assignment. Students will apply National Correct Coding Initiative guidelines.

OAS 114  HEALTHCARE BILLING AND REIMBURSEMENT – 3 Units
Corequisite: Students must be concurrently enrolled in, or have completed OAS 113 and OAS 150 with a grade of C or higher.
Class Hours: 54 lecture total
This course will provide the linkage between specialized medical office administration practices such as computerized medical account management and medical coding. The course will enable students to understand the processing of healthcare claims as it relates to various insurance payer requirements beginning with abstracting information from medical chart documents and following procedural steps based on the nature of the patient status and payer.

OAS 150  COMPUTERIZED MEDICAL ACCOUNT MANAGEMENT (formerly MEDA 159B) – 3 Units
Advisory: A grade of C or higher in OAS 51 and OAS 110
Class Hours: 54 lecture total
This course is designed to prepare students for entry-level positions in medical office billing. Topics covered are computerized systems for appointment scheduling and follow-up: claim forms and coding; patient and insurance billing, and medical practice financial management.

OAS 152  KEYBOARDING FOR SPEED AND ACCURACY (formerly OAS 268, OAS 268AD, BUSI 268AD) – 5 Unit (P/NP Option)
Note: Class may require outside time using a computer with internet access and appropriate software. Computer access is provided on campus at the Math and Business Learning Center and the Tehama Learning Center. Students taking the Internet format of this course must have access to the same version of Microsoft Operating System and Office Suite being used in the course.
Class Hours: 27-106 lab total (when offered in the Distance Education format, hours will total 271)
Designed for the beginning to advanced keyboarding student to improve typing speed and accuracy. Specific drills, proper typing technique, and ergonomics will be covered in the course. Development of keyboarding skills are attained through repetitive typing of specific drills designed to improve both accuracy and speed. This course may be repeated twice for a total of three enrollments since skills are enhanced by repetition and practice. This course may be offered in a distance education format.

OAS 157  OFFICE PROCEDURES (formerly BUSI 157) - 3 Units
Advisory: A grade of C or higher in OAS 51, and a grade of C or higher in ENGL 280 or English Placement Level 5 or higher
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A capstone course in office technology. Content includes office ethics, greeting office callers, telephone techniques, working with others on the job, mail procedures, filing procedures, reference sources, appointment/calendaring, office reprographics, employment testing, and career planning. This course may be offered in a distance education format.

OAS 158   MEDICAL OFFICE PROCEDURES (formerly BUSI 158) – 3 Units
Advisory: A grade of C or higher in OAS 51, and a grade of C or higher in ENGL 280 or English Placement Level 5 or higher
Class Hours: 54 lecture total
This is an essential class for students wishing to work in a medical office. Content includes: understanding the medical practice, the unique issues of working in a medical office, interacting with patients, dealing with insurance and finances, scheduling appointments, and obtaining employment.

OAS 160  MEDICAL TRANSCRIPTION (formerly OAS 159/160, BUSI 159B) – 3 Units
Corequisite: Students must be concurrently enrolled in, or have completed OAS 110 with a grade of C or higher
Prerequisite: A grade of C or higher in BUAD 166 and OAS 51
Note: Class may require outside time using a computer with Internet access and appropriate software. Computer access is provided on campus at the Math and Business Learning Center and the Tehama campus. Students taking the Internet format of this course must have access to the same version of Microsoft Operating System and Office Suite being used in the course.
Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)
Designed for the beginning to advanced keyboarding student to improve typing speed and accuracy. Specific drills, proper typing technique, and ergonomics will be covered in the course. Development of keyboarding skills are attained through repetitive typing of specific drills designed to improve both accuracy and speed. This course may be repeated twice for a total of three enrollments since skills are enhanced by repetition and practice. This course may be offered in a distance education format.

OAS 166  RECORDS MANAGEMENT(formerly BUSI 163) – 2 Units
Class Hours: 36 lecture/9 lab total (when offered in the Distance Education format, hours will total 117)
A study of the basic principles, rules, and procedures of filing. It includes a study of alphabetical, numeric, subject, and geographic filing. Various types of filing equipment will be analyzed. This course may be offered in a distance education format.
OAS 197 SPECIAL TOPICS IN OFFICE TECHNOLOGY – .5-.2 Units (P/NP Option)

This course is designed to give students an opportunity to explore a variety of topics dealing with changing topics/knowledge in the field of Office Technology. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for anyone who has taken a previous course, whether or not regular offices, or Business majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of four enrollments.

OAS 198 SPECIAL LAB TOPICS IN OFFICE TECHNOLOGY – .5-.2 Units (P/NP Option)

This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in office technology. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

PHIL 6 INTRODUCTION TO PHILOSOPHY – 3 Units (P/NP Option)

Advisory: A grade of C or higher in ENGL 1A or English Placement Level 7

This course is intended for students needing a computer terminal keyboarding skill who have numbers and symbols of the microcomputer keyboard. A beginning class provide the intensive drill necessary to master the alphabetic keys as well as interest and to make arrangements for tutoring. The course is designed to work toward personal growth objectives. This course does not meet the requirement of Keyboard I (Beginning Typing) for an A grade of C or higher in ENGL 1A or English Placement Level 7. This course may be repeated three times for a total of four enrollments since skills and proficiencies are gained by supervised repetition and practice.

PHIL 7 ETHICS: UNDERSTANDING RIGHT AND WRONG – 3 Units (P/NP Option)

Advisory: A grade of C or higher in ENGL 1A or English Placement Level 7

This course covers the application of appropriate methods of proofreading documents common to the work place, and an overview of the essential skills needed to perform text-editing functions in business settings. High level proofreading skills are vital to the efficient operation and productivity of the information-processing office. Proofreading has become a "must" for quality control in the work place.

PHIL 10 LIFE AND DEATH MORAL ISSUES – 3 Units (P/NP Option)

Advisory: A grade of C or higher in ENGL 1A or English Placement Level 7

This course will explore in detail the entire range of life and death moral issues which philosophers consider. These issues include abortion, euthanasia, capital punishment, warfare, self-defense cases, various crisis cases, cloning, and stem cell research, among others. We will examine both the various moral claims made about these issues and the moral theories used in defense of those claims. This course can serve as an introduction to moral philosophy in particular, and to philosophy in general. The issues covered in this course should be of intrinsic interest to everyone. This course may be offered in a distance education format.
The Adapted Physical Education program is taught by trained, physical education instructors. The Adapted PE program incorporates the use of the gymnasium, swimming pools, weight room, and cardio room, in an individualized approach.

### Course Descriptions

#### PE 13
**BODY MECHANICS (formerly HPE 33AD)** – 5.1-5.5 Units (P/NP Option)
Class Hours: 27, 54, or 81 total activity
Course is directed at the student who does not have exercise or physical activity as a regular part of his or her life. The course has a dual concern: 1) that the student receive a sounder base of knowledge so he/she can better understand and appreciate the need for and the means of a physical conditioning program, and 2) that student become involved in a physical conditioning program on a regular basis. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 14
**BODY FITNESS ASSESSMENT AND CONDITIONING (formerly HPE 66AD)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Designed to provide the students with knowledge of personal levels of physical fitness so that they may develop and implement a strategy to improve their levels through physiology of exercise, nutrition, and fundamental conditioning. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 15
**AEROBIC DANCE (form. HPE 53AD)** – 5.1 Units (P/NP Option)
Class Hours: 27 or 54 total activity
A complete physical conditioning program designed to increase cardiovascular efficiency through choreographed dances. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 16
**AEROBIC EXERCISE (form. HPE 63AD)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
A complete physical conditioning program designed to increase cardiovascular efficiency through aerobic exercises. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 17
**YOGA** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Introduction to basic yoga postures. Students will study and practice the principles of yoga exercise through self-awareness, breathing, relaxation, visualization, and meditation. Students will also learn the origin and history of yoga as a form of healthful exercise. This course is designed to meet all levels of experience in yoga techniques. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### ADAPTED PHYSICAL EDUCATION
The Adapted Physical Education program is taught by trained, physical education instructors. The Adapted PE program incorporates the use of the gymnasium, swimming pools, weight room, and cardio room, in an individualized activity program developed for each student.

#### PE 20
**INTRODUCTION TO ADAPTED PHYSICAL EDUCATION (formerly HPE 75AD)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Introduction to adapted physical education is designed to provide an orientation to the diversified adapted program of developmental activities, games, and sports. Assessment is done to best suit the interest, capacities and limitations of students with disabilities who may not safely or successfully engage in unrestricted participation in the general physical education program. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 21
**EXERCISE FOR ORTHOPEDIC DISORDERS OR INJURIES (formerly HPE 73AD)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Exercise for orthopedic disorders is designed to provide a program of activities suitable for those students who are unable to participate in a regular physical education program because of orthopedic injury or disorders. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 22
**EXERCISE FOR CARDIOVASCULARLY IMPAIRED (formerly HPE 74AD)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Exercise designed to provide a program of activities suitable for those students who are unable to participate in a regular physical education program because of cardiovascular impairments. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 23
**EXERCISE FOR RESPIRATORY DISORDERS (formerly HPE 76AD)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Exercise designed to provide a program of activities suitable for those students who are unable to participate in a regular physical education program because of respiratory disorders. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 26
**ADAPTED WEIGHT TRAINING** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 lab total
Strength and flexibility development through supervised progressive exercise. Includes initial assessment, exercise prescription and equipment, and technique instruction. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 27
**ADAPTED AQUATICS FOR THE PHYSICALLY LIMITED** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 lab total
Aquatic exercise designed to provide a program of activities for those students who are unable to participate in a regular physical education aquatic program because of physical or mental impairments. This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### AQUATICS

#### PE 30
**SWIMMING (formerly HPE 40AD)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
This course is designed to offer instruction in aquatic skills necessary for survival, efficiency in swimming and diving, and conditioning in the aquatic environment. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 31
**AQUA AEROBICS (form. HPE 79AD)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Aqua aerobics is an activity class covering basic aquatic exercises. Water is the perfect medium providing natural resistance for toning, firming, and strengthening. Body alignment, heart rates, fun, and pleasure without strain will be included. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 32
**WATER POLO (formerly HPE 44AB)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
A course designed to acquaint students with the sport of water polo. Emphasis on proper individual skills, team play, and game strategy. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 33
**PADDLE SPORTS (form. HPE 59AB)** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
This course is designed to offer instruction in canoeing or kayaking. The course will cover material on types of canoes or kayaks, their uses, basic paddling strokes, reading moving water, use of safety and rescue equipment and personal rescue techniques. Note: This course may be repeated any number of times for credit by students who are legally mandated to meet training requirements as a condition of continued pay or volunteer employment.

#### PE 35
**LIFEGUARD TRAINING (formerly HPE 43AB)** – 2 Units (P/NP Option)
Advisory: Red Cross Level VII swimming skills.
Class Hours: 27 lecture/27 lab total
A course designed to prepare and train student for certification in American Red Cross Lifeguard Training, Professional Rescuers CPR, and First Aid Basics. Note: This course may be repeated any number of times for credit by students who are legally mandated to meet training requirements as a condition of continued pay or volunteer employment.

#### PE 36
**WATER SAFETY INSTRUCTORS (formerly HPE 54)** – 1.5 Units (P/NP Option)
Class Hours: 18 lecture/27 lab total
A course designed to provide laboratory experience in the methodology of American Red Cross swimming instruction. Emphasis is placed on practical application of instructional theory used at all levels of swimming instruction. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 37
**SPRINGBOARD DIVING** – 5.1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
A course designed to present skills and techniques of high and low diving, and diving performance criteria. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

#### PE 38
**SNORKELING** – 5.1 Unit (P/NP Option)
Note: 1) Students will need to have appropriate equipment (mask, fins, snorkel, wet suit, wet belt, and buoyancy compensator). 2) Students will need to provide own transportation for field trips which will be arranged at the first class meeting. Class will meet at Shasta College pools for first 9-hours and by arrangement off-campus for 18-additional hours.
Class Hours: 27 total activity
A course designed to provide theory and practical skills required for safe and enjoyable snorkeling/free-diving in lake, stream, or ocean.
For Dance courses, refer to DAN in the catalog.

INDIVIDUAL SPORTS AND TEAM SPORTS

PE 51 TENNIS (formerly HPE 35AD) – .5-1.0 Units (P/NP Option)
Class Hours: 27 or 54 total activity
A course in fundamentals, techniques, rules of play, strategies, and social courtesies in singles and doubles play with the skill ranging from the beginning to the advanced. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PE 52 GOLF (formerly HPE 32AD) – .5-1 Units (P/NP Option)
Class Hours: 27 or 54 total activity
Designed to teach the fundamental skills and knowledge necessary to participate in the game of golf. A course for the beginning, intermediate, or advanced player who desires a review. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PE 62 FOOTBALL (formerly HPE 3AD) – .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
An activity course designed to teach skills and techniques of football. Team play is emphasized to prepare the beginner and intermediate player for competitive play. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PE 63 VOLLEYBALL (formerly HPE 6AD) – .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
Designed to develop basic skills and an understanding and appreciation for the game of volleyball. The use of lecture, demonstration and drills/practice will provide the student with the opportunity for skill improvement. Rules, strategy, and team play will enhance the student’s knowledge to continue this activity at a higher level. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PE 71 SOFTBALL (formerly HPE 5AD) – .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
An activity course designed to teach skills and techniques of softball. Team play is emphasized to prepare the beginner and intermediate player for competitive play. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PE 72 BASEBALL (formerly HPE 5AD) – .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
An activity course designed to teach skills and techniques of baseball. Team play is emphasized to prepare the beginner and intermediate player for competitive play. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PE 73 TRACK & FIELD TECHNIQUES (formerly HPE 12AD) – .5-1 Unit (P/NP Option)
Class Hours: 27 or 54 total activity
An activity course designed to teach and practice fundamental skills of track and field. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PE 74 SOCCER (formerly HPE 41AD) – .5-1 Units (P/NP Option)
Class Hours: 27 or 54 total activity
A course designed to provide instruction on the history, theory, fundamental skills, strategies, and techniques of the game of soccer. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PE 75 BASKETBALL (formerly HPE 4AD) – .5-1 Units (P/NP Option)
Class Hours: 27 or 54 total activity
Designed to develop basic skills and understanding and appreciation for the game of basketball. The use of lecture, demonstration and drills will provide the student with the opportunity for skill development. Rules, strategy, and team play will enhance the student’s knowledge to continue this activity at a higher level. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PE 97 SPECIAL TOPICS IN PHYSICAL EDUC. – .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in physical education. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

PE 98 SPECIAL TOPICS IN PHYSICAL EDUCATION - ACTIVITY – .5-2 Units (P/NP Option)
Class Hours: 27-108 total activity
This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in physical education. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

PE 197 SPECIAL TOPICS IN PHYSICAL EDUCATION – .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in physical education. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

PE 198 SPECIAL TOPICS IN PHYSICAL EDUCATION - ACTIVITY – .5-2 Units (P/NP Option)
Class Hours: 27-108 total activity
This course is designed to give students an opportunity to explore a variety of activities dealing with changing topics/knowledge in physical education. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

NON-CREDIT - PHYSICAL EDUCATION

PE 300 FITNESS FOR SENIORS (formerly HPE 305) – 0 Units
Class Hours: 27-54 total activity
This course is designed to provide instruction for seniors on the utilization of modified postures that are specifically designed to provide gentle stretching, strengthening, and balancing with emphasis in increasing limberness and stamina.

PE 301 FITNESS FOR THE DEVELOPMENTALLY DISABLED – 0 Unit
Class Hours: 27-54 total activity
This course is designed to provide instruction to the developmentally disabled person for the utilization of modified exercises that are specifically designed to provide gentle stretching, strengthening, range of motion, with emphasis in increasing limberness and stamina. Nutritional aspects of wellness will be discussed.

PHYSICAL EDUCATION – ATHLETICS (PEAT)

PEAT 2 CLINICAL EXPERIENCES IN SPORTS MEDICINE (formerly HPE 91L) – 1-3 Units (P/NP Option)
Class Hours: 54-162 total activity
Theory, practice, and hands-on experience in athletic injury prevention, athletic emergency care, therapeutic treatment, and rehabilitation of athletic injuries in the Athletic Treatment Center. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.

PEAT 3 STRENGTH TRAINING & CONDITIONING FOR ATHLETES (formerly HPE 64AD) – .5-1.5 Units (P/NP Option)
Class Hours: 27, 54, or 81 total activity
A course designed to provide specialized strength training program to meet the needs of athletes of various sports. Note: Since subject matter varies each time course is taught, course is repeatable three times for a total of four enrollments.
A course designed to teach the coach or aspiring coach a greater understanding of coaching philosophies, sport pedagogy, sport psychology, adolescent psychology, sport medicine, and sport rules and regulations, and how to deal with parental dilemmas and ethical issues.

**PEAT 5 INTERCOLLEGIATE FOOTBALL (formerly HPE 14AB) – 3 Units (P/NP Option)**

| Class Hours | 162-180 hours total |

A course designed to teach the rules, theory, and strategies of intercollegiate football. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 6 THEORY OF FOOTBALL, (form. HPE 9AB) – 1 Unit (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of intercollegiate football. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 7 INTERCOLLEGIATE VOLLEYBALL (formerly HPE 61AB) – 3 Units (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of intercollegiate volleyball. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 8 THEORY OF VOLLEYBALL (formerly HPE 52AB) – 1 Unit (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of intercollegiate volleyball. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 9 INTERCOLLEGIATE CROSS COUNTRY (formerly HPE 29AB) – 3 Units (P/NP Option)**

| Class Hours | 162-180 hours total |

A course designed to teach the rules, theory, and strategies of intercollegiate cross country. Note: This course may be repeated two times for a total of three enrollments since skills and proficiencies are enhanced by supervised repetition and practice. (If student desires to compete in conference matches, he/she must meet conference eligibility requirements.)

**PEAT 10 THEORY OF CROSS COUNTRY (formerly HPE 30AB) – 1 Unit (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of cross country. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 11 INTERCOLLEGIATE BASKETBALL (formerly HPE 15AB) – 1.5 Units (P/NP Option)**

| Class Hours | 81-90 lab hours total |

A course designed to teach the rules, theory, and strategies of intercollegiate basketball. Note: This course may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice. (If student desires to compete in conference matches, he/she must meet conference eligibility requirements.)

**PEAT 12 THEORY OF BASKETBALL (formerly HPE 13AB) – 1 Unit (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of intercollegiate basketball. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 13 INTERCOLLEGIATE SOFTBALL (formerly HPE 62AB) – 3 Units (P/NP Option)**

| Class Hours | 162-180 hours total |

A course designed to teach the rules, theory, and strategies of intercollegiate softball. Note: This course may be repeated two times for a total of three enrollments since skills and proficiencies are enhanced by supervised repetition and practice. (If student desires to compete in conference matches, he/she must meet conference eligibility requirements.)

**PEAT 14 THEORY OF SOFTBALL (formerly HPE 42AB) – 1 Unit (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of intercollegiate softball. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 15 INTERCOLLEGIATE BASEBALL (formerly HPE 16AB) – 3 Units (P/NP Option)**

| Class Hours | 162-180 hours total |

A course designed to teach the rules, theory, and strategies of intercollegiate baseball. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 16 THEORY OF BASEBALL (formerly HPE 10AB) – 1 Unit (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of intercollegiate baseball. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 17 INTERCOLLEGIATE TRACK AND FIELD (formerly HPE 18AB) – 3 Units (P/NP Option)**

| Class Hours | 162-180 hours total |

A course designed to teach the rules, theory, and strategies of intercollegiate track and field. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 18 THEORY OF TRACK AND FIELD (formerly HPE 28AB) – 1 Unit (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of intercollegiate track and field. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 19 INTERCOLLEGIATE TENNIS (formerly HPE 17AB) – 3 Units (P/NP Option)**

| Class Hours | 162-180 hours total |

A course designed to teach the rules, theory, and strategies of intercollegiate tennis. Note: This course may be repeated two times for a total of three enrollments since skills and proficiencies are enhanced by supervised repetition and practice. (If student desires to compete in conference matches, he/she must meet conference eligibility requirements.)

**PEAT 20 THEORY OF TENNIS (form. HPE 68AB) – 1 Unit (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of intercollegiate tennis. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 21 INTERCOLLEGIATE GOLF (formerly HPE 19AB) – 3 Units (P/NP Option)**

| Class Hours | 162-180 hours total |

A course designed to teach the rules, theory, and strategies of intercollegiate golf. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 22 THEORY OF GOLF (formerly HPE 69AB) – 1 Unit (P/NP Option)**

| Class Hours | 9 lecture/27 activity total |

A course designed to teach the rules, theory, and strategies of intercollegiate golf. Note: This course may be repeated once for a total of two enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.

**PEAT 23 INTERCOLLEGIATE SOCCER (formerly HPE 71AB) – 3 Units (P/NP Option)**

| Class Hours | 162-180 hours total |

A course designed to teach the rules, theory, and strategies of intercollegiate soccer. Note: This course may be repeated twice for a total of three enrollments since skills and proficiencies are enhanced by supervised repetition and practice. (If student desires to compete in conference matches, he/she must meet conference eligibility requirements.)
PHYSICS (PHYS)

PHYS 2A GENERAL COLLEGE PHYSICS – 4 Units (P/NP Option)
Prerequisite: A grade of C or higher in MATH 102 or Math Placement Level 4 or higher
Class Hours: 54 lecture/54 lab total
This course provides an introduction to the principles and applications of mechanics, using the mathematical tools of algebra and right triangle trigonometry. Topics include vectors, kinematics, Newton’s Laws, gravity, energy, momentum, equilibrium of rigid bodies, heat, fluids and simple harmonic motion.

PHYS 2B GENERAL COLLEGE PHYSICS – 4 Units (P/NP Option)
Prerequisite: A grade of C or higher in PHYS 2A
Class Hours: 54 lecture/54 lab total
This course is a continuation of PHYS 2A, covering mechanical waves (including sound), electricity, magnetism, geometric optics, interference and diffraction and elementary modern physics.

PHYS 4A PHYSICS (MECHANICS) – 4 Units
Prerequisite: A grade of C or higher in MATH 3A, or Math Placement Level 6 or higher
Corequisite: Students must be concurrently enrolled in PHYS 4A, and have completed MATH 3B with a grade of C or higher.
Class Hours: 54 lecture/54 lab total
This course is a continuation of PHYS 3A, and is the prerequisite for A.D.N. and Dental Hygiene programs.

PHYS 4B PHYSICS (ELECTRICITY AND MAGNETISM) – 4 Units
Prerequisite: A grade of C or higher in MATH 3B or Math Placement Level 7, and a grade of C or higher in PHYS 4A
Corequisite: Students must be concurrently enrolled in MATH 4A, or have completed MATH 4A with a grade of C or higher.
Class Hours: 54 lecture/54 lab total
This course is a continuation of PHYS 4A, and is the prerequisite for A.D.N. and Dental Hygiene programs.

PHYS 4C PHYSICS (WAVES, MODERN PHYSICS & QUANTUM MECHANICS) – 4 Units
Prerequisite: A grade of C or higher in PHYS 4B, and a grade of C or higher in MATH 4A or Math Placement Level 7
Corequisite: Students must be concurrently enrolled in, or have completed MATH 4A with a grade of C or higher.
Class Hours: 54 lecture/54 lab total
This course presents a general physics course designed to explore applications of Physics for non-transfer students. This course is designed for students in (but not limited to) heavy-duty mechanics, automotive, drafting, sports, fire science and architecture.

PHYSIOLOGY (PHY)

PHY 1 PHYSIOLOGY (formerly PHY 1/PHY 1L) – 5 Units (P/NP Option)
Class Hours: 72 lecture/54 lab total
A study of cellular, tissues, and organ function in the human body. A college level course surveying the elements of human physiology in selected organ systems with an emphasis on their control and integration. The course will be presented in a lecture/discussion format with appropriate audio visual aids to explain selected concepts. Experiments are performed in the laboratory to illustrate functional characteristics of cells, membranes, and organ systems discussed in lecture and to provide direct experience with lab techniques, recording systems, and methods of data analysis. Some previous knowledge of anatomy and chemistry is helpful, but not required for success in the course. A prerequisite for A.D.N. and Dental Hygiene programs.

POLITICAL SCIENCE (POL)

POL 1 INTRODUCTION TO POLITICAL SCIENCE – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 1A, or English Placement Level 7
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
The central emphasis of this course is upon the terms and concepts used in the field of political science. Discussion centers upon the nature of political science, the origin and nature of the State, patterns and functions of government, the
nurture of political ideologies, the nature of the U.S. Constitution and the basic principles of a constitutional republic. It is recommended that students majoring in political science or other social sciences take this course. This course may be offered in a distance education format.

**POLS 2** INTRODUCTION TO AMERICAN GOVERNMENT – 3 Units
**Advisory:** A grade of C or higher in ENGL 190 or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course emphasizes the machinery of government as found in the American system. It examines the Constitutional framework and the functioning of government at national, state and local levels. Political Science majors should take this course as well as POLS 1, preferably in sequence. This course satisfies the CSU requirement in U.S. Constitution and California state and local government (US-2 and US-3). This course may be offered in a distance education format.

**POLS 12** CALIFORNIA STATE AND LOCAL GOVERNMENT – 3 Units
**Advisory:** A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

The purpose of this course is to acquaint the student with an understanding of how the State of California is governed. Emphasis will be placed on the local elections, political parties, legislative, executive, and judicial powers, special interest groups, lobbying, and campaign finances. Major events in the historical development of California and on present day issues will be examined in the context of the US and California constitutions. This course may be offered in a distance education format.

**POLS 20** POLITICS OF THE DEVELOPING WORLD – 3 Units (P/NP Option)
**Advisory:** A grade of C or higher in ENGL 1A, or English Placement Level 7

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course focuses on the political dynamics of selected developing nations. Major emphasis will be on problems of poverty, colonialism, comparative political structures and behavior, imperialism and international relations. Tensions in political culture between traditional and non-traditional values in contemporary developing societies will also be examined. This course may be offered in a distance education format.

**POLS 25** GLOBAL POLITICS – 3 Units
**Advisory:** A grade of C or higher in ENGL 190, or English Placement Level 6 or higher; or a grade of C or higher in ESL 138; and a grade of C or higher in POLS 2

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course examines the political, social, and economic methods and processes by which nations of the world conduct relations with each other and within a global system. Ideology, nationalism, diplomacy, warfare, and the role of international organizations will be addressed. The last two centuries and present day issues will be evaluated in the context of a global system of international relations. This course may be offered in a distance education format.

**PSYCHOLOGY (PSYC)**

**PSYC 1A** GENERAL PSYCHOLOGY – 3 Units
**Advisory:** A grade of C or higher in ENGL 190 or English Placement Level 6 or higher

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course provides an introduction to psychology as a science and as an applied field. The course provides an integration of physiological, cognitive, social-behavioral, psychodynamic, humanistic, cultural, and evolutionary perspectives. Topics include research methods, the nervous system, perception, consciousness, learning, memory, development, motivation, emotion, intelligence, stress, personality, abnormal behavior, social behavior, and psychotherapy. This course may be offered in a distance education format.

**PSYC 5** HUMAN SEXUALITY (formerly PHY 5) – 3 Units (P/NP Option)

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

An introductory course in human sexuality, including human development from conception to adulthood. The anatomy and physiology of sex as well as behavioral and social aspects of human sexuality, and myths and laws governing sexual practices will be covered. This course may be offered in a distance education format.

**PSYC 14** UNDERSTANDING HUMAN BEHAVIOR – 3 Units
**Advisory:** A grade of C or higher in ENGL 280, or English Placement Level 5 or higher

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This introductory course provides a general survey of psychological concepts, with an emphasis on applied areas of psychology. Topics include learning, development, motivation, emotions, personality, abnormal behavior, psychotherapy, stress and coping, gender and sexuality, relationships, consciousness, and biological and social bases of behavior. This course may be offered in a distance education format.

**PSYC 15** SOCIAL PSYCHOLOGY – 3 Units (P/NP Option)
**Advisory:** A grade of C or higher in PSYC 1A and/or SOC 1; and a grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course is a study of human interaction. The focus is on the individual within a social context. Topics such as attitude formation; conformity; obedience to authority; liking and loving; gender, age, and cultural diversity; prejudice, discrimination and stereotyping; pro-social behavior and altruism; aggression; power and leadership; groupthink and deindividuation; conflict resolution and peacemaking are explored. In addition, the research methods and theories used by social psychologists are discussed. This course may be offered in a distance education format.

**PSYC 16** HEALTH PSYCHOLOGY – 3 Units (P/NP Option)
**Advisory:** A grade of C or higher in PSYC 1A; and a grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course examines the scientific and professional contributions of psychology to the areas of health and wellness including the promotion of and maintenance of health; the prevention and treatment of illness; how psychological, social, and biological factors influence health and the overall state of health; the roles of patients and health care providers; and the improvement of health care systems and health policy formation. Individual characteristics such as gender, culture, lifestyle, personality, and relationships and their effects on health are examined. Students pursuing psychology, health care, and/or human services as their profession will find this course beneficial. This course may be offered in a distance education format.

**PSYC 17** ABNORMAL PSYCHOLOGY – 3 Units (P/NP Option)
**Advisory:** A grade of C or higher in PSYC 1A; and a grade of C or higher in ENGL 190, or English Placement Level 7

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course provides an overview of psychological disorders, their characteristics, etiology, and treatment. The course discusses the many specific types of mental illness along with fundamental issues such as historical and modern perspectives on mental illness, diagnosis and assessment, research methods, intervention and therapies, and legal and ethical issues. This course may be offered in a distance education format.

**PSYC 20** CROSS-CULTURAL PSYCHOLOGY – 3 Units (P/NP Option)
**Advisory:** A grade of C or higher in PSYC 1A; and a grade of C or higher in ENGL 280, or English Placement Level 5 or higher, or a grade of C or higher in ESL 138

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

An introduction to cultural influences on human behavior, emotions and patterns of thinking, including theories of research and findings. Topics include a range of issues such as life-span development, abnormal behavior and mental health, drug use, self-concept, emotions, gender expectations and gender roles, social behavior, perception, learning, intelligence, and psychotherapy. By providing students with an understanding of cultural relativism this course will encourage them to interact with tolerance and/or appreciation in a world where there is an increasing contact among different cultures. This course may be offered in a distance education format.

**PSYC 41** CULTURAL/SOCIAL CONTEXT OF CHILDHOOD – 3 Units
**Advisory:** A grade of C or higher in ENGL 280, or English Placement Level 5 or higher

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course examines the impact of the psychological, social, and cultural context of child development. Emphasis is given to the socialization process and to cultural influences including ethnic identity, family relations, socioeconomic status, gender roles, peers, faith, and communities. Significant references highlight the experiences of children and their families from at least four different historically under-represented groups. This course may be offered in a distance education format.

**PSYC 46** HUMAN MEMORY AND LEARNING - 3 Units (P/NP Option)
**Advisory:** A grade of C or better in ENGL 280 or English Placement Level 5 or higher

**Class Hours:** 54 lecture total (when offered in the Distance Education format, hours will total 162)

This course explores research, theories, and applications within the field of human memory, cognition and learning. Topics include: an investigation of how the human mind stores and retrieves information; the application of memory and learning principles toward improving those abilities; the evaluation of the impact of prior learning, cognitive style, personality, and motivation on memory functioning; and changes in memory processes through the lifespan including recent research on topics such as Alzheimer’s disease and amnesia. This course may be offered in a distance education format.
REAL ESTATE (REAL)

REAL 30 REAL ESTATE PRINCIPLES (formerly BUSI 30) – 3 Units
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher.
Class Hours: 54 lecture total
This is a fundamental real estate course covering the basic laws and principles of California Real Estate. The knowledge, background, and terminology necessary for advanced study in specialized courses are covered. Designed to assist those preparing for the real estate salesperson license examination. Required for Real Estate majors and in the Real Estate Certificate Program.

REAL 31 REAL ESTATE PRACTICE (formerly BUSI 31) – 3 Units
Advisory: A grade of C or higher in REAL 30. A grade of C or higher in ENGL 280 or English Placement Level 5 or higher.
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
Day-to-day operations of the real estate broker and agent; sales techniques, prospecting, financing, escrow, and ethics. Applies toward California Department of Real Estate educational requirements for agents continuing education and brokers examination. Required for Real Estate majors and Real Estate Certificate program. Offered primarily as an evening class. This course may be offered in a distance education format.

REAL 32 REAL ESTATE APPRAISAL (formerly BUSI 32) – 3 Units
(P/NP Option)
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course will familiarize the student with the basic principles of real estate appraisal and the application of those principles to the market, cost, and income approaches to the valuation of real property. The main emphasis of this course is on the appraisal of single family residences. However, the student will receive introductory information as to the appraisal of income-producing properties. This course applies toward California Department of Real Estate educational requirements for the broker’s and salesperson’s licenses, the Certification Program for Real Estate majors, and the educational requirements under the state-mandated appraisal licensing (OREA). This course is offered primarily as an evening class. This course may be offered in a distance education format.

REAL 33 LEGAL ASPECTS OF REAL ESTATE (formerly BUSI 33) – 3 Units
Advisory: A grade of C or higher in REAL 30 or have a real estate license
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
A study of California real estate law, including rights incident to property ownership and management, agency, contracts, and application to real estate transfer, conveyancing, trust deed and foreclosure as well as recent legislation governing real estate transactions, environmental regulations and conduct.

REAL 34 REAL ESTATE FINANCE (formerly BUSI 34) – 3 Units
(P/NP Option)
Advisory: A grade of C or higher in REAL 30 or real estate license
Class Hours: 54 lecture total
Analysis of Real Estate financing, including lending policies and problems in financing transactions in residential, apartment, commercial, and special-purpose properties. This course will introduce the basic everyday problems encountered in the mortgage banking field in relation to simple real estate transactions. It will also offer solutions to those problems in terms of everyday language to the agent or the buyer and seller of real estate. It is a practical approach to real estate finance. Offered primarily in the evening program. Applies toward California Department of Real Estate educational requirements for the broker’s examination.
REGN 10: THEORETICAL CONCEPTS OF MEDICAL SURGICAL NURSING I (formerly REGN 70) – 7 Units
Prerequisite: A grade of C or higher in each of the following courses: REGN 1 and REGN 2
Corequisite: Students must be concurrently enrolled in REGN 11 and REGN 12
Note: If not previously completed, all students participating in clinical rotations must submit proof of drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.
Class Hours: 126 lecture total.
REGN 10 is a required prerequisite for REGN 20 and REGN 21. REGN 10 is a required course for the Associate Degree Nursing program at Shasta College. This course is one of three prerequisite courses that make up the second semester of the Associate Degree Nursing program. Building upon the content of REGN 1 and REGN 2, the students will expand their knowledge of medical surgical nursing. Foundational information regarding disease process, etiology, pathophysiology, and clinical manifestations begin each unit of study. Then, utilizing a nursing process matrix, medical surgical content is discussed in relationship to assessment, diagnosis, planning, nursing interventions, and evaluation. Independent, dependent, and collaborative nursing interventions are explored.

REGN 11: CLINICAL CONCEPTS OF MEDICAL SURGICAL NURSING I (formerly REGN 71) – 4.5 Units
Prerequisite: A grade of C or higher in each of the following courses: REGN 1 and REGN 2
Corequisite: Students must be concurrently enrolled in REGN 10 and REGN 12
Note: If not previously completed, all students participating in clinical rotations must submit proof of drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.
Class Hours: 243 clinical total
REGN 11 is a required prerequisite for REGN 20 and REGN 21. REGN 11 is a required course for the Associate Degree Nursing program at Shasta College. This course is one of three corequisite courses that make up the second semester of the Associate Degree Nursing program. Building upon the content of REGN 1 and REGN 2, the students will expand the fundamental clinical nursing skills they mastered in the previous semester of the program. Students will have a variety of patient assignments on the medical floor, surgical floor, neurology floor, orthopedic floor, operating room and emergency room. Students will have assignments in specialty areas as available, such as the pre-anesthesia surgical suite and respiratory therapy. Clinical skills will include receiving report, organizing their patient care, delegating care, performing teaching and documentation, intravenous therapy, blood administration, TPN/Lipid administration, capillary blood glucose measurement, and analyzing daily labs. A heavy focus is on improving objective and subjective nursing assessment skills. Students will progress from providing care for a single patient to providing care to two increasingly complex patients. Emphasis is placed on the integration of theory and the nursing process into the clinical setting by use of clinical papers, medical record review, and clinical conferences.

REGN 12: ASSESSMENT CONCEPTS OF MEDICAL SURGICAL NURSING (formerly REGN 72) – 3 Unit
Prerequisite: A grade of C or higher in each of the following courses: REGN 1 and REGN 2
Corequisite: Students must be concurrently enrolled in REGN 10 and REGN 11
Note: If not previously completed, all students participating in clinical rotations must submit proof of drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.
Class Hours: 27 lab total
REGN 12 is a required prerequisite for REGN 20 and REGN 21 and is a required course for the Associate Degree Nursing program at Shasta College. This course is one of three corequisite courses that make up the second semester of the Associate Degree Nursing program. Building upon the content of REGN 1 and REGN 2 the students will expand the basic assessment skills they mastered in the previous semester. Students will have a variety of patient assignments on the medical floor, surgical floor, neurology floor, orthopedic floor, operating room and emergency room. Students will have assignments in specialty areas as available, such as the pre-anesthesia surgical suite and respiratory therapy. Clinical skills will include receiving report, organizing their patient care, assessments, delegation, assessments, education, documentation, medication administration, intravenous therapy, venapuncture, blood administration, TPN/Lipid administration, accuchecks, and analyzing daily labs. Students will progress from providing care for a single patient to providing care to up to three increasingly complex patients. Emphasis is placed on the integration of theory and the nursing process into the clinical setting by use of organizational tools, clinical papers, a nursing care plan, chart review, and clinical conferences.

REGN 20: THEORETICAL CONCEPTS OF FAMILY/MATERNAL-CHILD NURSING AND MEDICAL SURGICAL NURSING II (form. REGN 90) – 7 Units
Prerequisite: A grade of C or higher in each of the following courses: REGN 10 and REGN 11 and REGN 12
Corequisite: Students must be concurrently enrolled in REGN 21
Class Hours: 126 lecture total
REGN 20 is a required course for the Associate Degree Nursing program at Shasta College and a required prerequisite for REGN 33 and REGN 34. This course is one of two corequisite courses that make up the third semester of the Associate Degree Nursing program. Building upon the content of REGN 10 and REGN 11 and REGN 12, the students will expand their knowledge of medical surgical nursing and examine complications of obstetrical and pediatric nursing. Content concepts emphasized include family, communication, health promotion, illness prevention, teaching, cultural sensitivity, growth and development, nursing process, critical thinking, legal-ethical issues and advocacy.

REGN 20X: SELECT THEORETICAL CONCEPTS OF FAMILY/MATERNAL-CHILD NURSING AND MEDICAL SURGICAL NURSING II (NON-DEGREE) (formerly REGN 90X/REGN 91X) – 4 Units
Corequisite: Students must be concurrently enrolled in REGN 21X
Limitation on Enrollment: Students must be enrolled in the 30-unit option program.
Note: This is the course for the non-degree, 30-unit option student. If not previously completed, all students participating in clinical rotations must submit proof of drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.
Class Hours: 72 lecture total
Note: This course is designed for the Licensed Vocational Nurse enrolled in the 30-unit non-degree program. It is a required prerequisite course for REGN 33X and REGN 34X. This course is one of two corequisite courses that make up the 30-unit option program. The students will expand their knowledge of medical surgical nursing and examine complications of obstetrical and pediatric nursing. Concepts emphasized include family, communication, health promotion, illness prevention, teaching, cultural sensitivity, growth and development, nursing process, critical thinking, legal-ethical issues and advocacy.

REGN 21: CLINICAL CONCEPTS OF FAMILY/MATERNAL-CHILD AND MEDICAL SURGICAL NURSING II (formerly REGN 91) – 5 Units
Prerequisite: A grade of C or higher in each of the following courses: REGN 10, REGN 11 and REGN 12
Corequisite: Students must be concurrently enrolled in REGN 20
Note: If not previously completed, all students participating in clinical rotations must submit proof of drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.
Class Hours: 270 clinical total
REGN 21 is a required course for the Associate Degree Nursing program at Shasta College and a required prerequisite for REGN 33 and REGN 34. This course is one of two corequisite courses that make up the third semester of the Associate Degree Nursing program. Building upon the content of REGN 10, REGN 11 and REGN 12, the students will expand the fundamental clinical nursing skills they mastered. Students will have a variety of patient assignments in the obstetrical, medical, surgical, oncology, and orthopedic floors with special assignments in the OB clinic, Shasta College preschool, home care agencies, the emergency department and pre-anesthesia unit. Clinical skills will include receiving report, organizing their patient care, assessments, documentation, medication administration, intravenous therapy, venapuncture, blood administration, TPN/Lipid administration, accuchecks, and analyzing daily labs. Students will progress from providing care for a single patient to providing care to up to three increasingly complex patients. Emphasis is placed on the integration of theory and the nursing process into the clinical setting by use of organizational tools, clinical papers, a nursing care plan, chart review, and clinical conferences.

REGN 21X: CLINICAL CONCEPTS OF FAMILY/MATERNAL-CHILD AND MEDICAL SURGICAL NURSING II (NON-DEGREE) (formerly REGN 90X/REGN 91X) – 4 Units
Corequisite: Students must be concurrently enrolled in REGN 20X
Limitation on Enrollment: Students must be enrolled in the 30-unit option program.
Note: This is the course for the non-degree, 30-unit option student. If not previously completed, all students participating in clinical rotations must submit proof of drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.
Class Hours: 216 clinical total
Note: This course is designed for the Licensed Vocational Nurse enrolled in the 30-unit non-degree program. This course is one of two corequisite courses that make up the first semester of the 30-unit option non-degree program. The students will expand the fundamental clinical nursing skills they mastered. Students will have a variety of patient assignments on the obstetrical, pediatric, medical, surgical, oncology and orthopedic floors with special assignments in the OB clinic, Shasta College preschool, home care agencies, the emergency department and pre-anesthesia unit. Clinical skills will include receiving report, organizing their patient care, assessments, documentation, medication administration, intravenous therapy, venapuncture, blood administration, TPN/Lipid administration, accuchecks, and analyzing daily labs. Students will progress from providing care for a single patient to providing care up to three increasingly complex patients. Emphasis is placed on the integration of theory and the nursing process into the clinical setting by use of organizational tools, clinical papers, a nursing care plan, chart review, and clinical conferences.
REGN 33X THEORETICAL CONCEPTS OF MENTAL HEALTH, COMMUNITY-BASED NURSING & MEDICAL SURGICAL NURSING III (NON-DEGREE) (formerly REGN 33X/33; 80/81) – 6 Units
Prerequisite: A grade of C or higher in each of the following courses: REGN 20X and REGN 21X
Corequisite: Students must be concurrently enrolled in REGN 33X
Class Hours: 108 lecture total
REGN 33X is one of the final required courses for the Associate Degree Nursing program at Shasta College and one of two corequisite courses that comprise the fourth semester of the Associate Degree Nursing Program. The course provides the conceptual basis of nursing care for patients in high acuity medical surgical, mental health and community-based settings. The emphasis of this course is on complex medical surgical conditions, fundamentals of mental health, community health nursing, fundamental concepts of nursing leadership, legal-ethical issues, current trends in practice, preparation for and successful completion of the licensing examination, and professional career development. The nursing process and critical thinking skills are emphasized. Students use the nursing process and critical thinking to plan, implement, and evaluate the acute and rehabilitative care of complex medical surgical and mental health patients. In addition to on-campus meetings, a portion of the course communication and activities will take place via the internet. Students will need access to a computer with Internet access.

REGN 34 - CLINICAL CONCEPTS OF MENTAL HEALTH, COMMUNITY-BASED NURSING & MEDICAL SURGICAL NURSING III (formerly REGN 30X/31; 80/81) – 6 Units
Prerequisite: A grade of C or higher in each of the following courses: REGN 20 and REGN 21
Corequisite: Students must be concurrently enrolled in REGN 34
Class Hours: 108 lecture total
REGN 34 is one of the final required courses for the Associate Degree Nursing program at Shasta College and one of two corequisite courses that comprise the fourth semester of the Associate Degree Nursing Program. Building upon the content of REGN 20 and 21, students expand previously learned clinical nursing skills to become increasingly independent. Students have assigned patients in a variety of clinical settings. For example, clinical rotations may include acute care, critical care, rehabilitation, mental health, and community health. Each student will spend 120 hours in a preceptorship during the semester. The preceptorship is the capstone clinical project of the semester. Emphasis is placed on the integration of theory and the nursing process in the clinical setting through the use of clinical papers, clinical conferences, group projects, and nursing care plans. In addition to on-campus meetings and clinical rotations, a portion of the course communication and activities will take place via the internet. Students will need access to a computer with Internet access.

REGN 34X - CLINICAL CONCEPTS OF MENTAL HEALTH, COMMUNITY-BASED NURSING & MEDICAL SURGICAL NURSING III (NON-DEGREE) (formerly REGN 30X/31; 80/81) – 6 Units
Prerequisite: A grade of C or higher in each of the following courses: REGN 20X and REGN 21X
Corequisite: Students must be concurrently enrolled in REGN 33X
Class Hours: 124 lecture total
Limitation on Enrollment: Students must be enrolled in the 30-unit option program
Note: This is the course for the non-degree, 30-unit option student. If not previously completed, all students participating in clinical rotations must submit proof of immunizations, current CPR certification, TB screening, physical examination, drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.

Class Hours: 324 clinical total
REGN 34X is a required course for the Associate Degree Nursing program at Shasta College and one of two corequisite courses that comprise the fourth semester of the Associate Degree Nursing Program. Building upon the content of REGN 20 and 21, students expand previously learned clinical nursing skills to become increasingly independent. Students have assigned patients in a variety of clinical settings. For example, clinical rotations may include acute care, critical care, rehabilitation, mental health, and community health. Each student will spend 120 hours in a preceptorship during the semester. The preceptorship is the capstone clinical project of the semester. Emphasis is placed on the integration of theory and the nursing process in the clinical setting through the use of clinical papers, clinical conferences, group projects, and nursing care plans. In addition to on-campus meetings and clinical rotations, a portion of the course communication and activities will take place via the internet. Students will need access to a computer with Internet access.

REGN 79 - RN TRANSITION – 2 Units
Limitation on Enrollment: Current CA Licensed Vocational Nurse Class Hours: 36 lecture/3 lab total
This course is designed for the LVN transitioning into the role of the registered nurse. Skills and theory necessary for entering third semester of the Associate Degree Nursing Program are taught and evaluated.

RUSSIAN (RUSS) Two years of high school foreign language with grades of "C" or better is equivalent to one semester of foreign language at Shasta College.

RUSS 1 - ELEMENTARY RUSSIAN – 5 Units Class Hours: 90 lecture total
This course is designed to give the student training in pronunciation, essentials of grammar, reading, writing and speaking in Russian. The student is also introduced to the customs and culture of the Russian people.

RUSS 2 - ELEMENTARY RUSSIAN – 5 Units Prerequisite: A grade of C or higher in RUSS 1, or Foreign Language Placement Level 2 or higher Class Hours: 90 lecture total
This course is a continuation of RUSS 1. There is continued emphasis on listening to and reading Russian (the receptive skills) and on speaking and writing Russian. Students expand their language skills and vocabulary. Also, students improve the ability to ask and answer questions and to discuss daily life, current events, travel, and leisure time activities. In the process of learning the language, the student is introduced to the culture and people of Russia, its history, literature, art, architecture, music and ballet.

RUSS 3 - INTERMEDIATE RUSSIAN – 5 Units Prerequisite: A grade of C or higher in RUSS 2 or Foreign Language Placement Level 3 or higher Class Hours: 90 lecture total
Designed for those who have had previous training in the Russian language. Review of grammar and sentence patterns with increased emphasis on speaking and writing skills. Students will read excerpts from works of Russian authors, study the culture of Russian speaking people, produce translations of various selections and develop their own writing skills.

RUSS 4 - INTERMEDIATE RUSSIAN – 5 Units (P/NP Option) Prerequisite: A grade of C or higher in RUSS 3 or Foreign Language Placement Level 4 Class Hours: 90 lecture total
This course is for the non-degree, 30-unit option student. If not previously completed, all students participating in clinical rotations must submit proof of immunizations, current CPR certification, TB screening, physical examination, drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.

SIGN LANGUAGE (SL) Two years of high school foreign language with grades of "C" or better is equivalent to one semester of foreign language at Shasta College.

SL 7 - AMERICAN SIGN LANGUAGE V: GRAMMAR – 4 Units Prerequisite: A grade of C or higher in SL 66 Class Hours: 72 lecture total
This course focuses on American Sign Language grammar and communication skills. All class activities and literature are designed to give students the opportunity to learn and practice the rules of Deaf culture and the grammar of ASL. English grammar will be analyzed and the differences between the two languages discussed.
SL 80 DEAF CHALLENGES – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course covers four areas that have a large impact on people’s development: society, family, education, and work. Students are made aware of the challenges deaf people face in these areas and how it influences their lives. This course may be offered in a distance education format.

SL 81 EDUCATIONAL WORLD OF THE DEAF – 3 Units
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course focuses on the education of the deaf population from ancient times to the present. It addresses the cultural, physical and psychological effects on the way deaf people learn. Topics such as family relationships, cognitive development, and language acquisition are addressed. This course may be offered in a distance education format.

SL 90 AMERICAN SIGN LANGUAGE I (formerly SPED 93A) – 4 Units
(P/NP Option)
Advisory: Concurrent enrollment in SL 91
Class Hours: 72 lecture total
Designed to introduce student to basic skills in American Sign Language vocabulary, fingerspelling and grammatical structure. The student will gain the manual skills to engage in basic dialogue, visual cues and the receptive skills to understand general American Sign Language conversation. Topics include: American Sign Language as an independent language, the history of American Sign Language, the Deaf community and Deaf culture.

SL 91 AMERICAN SIGN LANGUAGE I SKILL BUILDING LAB (formerly SPED 95A) – 1 Unit (P/NP Option)
Corequisite: Student must be concurrently enrolled in, or have completed SL 90 with a grade of C or higher
Class Hours: 54 lab total
This course is designed to give students a lab environment to practice basic American Sign Language skills. The course will review vocabulary, sentence structure and visual, non-manual behaviors from SL 90 and give students a solid foundation in basic signing skills which will better prepare them for the next level of American Sign Language. The lab environment will provide visual structured activities. Most of the class time will be non-verbal interactions. Note: This class may be repeated one time for a total of two enrollments since skills and proficiency are enhanced by supervised repetition and practice.

SL 92 AMERICAN SIGN LANGUAGE II (formerly SPED 93B) – 4 Units
(P/NP Option)
Prerequisite: A grade of C or higher in SL 90
Class Hours: 72 lecture total
This course is a continuation of American Sign Language I, and is designed to increase vocabulary and fluency in receptive and expressive skills of American Sign Language students. Emphasis is on the structure of American Sign Language including lexical, morphemic and syntactical elements. The student will gain the manual skills to engage in descriptive, complex dialog and stories at a moderate skill level. Topics include American Sign Language contrast and comparisons to other languages, language development and acquisition, and societal and legal issues.

SL 93 AMERICAN SIGN LANGUAGE II SKILL BUILDING LAB (formerly SPED 95D) – 1 Unit (P/NP Option)
Corequisite: Students must be concurrently enrolled in, or have completed SL 92 with a grade of C or higher
Class Hours: 54 lab total
This course is designed to give students a lab environment in which to practice new vocabulary and structure learned in SL 92, American Sign Language II, and will review vocabulary, sentence structure and visual, non-manual behaviors learned from SL 92. Students will be involved in structured class assignments in order to utilize signing skills and increase fluency to a moderate rate in preparation for success in SL 94. Note: No verbal communication allowed in lab. This course may be taken up to two times for a total of two enrollments since skills and proficiency are enhanced by supervised repetition and practice.

SL 94 AMERICAN SIGN LANGUAGE III (formerly SPED 93C) – 4 Units
(P/NP Option)
Prerequisite: A grade of C or higher in SL 92 and a grade of C or higher in SL 93
Class Hours: 54 lecture/54 lab total
This course is intended for students who plan to use American Sign Language in their daily lives. Success in this course will enable students to communicate with Deaf and Hard-of-Hearing individuals through sign language at an average rate of speed and build confidence in their use of the language. Students will study basic qualities and skills needed to interpret including topics such as the interpreting process, an overview of the NAD-RID Code of Professional Conduct, expectations, and simultaneous interpreting practice. Exposure to Deaf culture through class discussions and guest lecturers will be incorporated.

SL 95 AMERICAN SIGN LANGUAGE IV – 4 Units (P/NP Option)
Prerequisite: A grade of C or higher in SL 94
Class Hours: 54 lecture/54 lab total
This course is intended for students who plan to use American Sign Language in their daily lives. Success in this course will enable students to communicate with Deaf and Hard of Hearing individuals through sign language at an average rate of speed and build confidence in their use of the language, storytelling ability and presentation. Students will study qualities and skills needed to become interpreters. Students will be exposed to a variety of members and activities in the Deaf community.

SKILLS DEVELOPMENT (SDEV)
SDEV 301 PRE-GEID TEST PREPARATION – 0 Units
Advisory: A grade of C or higher ENGL 250 or English Placement Level 2 or higher
Class Hours: 54-108 lab total
This is a course to prepare the student at the 6th- to 8th-grade reading level for GEID (General Educational Development Test) level work and to enable students to apply the knowledge gained to real-life situations. Course content includes skill building and test-taking practice in the areas of reading, writing, social studies, science and mathematics. The purpose of this class is to provide the necessary foundation for the student to tackle GEID-level work.

SDEV 302 GEID TEST PREPARATION – 0 Units
Advisory: A grade of C or higher ENGL 260 or English Placement Level 3 or higher
Class Hours: 54-108 lab total
This is a course to prepare the student to pass the General Educational Development (GED) Test and to enable students to apply the knowledge gained to real-life situations. Course content includes skill building and test-taking practice in the areas of reading, writing, social studies, science and mathematics. The purpose of this class is for the student to successfully pass all five parts of the GED 2002 examination.

SDEV 310 EFFECTIVE COMMUNICATION – 0 Units
Class Hours: 8 lecture total
This is a course designed to introduce a student to the basic communications skills required in the workplace. Topics will include, effective workplace communication, identifying barriers to effective communication, verbal and non-verbal communication, listening skills and etiquette in the workplace. Communication using technology such as e-mail will also be included.

SDEV 311 CONFLICT AND ATTITUDE MANAGEMENT – 0 Units
Class Hours: 8 lecture total
This is a course designed to introduce a student to basic conflict and attitude management. Topics will include methods of conflict management and conflict handling modes. Students will also explore ways to maintain a positive attitude including philosophies for a positive attitude.

SDEV 312 SERVICE ORIENTATION ESSENTIALS – 0 Units
Class Hours: 8 lecture total
This is a course designed to introduce a student to basic customer service skills needed in the workplace. Topics will include characteristics of quality customer service, internal and external customers and the value of long-term customers to a business. Students will also discuss skills used in demonstrating professional service.

SDEV 313 TEAMWORK AND PRODUCTIVITY – 0 Units
Class Hours: 8 lecture total
This is a course designed to introduce a student to basic teamwork and productivity in the workplace. Topics will include what makes a great team player, characteristics of effective teamwork and responsibilities required of a productive team. Students will also explore their dominant personality style.

SOCIOLGY (SOC)
SOC 1 INTRO TO SOCIOLOGY – 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course examines the basics of sociology—the study of society. Sociology examines the interactions among social institutions, cultures, groups, and individuals. This course will focus on how unequal power relations organize the social world and shape individual lives, and how individuals negotiate their lives in different social and economic contexts. The course will examine a broad array of topics using a variety of theoretical perspectives and sociological research methods. The primary goal of this course is to recognize how people's experiences are shaped by social forces and reshaped through human action. This course may be offered in a distance education format.
SOC 2  SOCIAL PROBLEMS – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course examines several social problems from a sociological perspective. This approach makes two major assumptions. First, individuals are products of their social environment. Questions such as who we are, what we believe, what we strive for, and how we feel about ourselves, etc. have to be addressed by analyzing the society in which we live. This requires the use of the "Sociological Imagination" or looking at human attitudes, behaviors and feelings in the context of the social forces and institutional arrangements that shape them. Second, because sociology considers social structures responsible for social problems, we need to adapt a critical stance towards all social forms. This approach helps foster a more critical sociological approach to social problems. This course may be offered in a distance education format.

SOC 15  SOCIOLOGY OF MASS MEDIA – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course examines the central role media plays in daily life. Starting from a microsociological standpoint, students will examine how knowledge and experiences are increasingly mediated by the mass media in its various forms. The course will also explore the effect of media, including television, radio, newspapers, and the Internet, on social institutions which in turn permeate and shape public policy, the economy, education, and even the family. The course will examine ways in which mass media contribute to social/cultural power and stratification and will use the "process of mutual determination" to examine the relationship between media, individuals, and society. This course may be offered in a distance education format.

SOC 22  SOCIOLOGY OF AGING – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher, or a grade of C or higher in ESL 138
Class Hours: 54 lecture total
The consequences of demographic, economic, and social trends associated with population aging are challenging policy makers around the globe. This course will examine these processes as they affect individuals, families, and societies. Course content will examine themes surrounding aging and social policy in order to better understand how social context contributes to the aging or diminishing of the quality of life in old age. Areas of analysis include: health care rationing, family versus government responsibility, Social Security, retirement, changing norms and values, the elderly and the life course. This course may be offered in a distance education format.

SOC 25  SOCIOLOGY OF MINORITIES – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
The purpose of this course is to introduce students to the sociological study of race and ethnicity in the United States. This course will explore the relations between racial and ethnic minorities and the larger society. The histories of employment, educational options, civil and legal rights and social experiences will be viewed as they reflect race, ethnic and gender biases in our institutions. We will also focus on how different groups resist oppression and actively shaped a more democratic America. This course may be offered in a distance education format.

SOC 30  SOCIOLOGY OF GENDER – 3 Units  
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher, or a grade of C or higher in ESL 138
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
This course is an introduction to the sociological study of gender. The central themes of the course will be changes and continuities in gender roles within the U.S. and abroad, the social processes that influence our lives and gender identities, and the connections between gender, power, and inequality. As we explore these themes, we will study how culture, the economy, and the family have been pivotal sites for the maintenance, reproduction, and change in gender roles in both the U.S. and abroad. We will pay special attention to the ways in which race, class, and sexual orientation intersect processes of gender relations and social change. This course may be offered in a distance education format.

SOC 70  SOCIAL WELFARE – 3 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher, or a grade of C or higher in ESL 138
Class Hours: 54 lecture total (when offered in the Distance Education format, hours will total 162)
The basic purpose of this course is to provide students with an introduction to social services and the social work profession, including social work fields of practice, social service agencies, and levels of social work practice. The course will focus on the critical examination of social welfare issues, including a historical perspective, contemporary issues, structures of the current system, and alternative concepts. Discussions will examine direct services (micro level practice) and administration/planning (macro level practice). An overview of social service work will include discussion of the following areas: health care, children and family services, substance abuse, schools, mental health, the elderly, developmental disabilities, criminal justice, and the workplace. This course may be offered in a distance learning format.

SPANISH (SPAN)  
Two years of high school foreign language with grades of "C" or better is equivalent to one semester of foreign language at Shasta College.

SPAN 1  ELEMENTARY SPANISH – 5 Units (P/NP Option)  
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher

Class Hours: 90 lecture total
This introductory course is designed to give the student thorough and intense practice in speaking and listening to Spanish, and reading and writing in Spanish, with special emphasis on grammar and pronunciation. The course will focus on communicative competence in situations relating to daily routines, home life, college life, and everyday activities such as meeting and describing people; finding out about schedules, directions, and locations; discussing weather, eating, and holidays. Students are introduced to the culture of Spanish-speaking people in general and to specific customs and cultural characteristics of various Spanish-speaking countries.

SPAN 2  ELEMENTARY SPANISH – 5 Units (P/NP Option)  
Advisory: A grade of C or higher in SPAN 1, Foreign Language Placement Level 2 or higher

Class Hours: 90 lecture total
This course is a continuation of SPAN 1. There is continued emphasis on listening to and reading Spanish (receptive skills) and on speaking and writing Spanish. Students expand their language skills and vocabulary. Students also improve their ability to ask and answer questions and to discuss current events, health, food, travel, leisure time activities, and shopping. The course will focus on communicative competence in situations relating to the aforementioned areas and also to art, music, commerce, family, and the future. Students learn to express themselves in Spanish regarding these topics as they relate to the culture of Spanish-speaking people in general and to some specific Spanish-speaking countries.

SPAN 3  INTERMEDIATE SPANISH – 3 Units (P/NP Option)  
Prerequisite: A grade of C or higher in SPAN 2, Foreign Language Placement Level 3 or higher

Class Hours: 54 lecture total
This course is a continuation of SPAN 2. SPAN 3 includes a compact, detailed review of first-year material as well as new vocabulary and expansion of first-year principles, development of more advanced communication and composition skills, and verb tenses and structures. This course offers extensive conversational exercises with stress on correct pronunciation. The course also includes an introduction to Spanish and Latin American literature and further discussion of the arts in general, particularly as they relate to the culture of the Spanish-speaking countries.

SPAN 4  INTERMEDIATE SPANISH – 3 Units (P/NP Option)  
Prerequisite: A grade of C or higher in SPAN 3, Foreign Language Placement Level 4 or higher

Class Hours: 54 lecture total
This course is a continuation of SPAN 3. SPAN 4 (along with SPAN 3) comprises a compact, detailed review of first-year material as well as new vocabulary and expansion of first-year principles, development of more advanced communication and composition skills, and a more comprehensive overview of verb tenses and structures. This course offers extensive conversational exercise with stress on correct pronunciation. The course also includes further discussion of Spanish and Latin American literature and of the arts in general, particularly as they relate to the culture of Spanish-speaking countries.

SPAN 19  SPANISH CONVERSATION AND CULTURE – 3 Units (P/NP Option)  
Prerequisite: A grade of C or higher in SPAN 2, Foreign Language Placement Level 3 or higher

Class Hours: 54 lecture total
This course is a continuation of SPAN 3. This course meets regularly and focuses on communicative competence in situations relating to daily routines, home life, college life, and everyday activities such as meeting and describing people; finding out about schedules, directions, and locations; discussing weather, eating, and holidays. Students are introduced to the culture of Spanish-speaking people in general and to specific customs and cultural characteristics of various Spanish-speaking countries.
SPAN 10 SPANISH CONVERSATION AND CULTURE II – 3 Units
(P/NP Option)
Prerequisite: A grade of C or higher in SPAN 3, or Foreign Language Placement Level 4
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 54 lecture total
Continued intense practice in spoken Spanish with the objective of facilitating development of better conversation and communication skills, increasing vocabulary, and improving speech patterns and pronunciation by giving oral presentations, conversing, and analyzing Spanish-speaking culture.

SPAN 151 SPANISH VOCABULARY (formerly SPAN 151AB) – 3 Units
(P/NP Option)
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 54 lecture total
This course will help those students who want to learn Spanish vocabulary and grammar in order to facilitate very basic communication in everyday workplace and social situations. Students are introduced to pronunciation and minimum essentials of Spanish grammar. This course is a survey of basic vocabulary, numbers (1-1000), some vocabulary useful in the workplace, practice of simple phrases, intense practice in comprehending simple phrases and practice in responses to simple phrases given within the context of a professional or vocational situation.

SPAN 155 SPANISH FOR MEDICAL PROFESSIONALS – 3 Units
(P/NP Option)
Class Hours: 54 lecture total
This course is designed to help health care workers in the United States assess, treat, measure and educate Spanish-speaking clients/patients. This course facilitates better communication between health care providers and the growing Spanish-speaking population in the United States and in Northern California. Course topics include the building of the patient-practitioner relationship, understanding the patient’s chief complaint, taking medical history and current symptoms, and learning about cultural factors affecting the health care provided to Spanish speakers and the workers that care for them.

SPAN 197 SPECIAL TOPICS IN SPANISH – .5 - 3 Units (P/NP Option)
Advisory: A grade of C or higher in ENGL 280, or English Placement Level 5 or higher
Class Hours: 9-54 lecture total
This course is designed to meet the needs of professionals who work with Spanish speakers. Essentials of Spanish pronunciation and grammar are introduced, along with commands, the present indicative, and the two past tenses. Communicative skills will be developed through role-plays of realistic situations, practiced dialogues, and study of specialized vocabulary.

SPEECH
See CMST – Communication Studies

STUDENT DEVELOPMENT (STU)

STU 1 COLLEGE SUCCESS (formerly GS 1) – 3 Units
Class Hours: 54 lecture total
This course is designed to assist students in obtaining the skills and knowledge necessary to reach their educational objectives. Topics covered include: motivation and discipline, memory development, time and stress management, career and transfer planning, and a wide variety of study skills and techniques for success.

STU 10 INTRODUCTION TO PEER TUTORING (formerly GS 10) – .5 Unit (P/NP Option)
Class Hours: 9 lecture total (when offered in the Distance Education format, hours will total 27)
Practical skills necessary to function as a peer tutor, to train in human relation techniques, individual differences in learning styles, the importance of independence, good study habits and educational methods used to promote good learning. This course may be offered in a distance education format.

STU 50 GETTING CONNECTED: AN ORIENTATION TO COLLEGE
(formerly GS 50) – 5-1 Unit
Class Hours: 9-18 lecture total
This course includes an orientation to the educational opportunities, programs and services available at Shasta College as well as the procedures for accessing them. In the one unit version of the course, students will develop their sense of educational purpose and commitment through developing effective “Education Plans” and building “Connections for Success.” This course is appropriate for all students. It fulfills the orientation requirement for priority registration.

STU 70 COLLEGE STUDY AND LEARNING SKILLS (formerly ENGL 171) – 1 Unit (P/NP Option)
Class Hours: 18 lecture total
Designed to help non-traditional and traditional students to develop learning skills and to achieve the greatest amount of competency in their college class work. The class will help the student to take notes effectively, read and study course materials, prepare for exams, and complete written assignments.

2011-2012 Shasta College Catalog Page 141

STU 90 CAREER CHOICE (formerly GS 90) – 1 Unit (P/NP Option)
Class Hours: 16 lecture total
A course designed for students who are undecided about their educational and/or career goals. Through a series of group exercises, and career development testing, students learn to identify personal values, interests, skills, aspirations, and personality patterns and understand how they relate to choices in the world of work. Students learn to access occupational information, develop decision-making skills and set career goals.

STU 92 WORKSITE READINESS (formerly GS 92) – 1 Unit (P/NP Option)
Class Hours: 18 lecture total (when offered in the Distance Education format, hours will total 54)
Designed to prepare students to be successful on the job. Students will gain insights into employer expectations, effective workplace attitudes, developing job-related communication skills, conflict resolution, and managing stress. Emphasis will be placed on maximizing learning opportunities in the workplace, the development of effective networking skills, personal skills-acquisition plan, and building a job search campaign. This course may be offered in a distance education format.

STU 310 GENERAL TUTORING LAB/SUPERVISED TUTORING (formerly GS 310) – 0 Units
Class Hours: TBA
This course provides tutoring assistance to increase the probability of a student’s successful completion of his or her educational objectives. Upon faculty/counselor referral, student will receive tutoring in designated subject areas in various tutoring labs on campus. Cumulative progress and attendance records will be maintained for this non-credit, open entry course. Hours will vary depending upon individual student’s needs.

THEATRE ARTS (THTR)

THTR 1 INTRODUCTION TO THEATRE ARTS – 3 Units
Class Hours: 54 lecture total
This course is a survey of Theatre Arts including dramatic structure, performance style, plays, terminology, history, criticism, and stagecraft. Students will develop an appreciation for the theatre arts through lectures, viewing, critiquing, and participating in college productions. This course fulfills the Arts requirement for General Ed transfer and is required for the Theatre Certificate.

THTR 5 20TH CENTURY THEATRE – 3 Units
Advisory: A grade of C or higher in ENGL 190, or English Placement Level 6 or higher
Class Hours: 54 lecture total
This is a survey course in trends and developments of 20th Century theatre. Major playwrights (Ibsen, Chekhov, Miller), personalities (Craig, Artaud), and theatre innovators (Brecht) of this century will be examined. Mainstream and radical influences as well as the impact of technology on plays and performances will be discussed. This course fulfills the Humanities requirement for General Education transfer and is required for Theatre majors.

THTR 8 THEATRE APPRECIATION I – 3 Units
Class Hours: 54 lecture total
In this course students will read and investigate a selection of plays from the Greeks to the Elizabethan era. They will analyze the historical context of each play and how to interpret and transform scripts for production. Topics include: historical development and context, text analysis, acting style, theme, language, diction, set, audience, gender issues, special effects, and cultural significance. Theatre Appreciation I or II is required for the Theatre Certificate.

THTR 9 THEATRE APPRECIATION II – 3 Units
Class Hours: 54 lecture total
In this course students will read and investigate a selection of plays from the Jacobean to the Contemporary eras. They will analyze the historical context of each play and how to interpret and transform scripts for production. Topics include: historical development and context, text analysis, acting style, theme, language, diction, set, audience, gender issues, special effects, and cultural significance. Theatre Appreciation I or II is required for the Theatre Certificate.

THTR 12 ACTING FOR THE STAGE I – 2 Units
Class Hours: 18 lecture/54 lab total
This course teaches the fundamentals of what it is to be an actor. Topics covered include the use of senses, the voice, the body, emotions and building a character. Students participate in individual and group exercises, theatre games and acting projects. Students learn the vocabulary of acting and view/critique on-campus productions. This course is required for theatre majors; non-majors are welcome. This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

THTR 13 ACTING FOR THE STAGE II – 2 Units
Advisory: A grade of C or higher in THTR 12
Class Hours: 18 lecture/54 lab total
This course offers detailed application of techniques explored in beginning acting. These areas include: styles, articulation, analysis of emotional content of dramatic texts, mask and movement work. In this course the voice and body are used as creative and interpretive tools. Designed for the Theatre Arts Core Program, acting and directing concentration; may not be challenged, must be
taken for a grade, and is transferable. This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.

THTR 20 READER'S THEATRE (formerly THTR 20AD) – 1-3 Units
Class Hours: 54-162 lab total
A course dealing with the oral presentation of literature by two or more readers. Areas of study will include character development, performance techniques, material selection, analysis and adaptation, vocalization, and interpretation of scripts. Participation in public performances on and off campus is required. Note: Since subject matter varies each time the course is taught, this course may be repeated three times for a total of four enrollments.

THTR 21 ONE-ACT PRODUCTIONS (formerly THTR 21AD) – 1-3 Units
Class Hours: 54-162 lab total
In this course, students produce and publicly perform one-act plays. Students will attend rehearsals and performances, and discuss plays as they progress. This course may be repeated three times for a total of four enrollments.

THTR 23 MAINSTAGE PRODUCTION I – DRAMA (formerly THTR 23AD) - 1-4 Units
Class Hours: 54-216 lab total
In this course students rehearse, prepare and perform a mainstage play. The course is required for theatre majors, non-majors are welcome. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 24 MAINSTAGE PRODUCTION II – MUSIC (formerly THTR 24AD) – 1-4 Units (P/NP Option)
Class Hours: 54-216 lab total
A course which focuses on the rehearsal and performance of the musical elements of a major dramatic work. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 25 MAINSTAGE PRODUCTION II – CHOREOGRAPHY (formerly THTR 25AD) – 1-4 Units (P/NP Option)
Class Hours: 54-216 lab total
A course that teaches basic stage movement and dance for large cast plays and music theatre. Class projects and rehearsal activities will include participation in choreography in class or in theatre productions. Note: The authors, genre, and production styles will change each time this class is taught; therefore, it may be repeated three times for a maximum of four enrollments.

THTR 26 MAINSTAGE PRODUCTION II – DRAMA (formerly THTR 26AD) – 1-4 Units (P/NP Option)
Class Hours: 54-216 lab total
A course which focuses on the rehearsal and dramatic performance of a large cast dramatic work or musical. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 29 DIRECTING (formerly THTR 22EH) – 2 Units (P/NP Option)
Class Hours: 18 lecture/54 lab total
This course is designed to introduce the student to the background, function and techniques of the stage director. Included in the course will be an investigation of the principles involved in script selection and interpretation, the fundamentals of casting, rehearsal techniques, blocking, and conducting rehearsals, and the preparation of a director's prompt book. Students should have previous experience in theatre performance and production. Note: This course may be repeated three times for a total of four enrollments since course content varies and skills are enhanced by supervised repetition and practice.

THTR 30 STAGECRAFT I – 3 Units (P/NP Option)
Class Hours: 45 lecture/27 lab total
This course focuses on the technical principles of theatrical productions. Subjects covered include the use of basic power tools, constructing and painting scenery, hanging and operating lighting instruments, and understanding backstage practices. Students will learn how to interpret theatrical construction diagrams, floor plans for stage sets, and light plots. This course is required for the Theatre Arts Certificate.

THTR 31 STAGECRAFT II (formerly THTR 35) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course focuses on the design, management and coordination of the technical elements of a theatrical production. Students will design stage settings, light plots, and stage properties. They will learn the duties of the stage manager and the production coordinator.

THTR 33 STAGE MANAGEMENT (formerly THTR 22L) – 2 Units (P/NP Option)
Class Hours: 27 lecture/27 lab total
This course will introduce the student to the functions of the stage manager. Students will develop an understanding of how to coordinate a production team, including directors, designers, technicians, operators, actors and house personnel. Students will learn methods of production organization including scheduling, cueing, noting, reading floor plans, set changes, and rehearsal and performance protocols.

THTR 34 MAKEUP – 2 Units (P/NP Option)
Class Hours: 27 lecture/27 lab total
This course is designed to introduce the student to the principles and practical application of stage makeup. Emphasis will be given to facial structure, character analysis, makeup selection and application, facial modeling, three-dimensional techniques, false hair and corrective makeup. The student will demonstrate his/her understanding through actual application in the classroom and as a member of a makeup crew for a specific play production, special exercise, or project. Note: This course may be repeated once for a total of two enrollments since skill development is enhanced with a successive enrollment.

THTR 37 THEATRE MANAGEMENT – 2 Units
Class Hours: 36 lecture total
In this course students learn the business of theatre management, organization and administration. Season selection, budget, staff organization, scheduling, box office operations, promotion and publicity are among the topics covered.

THTR 41 THEATRE LABORATORY (formerly THTR 41AD) – .5-4 Units (P/NP Option)
Class Hours: 27-216 lab hours total
A laboratory course in which the student will received supervised practical experience and training in theatrical productions. Students may work progressively in one or more of the following areas: scenery construction, fabrication and rigging; console operations; stage management; lighting; sound; costumes; wardrobe; properties; make-up; publicity; house management; concessions, and running crews. Upon approval of the instructor, students may direct and participate in the preparation, rehearsal, and performance of student directed productions. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 42 STAGE PRODUCTION LABORATORY (formerly THTR 42AD) – .5-4 Units (P/NP Option)
Class Hours: 27-216 lab total
A laboratory course in which the student will participate in one or more of the following production areas: scenery construction, set decorations, lighting, sound, costumes, properties, makeup, stage management and publicity. The course will focus on the technical requirements of a stage production. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 50 STAGE PRODUCTION - DRAMA (formerly THTR 50AD) – 1-3 Units (P/NP Option)
Class Hours: 54-162 lab total
A production course designed to provide experience in creating public performances, including but not limited to dance, music, theatre and concerts. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 51 STAGE PRODUCTION-CHOREOGRAPHY (formerly THTR 51AD) – 1-3 Units (P/NP Option)
Class Hours: 54-162 lab total
A course in class or rehearsal sessions to teach basic stage movement and dance for a stage production. Class projects will include participation in choreography in the class or in stage productions. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 52 STAGE PRODUCTION – MUSIC (formerly THTR 52AD) – 1-3 Units (P/NP Option)
Class Hours: 54-162 lab total
A course in class or rehearsal sessions to teach the use of vocal and instrumental music for stage. Class projects will include participation in classroom activities and/or productions. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 60 SPECIAL PROJECTS-PRODUCTION (formerly THTR 60AD) – 1-4 Units (P/NP Option)
Class Hours: 54-216 lab total
A course that provides specialized training in specific areas of a current production. The focus of instruction will be in training students to perform disciplined tasks within the context of a scheduled theatrical event, e.g. special vocal skills, acting methods, stage lighting, scenography, script writing, choreography, makeup, puppetry, stagecraft, and/or other techniques needed to satisfy and complement a specific theatrical performance. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 61 COSTUMING LABORATORY (formerly THTR 22AD) – 1-3 Units (P/NP Option)
Class Hours: 54-162 lab total
A course that focuses on special projects in costume building for stage productions. Students will receive special instruction in sewing techniques for the stage, pattern drawing, the costumer’s function during the running of a show and costume maintenance. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.
VETERINARY TECHNICIAN

See AGVETT for course listings

WATER TREATMENT TECHNOLOGY (WTT)

WTT 177 INTRODUCTION TO WASTEWATER TREATMENT (formerly NR 77) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Designed to provide the student with a general background in the design, operation, and maintenance of water and wastewater treatment plants and to prepare the experienced operator for certification examinations. This course is directed to primarily towards entry-level operators, industrial waste inspection, lab technicians, maintenance personnel, and related occupations. Explains how and why treatment of wastewater protects the environment.

WTT 180 INTRODUCTION TO WATER TREATMENT TECHNOLOGY (formerly NR 180) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course is designed to prepare the student with a general background in the design, operation, and maintenance of water treatment plants and prepares the experienced operator for the State Water Treatment Plant Operator Certification examination.

WTT 181 INTERMEDIATE WATER TREATMENT TECHNOLOGY (formerly NR 181) – 3 Units
Advisory: A grade of C or higher in WTT 180
Class Hours: 54 lecture total
This course covers water supply and treatment, historical development of water quality control practices, water sources, public health aspects of water supply, chemical treatment, and evaluation of the various treatment processes. This course will prepare the experienced operator for certification examinations.

THTR 70 REPERTORY THEATRE I – 1-10 Units
Class Hours: 54-540 lab total (54 hours per unit)
In this course students will rehearse and perform major dramatic works in a repertory theatre format. Students will participate in a theatrical company/ensemble. They will share in the preparation, rehearsal, promotion, and public performance of a series of plays, musicals, or theatrical productions. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 74 REPERTORY THEATRE - TECHNICAL – 1-10 Units
Class Hours: 54-540 lab total (54 hours per unit)
A laboratory course in which student will gain work experience and training in technical Repertory Theatre practices. Students may work progressively in one or more of the following areas: scenery construction, fabrication and rigging; console operations; stage management; lighting; sound; costumes, wardrobe; properties; make-up; publicity; house management; concessions, and running crews. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 81 INTRODUCTION TO PLAYWRITING (Drama: Play, Performance & Perception) – 3 Units (P/NP Option)
Class Hours: 36 lecture/lab total
An examination of the elements of the dramatic script. The course consists of four main areas of investigation: critiquing the script; playwrights; plotting and theatre conventions; creating motivated characters—heroes, heroines, villains and foils. This course will guide the student toward creating scripts and analyzing their problems and help them distinguish drama from the performed theatre, i.e., scenarios for action.

THTR 97 SPECIAL STUDIO TOPICS: THEATRE – 1-3 Units (P/NP Option)
Class Hours: 54-162 lab total
This course is designed to give students studio-based instruction and experience in a variety of theatre processes and techniques not regularly covered in other theatre courses. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for Theatre majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of four enrollments.

THTR 98 SPECIAL TOPICS: THEATRE – 1-3 Units (P/NP Option)
Class Hours: 18-54 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge and contemporary issues in the field of theatre. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for Theatre majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of four enrollments.

THTR 153 COMMUNITY DRAMA – 1-3 Units (P/NP Option)
Class Hours: 54-162 lab total
Designed specifically for all community groups in off campus facilities, providing experience in the acting and technical production of scene, one-act, and small cast plays. Students will be involved in the staging and rehearsal of scenes and plays to be performed during class in the following areas: acting, makeup, lighting, sound, scenery development, costume, stage management, and publicity. Students will observe rehearsals and performances and discuss plays as they progress. Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.

THTR 301 APPLIED THEATRE TECHNIQUES-TECHNICAL (formerly THTR 301AD) – 0 Units
Class Hours: 9-162 lab total
Course is designed to allow involvement in the production of a dramatic event for those with a particular interest in costuming, prop building, makeup, set building, sound and lighting, or other theatre related technical skills. Students will be exposed to learning new skills as well as applying skills already learned in a practical manner.

THTR 302 APPLIED THEATRE –DRAMATIC – 0 Units
Class Hours: 9-162 lab total
This course is designed to allow those interested in appearing in a dramatic presentation to become involved in a specific aspect of that production. Although new skills will be acquired, such as audition techniques, casting practices, orientation to repertory procedures, and introduction to theatre administration, the major emphasis of the class will be directed toward the preparation of a stage production.

VET/TECHNICIAN

See AGVETT for course listings

VOCA/TIONAL NURSING (VOCN)

VOCN 160 FOUNDATIONS OF NURSING PRACTICE – 15 Units
Limitation on Enrollment: Students must be enrolled in the Vocational Nursing Program
Note: All students participating in clinical rotations must submit proof of drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.
Class Hours: 144 lecture/378 clinical total
VOCN 160 is the beginning sequence of three required courses for the Vocational Nursing Program. The emphasis of this course is development of fundamental nursing skills. Theory content includes role of the vocational nurse, nursing trends, interpersonal relationships, disease processes, and pharmacology. The student practices fundamental nursing skills in the Clinical Skills Laboratory prior to clinical assignment in long-term and acute care settings.

VOCN 161 NURSING OF ADULTS – 13 Units
Prerequisite: A grade of C or higher in VO CN 160
Note: If not previously completed, all students participating in clinical rotations must submit proof of drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.
Class Hours: 144 lecture/288 clinical total
VOCN 161 is the second required course in the Vocational Nursing Program. The emphasis of this course is towards application of the nursing process in acute care settings. Theory content includes care of patients with common medical surgical problems. The student develops competence in administration of medications and varied therapeutic skills to assigned patients with safety and independence confidence. Assignments include practice in the Clinical Skills Laboratory and medical, surgical, and orthopedic areas in acute care settings. Students may be assigned in such optional areas as operating room and recovery room for follow-through experience with their assigned surgical patients and in an ambulatory center.

VOCN 162 NURSING OF ADULTS AND CHILDREN (formerly VO CN 161B) – 13 Units
Prerequisite: A grade of C or higher in VO CN 161
Note: If not previously completed, all students participating in clinical rotations must submit proof of drug screening and a background check prior to going into clinical facilities. Students are financially responsible for meeting these requirements according to the established program process.
Class Hours: 144 lecture/288 clinical total
VOCN 162 is the last required course in the Vocational Nursing Program. The emphasis of this course is on principles of nursing care for maternity, newborn, pediatric patients, and continuing care of patients with more complex medical surgical problems. Supervision/leadership skill behaviors are introduced in the long-term care setting. Assignments include clinical experience in the acute care, long-term care, home-care setting, medical, surgical, obstetrics (including nursery), pediatrics, acute progressive care, and outpatient clinics.

WATER TREATMENT TECHNOLOGY (WTT)

WTT 177 INTRODUCTION TO WASTEWATER TREATMENT (formerly NR 77) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
Designed to provide the student with a general background in the design, operation, and maintenance of water and wastewater treatment plants and to prepare the experienced operator for certification examinations. This course is directed to primarily towards entry-level operators, industrial waste inspection, lab technicians, maintenance personnel, and related occupations. Explains how and why treatment of wastewater protects the environment.

WTT 180 INTRODUCTION TO WATER TREATMENT TECHNOLOGY (formerly NR 180) – 3 Units (P/NP Option)
Class Hours: 54 lecture total
This course is designed to provide the student with a general background in the design, operation, and maintenance of water treatment plants and prepares the experienced operator for the State Water Treatment Plant Operator Certification examination.

WTT 181 INTERMEDIATE WATER TREATMENT TECHNOLOGY (formerly NR 181) – 3 Units
Advisory: A grade of C or higher in WTT 180
Class Hours: 54 lecture total
This course covers water supply and treatment, historical development of water quality control practices, water sources, public health aspects of water supply, chemical treatment, and evaluation of the various treatment processes. This course will prepare the experienced operator for certification examinations.
WELD 170 INTRODUCTION TO ARC WELDING – 3 Units
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 36 lecture/72 lab total
A course to advance beginning arc welding skills with an emphasis on SMAW. Power sources, electrode identification, weldability of metals, joint design, arc, and oxyacetylene cutting, and introduction to GTAW and GMAW are covered in this course. Course activities include learning to weld stringer and weave beads, butt and fillet welds in flat, horizontal, vertical, and overhead positions.

WELD 171 INTERMEDIATE ARC WELDING (formerly WELD 171AB) – 3 Units
Advisory: A grade of C or higher in WELD 170 or entry-level trade experience
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 36 lecture/72 lab total
A course to advance arc welding skills with emphasis on vertical and overhead welding. Course activities prepare the student for weld certification and advance arc weld symbols, aluminum arc and cast iron welding are covered in this course.

WELD 172 SHEET METAL FABRICATION (RESIDENTIAL AND COMMERCIAL) – 3 Units
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 36 lecture/72 lab total
This is an introductory-level residential and commercial sheet metal working course. It is intended for the carpentry, welding, aviation mechanics, or metalworking employment. Students need to be familiar with arc welding. Course work will include classroom and laboratory instruction in sheet metal equipment, parallel and transition layout and duct construction, duct installations, residential and commercial duct systems and materials as related to heating and cooling systems, flashings and flashing installations.

WELD 174 STRUCTURAL STEEL MIG WELDING – 3 Units
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. Welding is a skill that requires a great deal of hand and eye coordination. Hours of practice are needed to master skills to advance to the next level or become skilled enough for employment.
Class Hours: 36 lecture/72 lab total
GMAW (gas metal arc welding structural steel) stresses certification code welding on plate and structural steel in all positions. Course instruction and related information will include gas metal and flux core arc welding equipment and welding variables, shielding gases, troubleshooting equipment and weld defects, welder certification and welding codes, weld symbols, structural steel identification and welding procedures, and metalurgy.

WELD 175 TIG WELDING – 3 Units
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. Welding is a skill that requires a great deal of hand and eye coordination. Hours of practice are needed to master skills to advance to the next level or become skilled enough for employment.
Class Hours: 36 lecture/72 lab total
TIG (Tungsten Inert Gas) is an inert gas welding course also known as Heliarc which covers aluminum, mild steel, stainless steel, magnesium and copper welding. The course consists of welding on flat and pipe stock in all positions. Course content will include metals identification and weld symbols. Welding exercises are stressed to develop welding skills.

WELD 176 GMAW MIG WELDING (LIGHT GAUGE AND NONFERROUS METAL) – 3 Units (PINP Option)
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 36 lecture/72 lab total
This course emphasizes developing MIG welding skills on light gauge steel, stainless, and aluminum. Related instruction will include ferrous and non-ferrous metal identification and their welding characteristics. MIG welding applications and variables, inert shielding gases and mixtures, troubleshooting MIG equipment and welds, and spot welding.

WELD 178 PIPE WELDING FUNDAMENTALS – 3 Units
Advisory: A grade of C or higher in WELD 170 or trade welding experience
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 36 lecture/72 lab total
A fundamental course in pipe welding with emphasis on open groove pipe joints using oxyacetylene, arc, and inert gas welding processes in all positions.
WELD 182 ADVANCED ARC WELDING – 1 Unit
Prerequisite: A grade of C or higher in WELD 171 or equal trade welding experience
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.
Class Hours: 72 lab total
An advanced course designed to prepare students to pass structural steel certification in vertical and overhead positions. SMAW (stick) and FCAW (MIG) processes will be used. The goal of this class is to pass the AWS D1.1 welding certification test. Strict adherence to the testing procedures will be followed. Completion of the class does not guarantee AWS certification unless a welding procedure qualification tests are passed. Note: This course may be repeated one time for a total of two enrollments since the course content varies and skills are enhanced by supervised repetition and practice.

WELD 184 ADVANCED GTAW (TIG) WELDING – 1 Unit
Prerequisite: A grade of C or higher in WELD 175
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. Welding is a skill that requires a great deal of hand and eye coordination. Hours of practice are needed to master skills to advance to the next level or become skilled enough for employment.
Class Hours: 72 lab total
An advanced welding laboratory class with emphasis on vertical and overhead welding. This class is designed for the student interested in improving his/her beginning skills in order to prepare for entry into the job force as a TIG welder. Note: This course may be repeated one time for a total of two enrollments since the course content varies and skills are enhanced by supervised repetition and practice.

WELD 186 ADVANCED PIPE WELDING – 2 Units
Prerequisite: A grade of C or higher in WELD 178
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. Welding is a skill that requires a great deal of hand and eye coordination. Hours of practice are needed to master skills to advance to the next level or become skilled enough for employment.
Class Hours: 108 lab total
An advanced pipe welding class with emphasis on ASME, AWS, or API certification. Course instruction includes welding codes, pipe classification and identification. Completion of the class does not guarantee certification unless welding procedure qualification tests are passed. Note: This course may be repeated one time for a total of two enrollments since the course content varies and skills are enhanced by supervised repetition and practice.

WELD 188 ADVANCED GMAW (MIG) WELDING – 1 Unit
Prerequisite: A grade of C or higher in WELD 174 or WELD 176
Note: Students must provide safety glasses and welding gloves, and those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. Welding is a skill that requires a great deal of hand and eye coordination. Hours of practice are needed to master skills to advance to the next level or become skilled enough for employment.
Class Hours: 72 lab total
An advanced welding laboratory class with emphasis on vertical and overhead welding. This class is designed for the student interested in improving his/her beginning skills in order to prepare for entry into the job force as a MIG welder. Note: This course may be repeated one time for a total of two enrollments since the course content varies and skills are enhanced by supervised repetition and practice.

WELD 197 SPECIAL TOPICS IN WELDING TECHNOLOGY – .5-2 Units (P/NP Option)
Class Hours: 9-36 lecture total
This course is designed to give students an opportunity to explore a variety of topics dealing with changing knowledge in the field of Welding Technology. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for Welding Technology majors; open to anyone with an interest in the topic. Note: This course may be repeated three times for a total of four enrollments.

WORKSITE LEARNING (WSL)

WSL 94 GENERAL WORKSITE LEARNING – 1-6 Units
Limitation on Enrollment: Financial aid students must maintain concurrent enrollment in seven (7) units which include worksite learning units. Students not receiving financial aid do not need to enroll in other courses in order to participate in Worksite Learning Classes.
Class Hours: 75 hours paid or 60 hours non-paid per unit
The General Worksite Learning course allows the student to gain on-the-job experience through employment/volunteerism at an approved job site that is acquired by the student. A faculty member supervises the WSL course to ensure that the work experience is of educational value. The course stresses good work habits and meeting of SCANS competencies through actual on the job performance. A student may earn up to 6 units through repeating this course since course content varies and skills are enhanced by supervised repetition and practice. A maximum of 6 units may be earned in a single semester.

ZOOLOGY (ZOOL)

ZOO 1 GENERAL ZOOLOGY – 4 Units
Prerequisite: A grade of C or higher in MATH 102 or Math Placement Level 4 or higher
Class Hours: 36 lecture/108 lab total
The study of the major divisions of the animal kingdom with emphasis on the origin, adaptations, functions, and development.

ZOO 15 FIELD HERPETOLOGY OF NORTHERN CALIFORNIA (formerly ZOO 165) – 1 Unit (P/NP Option)
Note: Field trips are an integral part of the course and are therefore mandatory.
Class Hours: 18 lecture/9 lab (field trip) total
Designed for individuals interested in natural history and field biology by providing the student with a basic awareness of the diversity of amphibians and reptiles that inhabit the local area. Lectures will feature slides, diagrams, maps and other media to present concepts in anatomy, physiology, behavior, systematics and distribution. The students will use various capture techniques and learn to record data and observations in a notebook format while in the field. Moderately rigorous hiking may be involved.

ZOO 63 FIELD ORNITHOLOGY OF NORTHERN CALIFORNIA (formerly ZOO 163) – 1 Unit (P/NP Option)
Class Hours: 18 lecture/16 lab (Four 4-hour field trips required)
Designed for birdwatchers and open to students to fulfill part of the general education requirements in science. Lectures will feature films, slides, records, maps, and other media to present concepts in anatomy, physiology, behavior and distribution. Students will use various field techniques for studying bird populations.