

Course Descriptions

ACCOUNTING (ACCT)

See Also: BUAD, CIS, MKTG, OAS, REAL

ACCT 2 INTRODUCTION TO FINANCIAL ACCOUNTING - 3 Units (CAN# BUS 2) (BUS SEQ A) (F/S)

Class Hours: 54 lecture total

A beginning accounting course for the student planning on transferring to a four-year university. Students will learn how accounting meets the information needs of various users of financial statements by developing and communicating information that is useful in decision making. The course is a prerequisite for ACCT 4, Introduction to Managerial Accounting.

ACCT 4 INTRODUCTION TO MANAGERIAL ACCOUNTING - 3 Units (CAN# BUS 4) (BUS SEQ A) (F/S)

Prerequisite: ACCT 2 with a minimum grade of "C"

Advisory: MATH 101 with a minimum grade of "C"

Class Hours: 54 lecture total

A continuation of ACCT 2. The emphasis will be on internal uses of how accounting meets the information needs of various users by developing and communicating information that is useful in decision making. Required for transfer business and accounting majors needing one semester of managerial accounting.

ACCT 97 SPECIAL TOPICS IN ACCOUNTING - 1/2-2 Units (CR/NC Option) (I)

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 - 1/2-2 Units (CR/NC Option) (I)

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 (F/S)

Class Hours: 54 lecture/18 lab total

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 systems; 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 transferable to a four-year college or university.

ACCT 102 BASIC ACCOUNTING II - 3 Units (F/S)

Prerequisite: ACCT 101 with a grade of "C" or better

Class Hours: 54 lecture/18 lab total

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.

ACCT 103 PC ACCOUNTING - 2 Units (F/S)

Prerequisite: ACCT 101 with a grade of "C" or better

Advisory: Ability to type 25 wpm strongly recommended

Class Hours: 18 lecture/54 lab total

Accounting on microcomputers emphasizes the major areas of a computerized accounting system. This course provides the student with hands-on opportunities to determine procedure, analyze transactions, 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.

ACCT 104 PAYROLL ACCOUNTING - 2 Units (F/S)

Prerequisite: ACCT 101, BUAD 106, and OAS 64 all with a "C" or better grade

Class Hours: 36 lecture/18 lab total

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.

ACCT 194 INCOME TAX - 3 Units (F)

Class Hours: 54 lecture total

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.

ADAPTIVE STUDIES (ADAP)**ADAP 100 SELF MANAGED LEARNING FOR STUDENTS WITH DISABILITIES (formerly SPED 100) - 3 Units (CR/NC Option) (F/S)**

Class Hours: 36 lecture/54 lab total

Introduction and practice of college 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 personal goals, counseling, the college experience, career exploration, study skills and college support services and programs. The law and the disabled will be discussed.

ADAP 101 ADAPTIVE ASSESSMENT AND COMPUTING (formerly SPED 101) – 1 Unit (CR/NC Option) (F/S)

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. *Note: This course may be repeated 3 times for a total of 4 enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ADAP 192 PROFESSIONAL RELATIONSHIPS (formerly SPED 192) – 3 Units (CR/NC Option) (F/S)

Class Hours: 36 lecture/54 lab total

This course helps to meet the vocational preparation needs for students who have disabilities or students with little or no experience in the workplace. This course will target workplace relationships, employer expectations, ethics, appropriate behaviors, hiring process, performance evaluations, legal issues, and reasonable accommodations for workers with disabilities specific to workplace settings.

ADAP 210 CAREER PLANNING AND DEVELOPMENT - 1 Unit (CR/NC Option) (F/S)

Class Hours: 18 lecture total

This course is designed as a career development and planning option for transitioning students who have disabilities. It is a component of a three-course series focusing on transition issues.: Career development, self-determination and self-advocacy. 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.

ADAP 240 ADAPTIVE DRAWING AND PAINTING (formerly SPED 240) – 1-2 Units (CR/NC Option) (F/S)

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/intra-individual needs of learning disabled students and/or those with adaptive 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 (CR/NC Option) (F/S)

Class Hours: 54 lab total

Adapted Computer Skills is recommended for students who have developmental disabilities and who are planning to participate in the supported employment or supported living options that are evolving in our community as alternatives to congregated adult programs and services. Course content will include the use of adapted computer instructional strategies and adaptations (behavior analysis, software and/or hardware), personal digital equipment and software programs aimed toward increasing academic, vocational and social skill levels. An evaluation to select appropriate adaptive computer software and hardware for completion of instructional tasks will be completed individually with each student. A detailed analysis completed with each student will be used to individualize instructional plans. E-mail and Internet access, using assistive adaptations, will be included within the instructional regimen. The use of personal digital environments will be included in order to enhance generalization of skills to multiple environments. *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.*

ADAP 255 HUMAN AWARENESS (formerly SPED 255) – 2 Units (CR/NC Option) (I)

Class Hours: 18 lecture/54 lab total

This course is being provided as a much more focused curricular offering in social-sexual education skills for students who have developmental disabilities (significant cognitive deficits). As opportunities for people with developmental disabilities have broadened from the limited options available in segregated day programs, the skills necessary for responsible independence in the community, such as those broadly categorized as *self-protection*, *forexample*, are seen by educators

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Subject to change. Check the current class schedule.

in the field as essential. The aim of this course is to prepare students to tackle the rights as well as the responsibilities of adult 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 (CR/NC Option) (I)

Class Hours: 18 lecture/54 lab total

This course is designed to meet the vocational preparation needs of students who have developmental disabilities. The objectives of the course are specifically designated in the *Student Educational Contract, (SEC)* that is individually prepared with each student. The student who is preparing for employment in the near term should consider the course. Training 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 proficiencies.*

ADAP 258 MATHEMATICS FOR LIFE SKILLS (formerly SPED 258) – 2 Units (CR/NC Option) (F/S)

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 a total of four enrollments since 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 (CR/NC Option) (I)

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 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 298 SPECIAL TOPICS IN SPECIAL EDUCATION (formerly SPED 298) – 0.5-2.0 Units (CR/NC Option) (I)

Class hours: 27-108 lab 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 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 (CR/NC Option) (F/S)

Class Hours: 27-108 lab total

This course is for adults with developmental disabilities who desire to participate in service organizations within their communities. Students will nominate and elect class officers, who will conduct each meeting. Students will participate in meetings, either as officer or general member, using simplified Robert's Rules of Order. With guidance of the instructor, students will determine an appropriate project (i.e., to put on a spaghetti dinner fundraiser for Special Olympics), break the project into specific tasks, volunteer for the tasks, and complete the project. *Note: This course is designed specifically for adults with developmental disabilities who are able to function independently in a group setting. This class may be repeated 3 times for a total of 4 enrollments since course content varies and supervised repetition and practice enhance skills.*

ADAP 377 VOCATIONAL EDUC. FOR PERSONS WITH DISABILITIES (formerly SPED 377)–0 Units (CR/NC Option)(F/S)

Class Hours: 27-270 lab total

This course is for adults with developmental disabilities who attend a site-based vocational workshop on a regular basis. This course will teach students the fundamentals of specific jobs, such as teacher's aide, mailroom clerk, and/or ground maintenance. This course will also teach students general information regarding finding and keeping a job, such as filling out applications, appropriate behaviors, and safety. This course will also cover general information that could be applied to many other jobs, i.e., telling time, handling money, measurement (both linear and volume), and avoiding illness. *Note: This course is designed specifically for adults with developmental disabilities who are able to function independently in a group setting.*

ADMINISTRATION OF JUSTICE (ADJU)

ADJU 10 INTRODUCTION TO ADMINISTRATION OF JUSTICE - 3 Units (CR/NC Option) (CAN# AJ 2) (F)

Class Hours: 54 lecture total

The history and philosophy of administration of justice in America; recapitulation of the system identifying the various sub-systems, role expectation, and their interrelationships; theories of crime, punishment, and rehabilitation ethics, education and training for professionalism in the system. Required for Administration of Justice majors.

ADJU 11 TRAFFIC CONTROL AND INVESTIGATION - (3 Units) (CR/NC Option) (S/I)

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 Rules

of the Road covering 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 (CR/NC Option) (CAN# AJ4) (S)

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, and 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 (CR/NC Option) (CAN# AJ 8) (S)

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 (CR/NC Option) (F)

Class Hours: 54 lecture total

The 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 18 COMMUNITY RELATIONS - 3 Units (CR/NC Option) (S)

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.

ADJU 20 PRINCIPLES OF INVESTIGATION - 3 Units (CR/NC Option) (F)

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 (CR/NC Option) (S)

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 (CR/NC Option) (I)

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 (CR/NC Option) (F)

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 (CR/NC Option) (I)

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 relative 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 (CR/NC Option) (I)

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 AND REPORT WRITING - 3 Units (CR/NC Option) (F)

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

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well as important aspects of courtroom testimony. Required for Administration of Justice majors.

ADJU 28 ENFORCEMENT SERVICES - 1 Unit (F/S) (CR/NC Option)

Class Hours: 18 lecture total

This course is designed to introduce the Administration of Justice student to different facets of dealing with the public in sometimes difficult situations related to parking enforcement. Basic police-public contact skills are examined as well as concerns relative to the parking enforcement and control function in today's society. Students are given the opportunity to practice their learned skills by participating in Work Site Learning with the Parking Enforcement Services program on campus.

ADJU 30 WILDLIFE LAW ENFORCEMENT - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

Students will develop an understanding of the practice of wildlife enforcement. Students will analyze various wildlife enforcement situations and learn to apply management techniques to properly and safely utilize our wildlife populations.

ADJU 40 INSTITUTIONAL AND FIELD SERVICES - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

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 control techniques is discussed, as well as, rehabilitation goals as they affect individual and inmate cultural groups in both confined and field settings.

ADJU 41 FUNDAMENTALS OF CRIME AND DELINQUENCY - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

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.

ADJU 42 INTERVIEWING AND COUNSELING - 3 Units (CR/NC Option) (I)

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 50 PEACE OFFICER FIRST AID/CPR- 1.5 Units (CR/NC Only) (F/S)

Class Hours: 27 lecture total

Course is designed to acquaint peace officer trainees with the most common medical emergencies they may encounter while on patrol and how to deal with them. Required portion of the P.O.S.T. Transition Program (CP9).

ADJU 60 CHILD ABUSE ASSESSMENT AND REPORTING - .5 Unit (CR/NC) (I)

Class Hours: 9 lecture total

Designed to provide training for those who are required to have child abuse assessment and reporting training such as child care and health care workers, social workers, criminal justice workers, marriage and family and child counselors. It will cover child abuse laws as they pertain to the detection and reporting of abuse and assessment. It will provide information on prevention, counseling, interviewing, and referral. This would also be appropriate for teachers, foster parents, and others who work with children.

ADJU 94 ADMINISTRATION OF JUSTICE WORK SITE LEARNING - 1-4 Units (CR/NC Option) (F/S)

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs related to the student's major. All WSL classes are supervised by a faculty member to ensure that the work experience is of educational value. The course stresses good work habits and meetings of SCANS competencies through actual on the job performance. *This course may be repeated three times for a maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ADJU 100 P.C. 832 ARREST COURSE - 2 Units (CR/NC) (F/S)

Note: This course does not include PC 832 Firearms Training. Students wishing to receive such training need to concurrently enroll in ADJU 102.

Class Hours: 40 lecture total

Designed to satisfy 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 (CR/NC Only) (F/S)

Corequisite: ADJU 100 or previous completion

Note: Students taking this course must submit and pass the Department of Justice fingerprint check – requires fees.

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 (CR/NC Option) (F/S)

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 referrals, 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 - 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 111 832 P.C. ARREST AND COMMUNICATION MODULE, INTERACTIVE VIDEO DISC (formerly ADJU 110B) – 1/2 Unit (CR/NC Option) (F/S)

Class Hours: 40 total (directed study)

Designed to satisfy 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. Satisfies partial mandatory requirement for all peace officers who do not possess a basic certificate awarded by the Commission on Peace Officer Standards and Training. This class will be offered in an independent study format.

ADJU 112 HANDGUN SAFETY - .5 Unit (CR/NC) (F/S)

Class Hours: 9 lecture total

Designed for handgun owners, prospective handgun owners and any interested persons wishing to know the moral and legal responsibilities of handgun possession and usage. The course will emphasize safety, and is designed to offer students required training to re-certify for CCW permits.

ADJU 131 REGULAR BASIC COURSE MODULAR FORMAT LEVEL III ACADEMY – 4.5 Units (F/S)

Prerequisite: ADJU 100 and ADJU 102

Class Hours: 72 lecture (includes 4 hours written testing)/27 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. State mandates require that students successfully complete ADJU 100 and ADJU 102.

ADJU 132 REGULAR BASIC COURSE MODULAR FORMAT LEVEL II ACADEMY – 8 Units (F/S)

Prerequisite: Successful completion of a P.O.S.T. certified Module 3 course within the last three years.

Class Hours: 90 lecture/162 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 II Regular Basic Academy. 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. State mandates require that students successfully complete Modular Level III prior to enrolling in this course.

ADJU 170 PUBLIC SAFETY DISPATCHING - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

An introductory course for persons interested in dispatching for public agencies. The Public Safety Dispatcher serves in a communications role critical to many public agencies. The Public Safety Dispatcher serves in a communications role critical to many public agencies such as police, fire, and medical. This course is designed to provide basic standardized education in dispatching, with major emphasis on safety to both the agency and the community.

ADJU 197 SPECIAL TOPICS IN ADMINISTRATION OF JUSTICE – .5-3 Units (I)

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.*

ADJU 312 HANDGUN SAFETY RECERTIFICATION - 0 Units (I)

Class Hours: 6 hours total

Designed for handgun owners who wish to remain current regarding the legal and moral aspects of handgun usage. State law now requires CCW renewal applicants to receive a minimum of four hours training every two years.

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AGRICULTURE (AGRI)

See also: ENVR

AGRI 6 CAREER PLACEMENT - AGRICULTURE - 1 Unit (CR/NC Option) (S)

Note: Designed for students concurrently completing or who have completed the core course requirements in a vocational major.

Class Hours: 18 lecture total

This class will assist students in getting the best possible employment upon graduation. Students will learn interview techniques, will develop an employment portfolio, and will contact several prospective employers. Life goals will be developed complete with a plan of action. This class is required for all agriculture majors.

AGRI 10 LIVESTOCK SELECTION - 3 Units (CR/NC Option) (I)

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. Field trips to area ranches may be taken.

AGRI 11 FEEDS AND FEEDING - 3 Units (CR/NC Option) (S)

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.

AGRI 12 HORSEMANSHIP - 3 Units (CR/NC Option) (I)

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. A horse is recommended.

AGRI 13 HORSE HUSBANDRY - 3 Units (CR/NC Option) (S)

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.

AGRI 14 WESTERN RIDING AND TRAINING (formerly AGRI 111) - 3 Units (CR/NC Option) (F)

Class Hours: 36 lecture/54 lab total

This course specializes in the many phases of Western riding and training. It is suited 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.*

AGRI 15 ARTIFICIAL INSEMINATION - 1 Unit (CR/NC Option) (I)

Class Hours: 9 lecture /27 lab total

Students will use the materials presented in class to identify one breeding synchronization program that will work in a typical beef operation. A presentation of the pros and cons will be given to the class in a discussion format.

AGRI 16 VETERINARY PRACTICES - 2 Units (CR/NC Option) (F)

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 restraint procedures.

AGRI 17 BEEF PRODUCTION - 2 Units (CR/NC Option) (F)

Note: 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 record-keeping. Field trips are a required part of the course.

AGRI 18 SWINE PRODUCTION - 2 Units (CR/NC Option) (I)

Class Hours: 36 lecture/6 lab total

Course emphasizes the practices used in the production of commercial swine in California. General husbandry, selection, breeding, housing, and record keeping topics will be covered. Students will participate in lab activities conducted at the HRL-Holistic Resource Laboratory as an integral part of this course.

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- AGRI 19 *PRINCIPLES OF ANIMAL SCIENCE - 3 Units (CR/NC Option) (S)***
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 specie.
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- AGRI 20 *PLANT SCIENCE - 4 Units (CR/NC Option) (S)***
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 investigating modern production and marketing practices of agronomic crops, the impact of commercial crop production upon mankind and the environment will be considered. Field trips to local areas will be included.
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- AGRI 21 *HORSE MANAGEMENT (formerly AGRI 115) - 3 Units (CR/NC Option) (F)***
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.
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- AGRI 22 *SHEEP PRODUCTION - 2 Units (CR/NC Option) (I)***
Class Hours: 27 lecture/27 lab total
 A survey of the sheep industry in California covering breeds, breeding practices, feeding and marketing strategy. Students will participate in planned lab activities at the HRL-Holistic Resources Laboratory and should dress appropriately.
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- AGRI 25 *IRRIGATION PRACTICES - 3 Units (CR/NC Option) (I)***
Class Hours: 36 lecture/54 lab total
 A study of irrigation and drainage problems related to pumps, motors, sprinkler systems, structure, pipelines, ditches and wells. Computation of costs and measurements of water. Water law, basic principles of plant-soil moisture relationships and water movement in the soil.
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- AGRI 50 *AGRICULTURE RESOURCE MANAGEMENT - 3 Units (CR/NC Option) (S)***
Class Hours: 36 lecture/54 lab total
 This class is focused around a goal-driven ecosystem-based management model to make decisions that are socially, financially and ecologically sustainable. Land resource management will be emphasized, however, personal decision making for quality of life, for self, family and community will be explored. This class is appropriate for anyone interested in sustainable land management.
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- AGRI 51 *AGRICULTURE RECORDS AND ANALYSIS - 3 Units (CR/NC Option) (F)***
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.
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- AGRI 54 *RESOURCE ECONOMICS - 3 Units (CR/NC Option) (F)***
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 a practical marketing, financing, promotions, business analysis, retailing, or some other practical economic problem will be required.
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- AGRI 56 *AGRICULTURE PRACTICES, HOLISTIC RESOURCE CENTER (formerly AGRI 56NR) - 1-4 Units (CR/NC Option) (S)***
Class Hours: 54 lab hours per unit
 The practical application of skills needed to be successful in agriculture and natural resources will be learned by working in the Shasta College Holistic Resource Center and in the community. Required of all transfer agriculture, production agriculture, and ornamental horticulture majors. *Note: This course may be repeated three times for a maximum of four enrollments since course content varies and skills are enhanced by supervised repetition and practice.*
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- AGRI 58 *STUDENT ENTERPRISE PROJECTS - 1-4 Units (F/S)***
Prerequisite: Must be enrolled in at least 9 units in the Agriculture or Natural Resources area and have a sponsoring instructor from the Center for Science, Industry and Natural Resources.
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.
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"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

AGRI 97 SPECIAL TOPICS IN AGRICULTURE - .5-2 Units (CR/NC Option) (I)

Class Hours: 9-36 total hours

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.*

AGRI 98 SPECIAL TOPICS IN AGRICULTURE - LAB SKILLS - .5-2 Units (CR/NC Option) (I)

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.*

AGRI 110 HORSE TRAINING - 3 Units (CR/NC Option) (I)

Advisory: AGRI 12

Class Hours: 36 lecture/54 lab total

A versatile approach to the basic principles involved in handling and training the young horse. Curriculum includes groundwork, trailering, starting a colt, and advancing the green horse. Problem solving will be discussed and worked on throughout the course. Horses are desired. *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.*

AGRI 112 HORSESHOEING - 2 Units (CR/NC Option) (F)

Note: Student 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.

AGRI 114 ENGLISH RIDING AND TRAINING - 3 Units (CR/NC Option) (I)

Note: Horses are not provided, helmets are required

Class Hours: 36 lecture/54 lab 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. Horses are desirable. *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.*

AGRI 115 SHOWING AND TRAINING THE HUNTER/JUMPER - 2 Units (CR/NC Option) (F)

Class Hours: 18 lecture/54 lab total

Course 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.

AGRI 117 SHEEP SHEARING - 1 Unit (CR/NC Option) (I)

Note: Individual should be physically able to handle large animals.

Class Hours: 9 lecture/27 lab total

A course designed to introduce and improve sheep shearing techniques by the New Zealand method. An increasing level of proficiency will be expected in shearing, tagging, blade grinding, equipment maintenance, and wool handling. Students will shear 30-100 head of sheep. Students should be physically able to handle large animals.

AGRI 118 STOCK DOG TRAINING - 1 Unit (CR/NC Option) (S)

Class Hours: 9 lecture/27 lab total

This course is designed to familiarize students with basic techniques of handling and training working stock dogs in preparation for ranch work and trailering. Demonstrations and hands-on involvement will include: working characteristics of different stock dog breeds, proper handler positioning, and basic obedience related to the working stock dog. Dogs present must have proof of valid rabies vaccination and be controlled on a leash. *Note: Since skills are enhanced by supervised practice and repetition, this course may be repeated one time for a total of two enrollments.*

AGRI 126 PESTICIDE TRAINING - .5 Unit (CR/NC) (F)

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.

AGRI 127 SELECTED TOPICS IN AGRICULTURE: HORSE SELECTION - .5 Unit (CR/NC) (I)

Class Hours: 9 lecture total

Course will review the techniques involved in horse selection. Basic selection for confirmation, health, suitability to the buyer, and basic costs involved will also be covered.

AGRI 128 *SELECTED TOPICS IN AGRICULTURE: HORSE HEALTH TIPS - .5 Unit (CR/NC) (I)*

Class Hours: 9 lecture total

Course deals with the routine health of equine including vaccinations, parasite control, common diseases, and healthvs disease.

AGRI 146 *INTRO. TO EQUIPMENT OPERATIONS & MAINTENANCE (formerly AGRI 146A) - 1 Unit (CR/NC Option) (I)*

Note: Student must produce a negative test result for substance abuse through the Federal Highway Administration (FHWA) certified testing process for pre-employment at a student cost of \$115.00.

Class Hours: 9 lecture/27 lab total

This is an introductory course designed to give the participants practical skills and knowledge in the operation and safety of heavy equipment. The course will emphasize safe operation skills, pre-operation inspections and routine maintenance procedures, along with experience operating on and off-road heavy equipment.

AGRI 147 *INTERMEDIATE EQUIP. OPERATIONS & MAINTENANCE (formerly AGRI 146B)-1 Unit (CR/NC Option)(I)*

Prerequisite: AGRI 146

Note: Student must produce a negative test result for substance abuse through the Federal Highway Administration (FHWA) certified testing process for pre-employment at a student cost of \$115.00.

Class Hours: 9 lecture/27 lab total

This is an intermediate level course designed to give the participants practical skills and knowledge in the operation and safety of heavy equipment. The course will emphasize safe operation skills, pre-operation inspections and intermediate maintenance procedures, along with experience operating on and off-road heavy equipment.

AGRI 148 *SURVEYING AND GRADE SETTING BASICS (formerly AGRI 146C) – 1 Unit (CR/NC Option) (I)*

Note: Previous equipment operations experience will be helpful.

Class Hours: 9 lecture/27 lab total

This is an advanced level course designed to give the participants practical skills and knowledge in the operation and safety of heavy equipment and grade stake reading. The course will emphasize safe operation skills, pre-operation inspections and advanced maintenance procedures, along with experience operating on and off-road heavy equipment.

AGRI 149 *CLASS A & B LICENSE TRAINING (formerly AGRI 146D)- .5 Unit (CR/NC Option) (I)*

Prerequisite: CONS 46

Note: Student must produce a negative test result for substance abuse through the Federal Highway Administration (FHWA) certified testing process for pre-employment at a student cost of \$115.00.

Class Hours: 27 lab total

This is an advanced level course designed to give the participants practical skills and knowledge in the operation and safety of on-road heavy equipment. The course will emphasize safe operation skills, pre-operation inspections and Department of Motor Vehicles Class A and B license training as it pertains to operating on-road heavy equipment.

AGRI 159 *FARM MANAGEMENT EXPERIENCE - 4 Units (CR/NC Option) (F/S)*

Class Hours: 18 lecture/162 lab total

A practicum course dealing with the operation and management of the college farm and farm dormitory. Students are assigned specific farm responsibilities on a monthly basis. The subject of group living and group problem solving will also be discussed. This class can be repeated up to three times for a total of four enrollments.

AGRI 197 *SPECIAL TOPICS IN AGRICULTURE - .5-2 Units (CR/NC) (I)*

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.*

ANATOMY (ANAT)

See Also: AGRI, BOT, MICR, and ZOO

ANAT 1 *HUMAN ANATOMY - 5 Units (CAN # BIOL 10) (F/S)*

Advisory: ENGL 190

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 is used as a teaching resource. May be taken concurrently with Physiology 1.

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Subject to change. Check the current class schedule.

ANTHROPOLOGY (ANTH)

ANTH 1 PHYSICAL ANTHROPOLOGY - 3 Units (CR/NC Option) (CAN# ANTH 2) (F)

Prerequisite: ENGL 190 eligibility.

Note: When offered in a Distance Education format, student must have access to the Internet

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. The Distance Education version of Physical Anthropology is offered only over Internet, but it is the same in content as that offered on campus. For more information on how to register and what is expected of the student refer to the title, PHYSICAL ANTHROPOLOGY, on the Homepage of Shasta College at <http://www.shastacollege.edu> or call the Center for Language Arts and Social Sciences at 530-225-4669.

ANTH 2 CULTURAL ANTHROPOLOGY - 3 Units (CR/NC Option) (I)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

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.

ANTH 5 HUMANITY, CULTURE, AND ECOLOGY - 3 Units (CR/NC Option) (CAN# ANTH 4) (F/S)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

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.

ANTH 25 CULTURE AND HISTORY OF THE NORTH AMERICAN INDIAN - 3 Units (CR/NC Option) (F/S)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

A course dealing with the history and culture of the North American Indian. Emphasis will be upon the origins, spread and diversification, and the development of Native American civilizations in North America. Consideration will be given to how the arts, economics, and cultural contributions of Native Americans have influenced the modern world.

ARCHAEOLOGY (ARCH)

ARCH 3 PRINCIPLES OF ARCHAEOLOGY - 3 Units (CR/NC Option) (CAN# ANTH 6) (F)

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 - 3 Units (CR/NC Option) (S)

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 - .5-2 Units (I)

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 subsequent interpretation and explanation will be the class focus. Some work may require overnight stays. Students will assume positions of crew chiefs, 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)

Recommended basic skills eligibility levels are as follows: ART 1, Art History classes, ART 35, ART 45 and ART 55 -- ENGL 190. All other classes -- ENGL 280 skills. Math recommendations are noted in course descriptions.

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- ART 1 INTRODUCTION TO ART - 3 Units (F/S)**
Class Hours: 54 lecture total
 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 Twentieth Century. Fundamental concepts of line, color, shade, texture, form and volume are examined by two- and three-dimensional examples. Required for Art Core Program and recommended for Humanities elective.
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- ART 2 HISTORY OF WESTERN ART THROUGH THE RENAISSANCE - 3 Units (CR/NC Option) (CAN# ART SEQ A) (F)**
Class Hours: 54 lecture total
 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, Byzantine, Christian, Medieval, Romanesque, Gothic and Renaissance. (30,000 B.C. - 1500 A.D.) Required for the Art Core Program and recommended for Humanities elective.
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- ART 3 HISTORY OF WESTERN ART SINCE THE RENAISSANCE - 3 Units (CR/NC Option) (CAN# ART SEQ A) (S)**
Class Hours: 54 lecture total
 A historical survey course of the visual arts from the year 1500 through the 20th Century, with emphasis on painting, sculpture and architecture.
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- ART 4 ETHNIC ART OF THE WORLD - 3 Units (I)**
Class Hours: 54 lecture total
 A survey course of the visual arts of Ethnic and Indian Cultures. Explored are the Eskimo, North West Coast, Pueblo, Apache, Navaho, Iroquois, Plains, Southeastern, California, Mexico, Peru, Africa, Polynesia, Melanesia, Micronesia, India, Japan, China, and Barbarians. Stress is given to the styles, motifs, symbols and meaning of the cultures by examining crafts, drawings, sculpture, woodcuts and paintings. This course designed for Humanities elective, recommended for Art Core Programs, and required for Art History Concentration.
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- ART 6 HISTORY OF MODERN ART - 3 Units (I)**
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.
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- ART 12 BEGINNING FORM, DESIGN AND COLOR (formerly ART 14A) - 3 Units (CR/NC Option) (CAN# ART 14) (F/S)**
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, directional movements, 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 Technical Program.
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- ART 13 INTERMEDIATE FORM, DESIGN AND COLOR (formerly ART 14B) - 3 Units (CR/NC Option) (S)**
Prerequisite: 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.
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- ART 15 THREE DIMENSIONAL DESIGN - 3 Units (ART 16) (I)**
Class Hours: 36 lecture/72 lab total
 Experiments involving the elements and principles of design in the creation of three-dimensional form and space relationships. Transfers to all California State Universities and California Universities. *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.*
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- ART 16 PENCIL RENDERING - 2 Units (I)**
Class Hours: 18 lecture/54 lab total
 A fundamental course to prepare 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.*
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Subject to change. Check the current class schedule.

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- ART 17** **SHADES, SHADOWS, AND PERSPECTIVES (formerly ART 17AD) - 3 Units (CR/NC Option) (I)**
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.*
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- ART 21A** **FREEHAND DRAWING - 3 Units (CAN# ART 8) (CR/NC Option) (F/S)**
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.
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- ART 21B** **FREEHAND DRAWING - 3 Units (CAN# ART 8) (CR/NC Option) (S)**
 Prerequisite: ART 21A
Class Hours: 36 lecture/72 lab total 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.
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- ART 23** **PEN, BRUSH AND INK - 2 Units (I)**
Class Hours: 18 lecture/54 lab total
 A course in the techniques using landscape, free brush, and still life drawings. Course is designed for Architecture majors and recommended for Commercial Art, Craft Concentration Program. *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.*
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- ART 26** **BEGINNING WATERCOLOR PAINTING (formerly ART 26AB) - 3 Units (CR/NC Option) (F/S)**
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.*
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- ART 27** **INTERMEDIATE WATERCOLOR PAINTING (formerly ART 26CD) - 3 Units (CR/NC Option) (F/S)**
 Prerequisite: 2 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.*
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- ART 29** **BEGINNING PAINTING (formerly ART 25AB) - 3 Units (CAN# 10) (F/S)**
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 Architecture majors, Painting Concentration and Theatre Arts Technician Concentration. *Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.*
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- ART 30** **INTERMEDIATE PAINTING (formerly ART 25CD) - 3 Units (F/S)**
 Prerequisite: 2 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.*
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- ART 31** **BEGINNING FIGURE DRAWING (formerly ART 22AB) - 3 Units (F/S)**
 Prerequisite: ART 21A
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.*
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- ART 32** **INTERMEDIATE FIGURE DRAWING (formerly ART 22CD) - 3 Units (F/S)**
 Prerequisite: 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 - 3 Units (CR/NC Option) (CAN# ART 6) (F/S)

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 ADVANCED CERAMICS - 3 Units (CR/NC Option) (I)

Prerequisite: 2 semesters of ART 35

Class Hours: 36 lecture/72 lab total

This is an advanced ceramics course emphasizing studio problems which involve the potter's wheel, construction of molds and advanced hand-building techniques. *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 45 BEGINNING GLASS BLOWING (formerly ART 45AB) - 3 Units (CR/NC Option) (F/S)

Class Hours: 36 lecture/72 lab total

A course that develops skills and aesthetic awareness in hand blown glass. The course includes safety procedures, use of glass working tools, design and execution of simple hand blown forms, formulary of melting and recycling of glass. Course designed for Glass and Crafts Concentration Programs. All students in the glass blowing classes are required to sign up for 2 hours of studio work outside of regular class hours. *Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.*

ART 46 INTERMEDIATE GLASS BLOWING (formerly ART 45CD) - 3 Units (CR/NC Option)(F/S)

Prerequisite: 2 semesters of ART 45

Class Hours: 36 lecture/72 lab total

A developmental course focusing 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. *Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.*

ART 50 PRINTMAKING - 3 Units (CR/NC Option) (CAN # ART 20) (F/S)

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 printmaking. The creation of relief, silkscreen, 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 (CAN # ART 12) (I)

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, sculpture concentration program and the beginning section is recommended for general education requirement. *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 (I)

Prerequisite: 2 Semesters of ART 55

Class Hours: 36 lecture/72 lab total

A developmental course 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 independence. The student will be 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. *Note: This course may be repeated once for a total of two enrollments since skills are enhanced by supervised repetition and practice.*

ART 60A BASIC PHOTOGRAPHY AND DARKROOM - 3 Units (CR/NC Option) (CAN # ART 18) (F/S)

Class Hours: 36 lecture/72 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 60B BASIC PHOTOGRAPHY AND DARKROOM - 3 Units (CR/NC Option) (I)

Prerequisite: ART 60A

Class Hours: 36 lecture/72 lab total

A course requiring the knowledge of the fundamental techniques of black and white photography, developing, and printing. The student will be emphasizing negative quality, print quality, and print presentation along with content, composition and

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Subject to change. Check the current class schedule.

personal expression. The use of darkroom techniques to enhance or modify prints will be stressed.

ART 61 BEGINNING CREATIVE PHOTOGRAPHY - 3 Units (CR/NC Option) (F/S)

Class Hours: 27 lecture/81 lab total

A course which concentrates on expressive and aesthetic aspects of photography in fine arts. Emphasis will be placed on a camera use, composition, film exposure and darkroom techniques to achieve artistic effect.

ART 62 INTERMEDIATE CREATIVE PHOTOGRAPHY – 3 Units (CR/NC Option) (F)

Prerequisite: ART 60A or ART 61

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 63 35MM SLIDE PHOTOGRAPHY - 3 Units (CR/NC Option) (I)

Prerequisite: ART 60A or ART 61

Note: May not transfer to four-year institution for Art majors

Class Hours: 45 lecture/27 lab total

A concentrated course in the application of concepts and techniques in the production of transparency materials for free lance, commercial, and portrait applications. Subjects covered are photography color theory, types of slide films, processing slides, visual evaluation of slides, presentation and basic slide printing applications.

ART 80A GRAPHIC DESIGN - 2 Units (CR/NC Option) (F/S)

Class Hours: 18 lecture/36 lab total

An introduction to the commercial art field with emphasis on production techniques for the graphic arts. Subjects covered include rendering, typography, layout and design, printing processes, copy preparation, studio techniques and equipment.

ART 80B GRAPHIC DESIGN - 2 Units (CR/NC Option) (F/S)

Prerequisite: ART 80A

Class Hours: 18 lecture/36 lab total

A developmental course using techniques from ART 80A with emphasis on graphic design. Subjects covered are designing with color, photography, literary illustration, advertising design, promotional graphics, instructional illustration, business practices, and portfolio development.

ART 97 SPECIAL STUDIO ART TOPICS - .5-2 Units (CR/NC Option) (I)

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 (CR/NC Option) (I)

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 (CR/NC Option) (I)

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 (CR/NC Option) (I)

Class Hours: 18 lecture/ 54 lab total

Designed to develop a personal approach to the problems of pictorial elucidation and provides an understanding of the use of visual media to illustrate verbal content. It develops a knowledge of the more common graphic media and of design elements in relationship to illustration. *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 (formerly ART 125W) - 2 Units (CR/NC Option) (I)

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.*

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- ART 123 LANDSCAPE PAINTING (formerly ART 125X) - 2 Units (CR/NC Option) (I)**
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.*
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- ART 124 INTRODUCTION TO PAINTING (formerly ART 125Y) - 2 Units (CR/NC Option) (I)**
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.*
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- ART 125 INTRODUCTION TO WATERCOLOR (formerly ART 126W) - 2 Units (CR/NC Option) (I)**
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: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.*
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- ART 126 NATURE IN WATERCOLOR (formerly ART 126X) - 2 Units (CR/NC Option) (I)**
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: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.*
-
- ART 163 FUNDAMENTALS OF PHOTOGRAPHY - 2 Units (CR/NC Option) (I)**
Class Hours: 36 lecture total
 An elementary, non-darkroom course in photography. Topics covered include camera use, film exposure, the lens, composition, aesthetics, and critiques. Color materials may be covered at instructor's discretion. *Note: This course may be repeated once, for a total of two enrollments, since skills are enhanced by additional exposure to the subject matter.*
-
- ART 301 BEGINNING, INTERMEDIATE & ADV. DRAWING & PAINTING-MIXED MEDIA - 0 Units (I)**
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 adults through art activities.
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- ART 302 ART EXPRESSION FOR SENIORS - 0 Units (I)**
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)

See Also: CHEM, GEOL, PHSC, and PHYS

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- ASTR 1 ASTRONOMY - 3 Units (CR/NC OPTION)(F/S)**
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.
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- ASTR 5 COSMOLOGY - 1 Unit (CR/NC Option) (F/S)**
Class Hours: 27 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.
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- ASTR 6 EXTRATERRESTRIAL LIFE - 1 Unit (CR/NC Option) (F/S)**
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)

See Also: DIES and INDE

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 (F/S)

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 and Diesel Technology majors with emphasis on electrical systems.

AUTO 10 AUTOMOTIVE ELECTRONICS (formerly AUTO 110) - 3 Units (S)

Prerequisite: 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 (F)

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 (S)

Prerequisite: AUTO 20

Class Hours: 36 lecture/72 lab total

This course is designed to continue the study of engine performance by 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 30 POLLUTION PREVENTION TRAINING FOR AUTOMOTIVE FACILITIES – 3 Units (Credit/No Credit Option)

Note: Students must have access to and a working knowledge of the Internet and Windows

Hours: 162 total hours (Internet Class)

This online course will instruct the student in proper ways to manage hazardous wastes generated by an automotive repair facility. The course is divided into three modules. Module 1 deals with the concepts of pollution prevention. Module 2 covers the waste streams inherent to automotive repair facilities. Module 3 requires each student to develop and perform an environmental audit of an automotive repair facility.

AUTO 94 WORKSITE LEARNING FOR AUTOMOTIVE TECHNOLOGY - 1-4 Units (F/S)

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

AUTO 130 AUTOMOTIVE STEERING AND SUSPENSION - 3 Units (F)

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 (S)

Prerequisite: 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 (F)

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 150 AUTOMOTIVE INTERNAL COMBUSTION ENGINES THEORY - 3 Units (F/S)

Class Hours: 54 lecture total

This course is designed to cover the fundamentals of the modern internal combustion engine including theory, diagnosis, and overhaul procedures. Completion of this course along with AUTO 152, will prepare students to become certified in ASE areas A-1, M-1, M-2 and M-3.

AUTO 152 AUTOMOTIVE ENGINES LABORATORY - 3 Units (F/S)

Prerequisite: AUTO 150 (may be taken concurrently)

Class Hours: 162 lab total

This course is designed to provide entry level skills required to overhaul the modern internal combustion engine. ASE and AERA based tasks utilize hand and power tools and modern machining equipment. Completion of this course along with AUTO 150 will prepare students to become certified in ASE areas A-1, M-1, M-2 and M-3.

AUTO 161 MANUAL DRIVE TRAIN AND AXLES - 3 Units (F)

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 (F)

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 (S)

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-7.

AUTO 164 ELECTRONIC AND HIGH PERFORMANCE AUTOMATIC TRANSMISSIONS – 2 Units (F/S)

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 167 INTRODUCTION TO AUTOMOTIVE MACHINIST - 2 Units (I)

Class Hours: 18 lecture/54 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. The course may be repeated one time for a total of two enrollments.

AUTO 170 AUTOMOTIVE SERVICE PRINCIPLES - 2 Units (CR/NC Option) (F)

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 (F)

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-6 and A-8 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.

“F” and “S” indicate semester course is usually offered. “I” indicates course may not be offered every year.

Subject to change. Check the current class schedule.

AUTO 173 ENHANCED AREA CLEAN AIR CAR COURSE - 1 Unit (I)

Note: This course satisfies the BAR "20 Hour Update Course" requirement and the "BAR 97 Transition Class"

Class Hours: 18 lecture/10 lab total

This course is approved and required by the Bureau of Automotive Repair for technicians who wish to update their Basic Area Technician License to the Advanced Emission Specialist Technician License or technicians who wish to renew their Advanced Emission Specialist Technician License. The course covers detailed diagnostic and repair strategies for vehicles that fail BAR-97 Loaded Mode Emissions Inspection and satisfies the BAR "20 Hour Update Course" course requirement and the "BAR 97 Transition Class."

AUTO 175 OBD II UPDATE TRAINING - 1 Unit (F/S)

Advisory: A student should have a good understanding of the OBD I operating system to be successful in this course.

Class Hours: 20 lecture total

This course is intended to give the student a general overview of the On-Board Diagnostics II (OBD II) operating system used on today's vehicles. There are many facets to the OBD II operating system that go beyond the generic format described in the course textbooks. This course, and the accompanying final examination, are designed around the generic OBD II system, as mandated by the California Air Resources Board (CARB) and the United States Environmental Protection Agency (USEPA). This course will be taught using this generic format. The Bureau of Automotive Repair requires this course in order to obtain or retain a smog inspection license.

AUTO 180 AUTOMOTIVE MACHINIST - 4 Units (F/S)

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. This course may be repeated one time for a total of two enrollments.

AUTO 197 SPECIAL TOPICS IN AUTOMOTIVE TECHNOLOGY - .5-2 Units (CR/NC Option) (I)

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 MAINTENANCE TECHNOLOGY (AVIA)

AVIA 101 AVIATION GROUND SCHOOL - 3 Units (CR/NC Only) (I)

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 (CR/NC Only) (I)

Class Hours: 54 lecture total

This course will provide knowledge and data for the student to take the Federal Aviation Administration Instrument pilot's written exam.

BIOLOGICAL SCIENCES (BIOL)

See Also: AGRI, ANAT, BOT, ENVR, HORT, MICR, NHIS, NR, PHY, and ZOO

BIOL 1 PRINCIPLES OF BIOLOGY - 4 Units (CAN# BIOL 2) (BIOL SEQ A) (F/S)

Prerequisite: A grade of "C" or better in CHEM 1A or CHEM 2A

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 (CR/NC Option) (F/S)

Class Hours: 54 lecture total

An introductory one semester course in human anatomy and physiology. Topics include the cells, tissues, and selected anatomy and physiology of all the human systems.

BIOL 6 INTRODUCTION TO HUMAN BIOLOGY LABORATORY - 1 Unit (CR/NC Option) (F/S)

Prerequisite: Concurrent enrollment in BIOL 5; previous completion of BIOL 5

Class Hours: 54 lab total

A laboratory course designed to complement BIOL 5. A one-semester human anatomy and physiology laboratory course. Exercises include microscopy, practical anatomy, physiology, and physiological instrumentation.

BIOL 10 GENERAL BIOLOGY - 3 Units (CR/NC Option) (F/S)

Class Hours: 36 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. *Note: This may be offered as Distance Education.*

BIOL 11 DIVERSITY OF LIFE - 3 Units (CR/NC Option) (I)

Note: Student must have access to the Internet

Class Hours: 162 total hours

This course is a non-laboratory, computer-based life science course and is available only on the Internet. Topics include diversity of living things, interrelationships among living things, adaptations and evolution of living things, cell division and heredity, and the human organism. For more information on how to register and what is expected of the student refer to the title, DIVERSITY OF LIFE on the Homepage of Shasta College at <http://www.shastacollege.edu>.

BIOL 12 FIELD BIOLOGY - 3 Units (I)

Class Hours: 36 lecture/54 lab total

Plant and animal morphology, classification and ecological relationships examined through field and laboratory study. Principles of ecology illustrated in the context of biotic communities of Northern California.

BIOL 14 HEREDITY - 3 Units (F)

Class Hours: 54 lecture total

An introduction to the biological, medical and environmental basis of man's inheritance.

BIOL 15 ENTOMOLOGY - 3 Units (I)

Class Hours: 36 lecture/54 lab total

An introduction to the study of insects, their biology, anatomy, classification, and relation to human welfare.

BIOL 30 NATURE PHOTOGRAPHY - 1 Unit (CR/NC Option) (I)

Note: Students must provide a camera, film, and processing.

Class Hours: 9 lecture/27 lab total

Methods and techniques used in nature photography. Includes, micro, macro, wide angle, normal and telephotography.

BIOL 60 BIOLOGY OF AGING - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

This course examines processes and responses of the individual during the aging process. Emphasis will be on the difference between normal aging in the absence of disease and aging with disease. Topics include: Mental health, mental disease, sexuality, physical aspects of aging, acute illness, chronic illness, dying, and theories of aging.

BOTANY (BOT)

See Also: AGRI, ANAT, BIOL, ENVR, HORT, MICR, NHIS, NR, PHY, and ZOO

BOT 1 GENERAL BOTANY - 4 Units (CAN# BIOL 6) (BIOL SEQ A) (S)

Class Hours: 36 lecture/108 lab total

An introduction to the structure, physiology, reproduction, life cycles and taxonomic of major plant and plant-like groups.

BOT 50 WILDFLOWERS OF CALIFORNIA - 1 Unit (CR/NC Only) (S)

Note: Two all-day Saturday field trips will be required.

Class Hours: 18 lecture /11 lab total

Local wildflowers are examined closely in the laboratory in order to learn their structural characteristics. This knowledge will be used to identify flowers using a plant identification key and for sight identification. The field trips reinforce identification skills by allowing students to observe these flowers in their natural setting. A supplementary course for botany, biology, forestry, ornamental horticulture, and natural resources students; elementary and high school teachers; and general interest. *Five three-hour class meetings and two all day Saturday field trips.*

BUSINESS ADMINISTRATION (BUAD)

See Also: ACCT, MKTG, MIS, OAS, and REAL

BUAD 6 BUSINESS LAW - 3 Units (CAN# BUS 8) (F/S)

Class Hours: 54 lecture total

This course primarily involves the legal ramifications of business and personal conduct in the areas of business contracts and agency. In addition, it includes an introduction to the American legal system, alternative dispute resolution, business torts and ethics.

BUAD 8 BUSINESS LAW - 3 Units (F/S)

Class Hours: 54 lecture total

This course involves the various parameters and requirements of business organizations, security devices, bankruptcy

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Subject to change. Check the current class schedule.

with personal and intellectual property issues.

BUAD 10 INTRODUCTION TO BUSINESS - 3 Units (F/S)

Advisory: ENGL 190 eligibility

Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

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

A survey course for both business and non-business majors covering the major field of business. Dynamics and complexities of the competitive business world including international business are explored through the study of topics including forms of business ownership, social responsibility and ethics, entrepreneurship, personnel, management and marketing concepts, securities market and other major aspects of business. Designed to provide students with familiarity with basic principles and practices of contemporary business, knowledge of business terminology, and an understanding of how business works within the U.S. economic system. Due to its introductory nature, it is recommended that this course be taken as a first business course. The equivalent of this course in content and objectives may also be offered on the Internet.

BUAD 12 INTERNATIONAL BUSINESS - 3 Units (CR/NC Option) (F/S)

Advisory: BUAD 10, ENGL 190 eligibility

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

Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

An introduction to the essentials of international business and the environmental forces that impact on the managerial decision process. Gives an overview of global business with emphasis on cultural differences and global business concepts and issues influencing international business decision-making. Course examines the physical, financial, political, legal, competitive, labor, marketing, economic, and sociocultural constraints and opportunities of foreign market analysis and trade management. The equivalent of this course in content and objectives may also be offered on the Internet.

BUAD 15 BUSINESS AND SOCIETY - 3 Units (F/S)

Class Hours: 54 lecture total

The purpose of this course is to acquaint the student with the American enterprise system, impart consumer knowledge, become aware of business issues and their effect on merchants as well as customers, understand the consumer's role in relation to the marketplace, explore current business and ethical issues, and develop an appreciation for the complexity of business decision making.

BUAD 40 SMALL BUSINESS MANAGEMENT – AN ENTREPRENEURIAL EMPHASIS - 3 Units (I)

Class Hours: 54 lecture total

An entrepreneurial perspective of small business management. The course covers techniques and methods of managing a small business enterprise and incorporates the development of a sound financial, management, and marketing business plan required for a small business.

BUAD 41 LEADERSHIP & SUPERVISION (formerly Personnel Management) - 3 Units (CR/NC Option) (F)

Note: Students taking the Internet format of this course must have access and working knowledge of the Internet and Windows.

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

This course focuses on the role of the first-line supervisor in the organization. There is particular emphasis on team building, coping with organizational change, leadership styles, motivating employees, and the supervisor's role in monitoring the primary management functions of planning, organizing, directing and controlling.

BUAD 42 MONEY AND BANKING (formerly FIN 42) - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

A course designed to give an understanding of the roles of financial institutions, the Federal Reserve System, and money as they relate to the national and international economic system.

BUAD 44 INVESTMENTS (formerly FIN 44) - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

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.

BUAD 45 HUMAN RELATIONS ON THE JOB - 3 Units (F/S)

Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

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. The equivalent of this course in content and objectives may also be offered on the Internet.

BUAD 66 BUSINESS COMMUNICATIONS - 3 Units (F/S)

Prerequisite: BUAD 166 with a "C" grade or better or eligibility for ENGL 1A

Note: Student must submit all assignments in keyboarded (not handwritten) format. Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

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

This course provides implementation of letter-writing principles and techniques through expository and argumentative writing. Additionally, the writing of employment portfolio, business letters and vocational survey (team project) is required. Application of electronic communication (Netiquette, E-mail format, Internet uses) will also be presented. This is a required course for many major and certificate programs and an alternate requirement or suggested elective in others. This class also satisfied the A.A. General Education Requirement for English. The equivalent of this course in content and objectives may also be offered on the Internet.

BUAD 71 INTRODUCTION TO e-COMMERCE - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture total

This course is an introduction to e-commerce principles. Topics include an overview of where e-commerce fits into the business, e-commerce basics, cost-benefit of e-commerce solutions, planning and development. This course offers practical suggestions to individuals involved in or planning an e-commerce business or business component.

BUAD 72 e-COMMERCE MARKETING - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture total

E-Commerce Marketing (electronic commerce) is the study of all the online or electronic-based activities that facilitate manufacturing goods and services by the producer to satisfy the wants and needs of the consumer. Electronic marketing draws heavily on networks' technology to coordinate market research, aid product development, and develop strategies and tactics to persuade consumers to buy, provide for online distribution, maintain customer records, conduct customer satisfaction surveys, and gather consumer feedback. Electronic marketing advances the overall marketing program that in turn supports the company's overall marketing business objectives.

BUAD 73 WEB DESIGN CONCEPTS FOR e-COMMERCE - 1 Unit (CR/NC) (I)

Class Hours: 18 lecture total

This course is a conceptual approach to basic principles/concepts of web design for e-commerce applications. Topics include analysis of established e-commerce web sites; internet principles and access; storefront services; software options; advertising options; search engines and directories; monitoring customers; understanding forms; databases; shopping carts; and payment processing. This is a CONCEPTUAL course and does not involve the hands-on development of web sites.

BUAD 80 PRINCIPLES OF CUSTOMER SERVICE - 3 Units (I)

Class Hours: 54 lecture total

This course is designed to provide the student with understanding and knowledge to the importance of meeting the needs of customers in a service economy. Students will gain insight into employer and customer expectation 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. Topics will also include communicating with customers, developing a positive attitude, handling complaints and sales skills.

BUAD 81 STRESS MANAGEMENT IN THE WORKPLACE – _ Unit (CR/NC Only) (I)

Class Hours: 9 lecture total

This course is designed to acquaint the student with various skills the supervisor needs to help employees. Included in the recognition of stress and how to manage it, job burnout and what to do about it, and counseling employees in various situations.

BUAD 82 MANAGING ORGANIZATION CHANGE – _ Unit (Credit/No Credit Only) (I)

Class Hours: 9 lecture total

This course is designed to provide the student with an understanding of 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.

BUAD 83 CONFLICT RESOLUTION – _ Unit (Credit/No Credit Only) (I)

Class Hours: 9 lecture total

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.

BUAD 84 ATTITUDE IN THE WORKPLACE – _ Unit (Credit/No Credit Only) (I)

Class Hours: 9 lecture total

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.

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

BUAD 85 CUSTOMER SERVICE IN THE WORKPLACE – _ Unit (CR/NC) (I)

Class Hours: 9 lecture total

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.

BUAD 86 DECISION MAKING AND PROBLEM SOLVING – _ Unit (CR/NC Only) (I)

Class Hours: 9 lecture total

This course is designed to introduce the student to decision making and problem solving as a supervisor.

BUAD 87 TEAM BUILDING – _ Unit (CR/NC Only) (I)

Class Hours: 9 lecture total

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.

BUAD 88 COMMUNICATING WITH PEOPLE – _ Unit (CR/NC Only) (I)

Class Hours: 9 lecture total

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.

BUAD 89 TIME MANAGEMENT – _ Unit (Credit/No Credit Only) (I)

Class Hours: 9 lecture total

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.

BUAD 90 FOUNDATION ESSENTIALS: VALUES AND ETHICS – _ Unit (Credit/No Credit Only) (I)

Class Hours: 9 lecture total

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.

BUAD 91 PRINCIPLES OF MANAGEMENT - 3 Units (F)

Class Hours: 54 lecture total (when offered in the Distance Education format, hour 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.

The equivalent of this course is content and objectives may also be offered on the Internet.

BUAD 92 PROJECT MANAGEMENT: PRINCIPLES AND PRACTICES – 3 Units (CR/NC Option) (I)

Advisory: This is a specialized business course recommended for students with business experience.

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

Project Management: Principles and Practices is designed to familiarize the student with management techniques specific to project management environments. These environments typically include construction industries, hi-tech organizations, and other businesses and ventures dealing with predetermined time, dollar, and performance parameters. The course covers nine areas identified by the Project Management Institute. These include: (1) project integration management; (2) project scope management; (3) project time management; (4) project cost management; (5) project quality management; (6) project human resource management; (7) project communication management; (8) project risk management; (9) project procurement management.

BUAD 94 BUSINESS WORK SITE LEARNING - 1-4 Units

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Class Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

BUAD 97 SPECIAL TOPICS IN BUSINESS ADMINISTRATION - .5-2 Units (CR/NC Option) (I)

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 98 SPECIAL LAB TOPICS IN BUSINESS ADMINISTRATION - .5-2 Units (CR/NC Option) (I)

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 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 (CR/NC Option) (F/S)

Prerequisite: Qualifying score on Mathematics Placement Test or grade of "C" or better in MATH 240

Note: Students taking the Internet format of this course must have access to and a working knowledge of the Internet and Windows.

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

A required course in several business occupational majors and suggested elective in others. Student entering this class should have a strong foundation of basic arithmetic skills of adding, subtracting, multiplying, and dividing of whole numbers, fractions, decimals, and percentage values. 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.

The equivalent of this course in content and objectives may also be offered on the Internet.

BUAD 120 STARTING A SMALL BUSINESS – THE ENTREPRENEUR – 1 Unit (CR/NC Option) (F/S)

Class Hours: 18 lecture total

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.

BUAD 166 BUSINESS ENGLISH - 3 Units (F/S)

Prerequisite: Eligibility for ENGL 190. It is the student's responsibility to consult the catalog and arrange to take the English placement test prior to enrollment.

Note: Students taking the Internet format of this course must have access and working knowledge of Internet and Windows.

Class Hours: 54 lecture total (when offered in the Distance Education format, hour 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 format of the business letter, including expository and argumentative writing.

A required course for many majors and certificate programs and an alternative requirement or suggested elective in others. Class also satisfies the A.A. General Education requirement. The equivalent of this course in content and objectives may also be offered on the Internet.

BUAD 378 TUTORING WORKSHOP - 0 Units (F/S)

Class Hours: TBA

Individualized workshops developed for students having difficulty in the area of Business and Computer Science. Students will receive individualized tutoring to help them overcome difficulties in classroom assignments.

CASINO MANAGEMENT (CAS)**CAS 10 INTRODUCTION TO CASINO OPERATIONS - 2 Units (CR/NC Option) (F)**

Note: Students taking the Internet format of this course must have access to and a working knowledge of the Internet and Windows.

Class Hours: 27 lecture/27 lab total (when offered in the Distance Education format, hour will total 108)

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 also focuses on the history of casinos and on modern-day trends, career opportunities, and recent innovations in the casino industry. The equivalent of this course in content and objectives may also be offered on the Internet.

CAS 20 THE HISTORY OF GAMING/NATIVE AMERICAN GAMING - 1 Unit (CR/NC Option) (S)

Class Hours: 18 lecture total

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.

CAS 30 CASINO SURVEILLANCE - 3 Units (CR/NC Option) (F)

Class Hours: 54 lecture total

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.

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

CAS 40 CASINO MANAGEMENT AND OPERATIONS - 3 Units (CR/NC Option) (S)

Prerequisite: A grade of C or higher in MATH 240

Advisory: CAS 10

Class Hours: 54 lecture total

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 in 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.

CAS 50 CASINO MARKETING/CONSUMER BEHAVIOR - 3 Units (CR/NC Option) (S)

Class Hours: 54 lecture total

This course will discuss concept and marketing strategies behind gaming products and services. This course will evaluate the need for entertainment, 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 motivation, greed, and the quest for gratification shall be discussed. An insight into pathological gambling as a prelude to a psychological and medical disease will be addressed.

CAS 94 CASINO MANAGEMENT WORK SITE LEARNING – 1-4 Units (F/S)

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

CAS 97 SPECIAL TOPICS IN CASINO MANAGEMENT - .5-2 Units (CR/NC Option) (I)

Course 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 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.*

CAS 98 SPECIAL LAB TOPICS IN CASINO MANAGEMENT - .5-2 Units (CR/NC Option) (I)

Course 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 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.*

CHEMISTRY (CHEM)

See Also: ASTR, GEOL, PHSC, and PHYS

CHEM 1A GENERAL CHEMISTRY - 5 Units (CR/NC Option) (CAN# CHEM 2) (CHEM SEQ A) (F/S)

Prerequisite: 2 years of high school algebra and 1 year high school chemistry or equivalent

Class Hours: 54 lecture/108 lab total

A course for science and engineering majors which covers the nature of atoms, molecules, and ions; chemical reactions; stoichiometry; properties of solids, liquids, gases, and solutions; electronic structure; periodicity; chemical bonding; and an introduction to thermodynamics, equilibrium, and precipitation, oxidation-reduction, and acid/base chemistry

CHEM 1B GENERAL CHEMISTRY - 5 Units (CAN# CHEM 4) (CHEM SEQ A) (CR/NC Option) (F/S)

Prerequisite: CHEM 1A with a "C" or better

Class Hours: 54 lecture/108 lab total

An introduction to chemical kinetics, nuclear chemistry and transition metals, along with continued, in-depth study of thermodynamics, electrochemistry, equilibrium, acid-base and solution chemistry.

CHEM 2A INTRODUCTION TO CHEMISTRY - 5 Units (CAN# CHEM 6) (CHEM SEQ A) (F/S)

Prerequisite: MATH 101

Class Hours: 54 lecture/18 discussion/54 lab total

A survey of modern inorganic chemistry suitable for liberal arts, agriculture and nursing students. The basic fundamentals of the metric system, thermodynamics, the atom, bonding and pH are presented. The mole concept provides the basis for discussion for chemical equation writing, gas laws and the concentration of solutions.

CHEM 2B INTRODUCTION TO ORGANIC AND BIOCHEMISTRY - 5 Units (CAN # CHEM 8) (CR/NC Option) (S)

Prerequisite: CHEM 2A or High School Chemistry or equivalent

Class Hours: 54 lecture/54 lab/18 discussion total

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 other non-science majors.

CHEM 6 INTRODUCTORY CHEMISTRY APPLIED TO THE ENVIRONMENT - 4 Units (I)

Prerequisite: MATH 101 or High School Algebra

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 (F/S)

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 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 (F/S)

Prerequisite: CHEM 10 (may be taken concurrently)

Note: CHEM 10 taken with CHEM 11 meets GE requirement in science.

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 will satisfy the general education requirement for a laboratory science if taken with CHEM 10.

CHEM 16 CHEMICAL PROBLEM-SOLVING - 3 Units (CR/NC Option) (I)

Advisory: Completion of MATH 101 or eligibility for MATH 102

Class Hours: 54 lecture total

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.

CHEM 70 ORGANIC CHEMISTRY - 3 Units (F)

Prerequisite: CHEM 1B

Note: CHEM 70A should be taken concurrently with CHEM 70 for science majors for transfer

Class Hours: 54 lecture total

Structure, bonding, nomenclature, isomerism, stereochemistry and physical properties of organic compounds. Reactions and mechanisms of alkanes, alkenes, alkynes, cycloalkanes, arenes, alcohols, organic halides, epoxides, ethers and thiols.

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.

CHEM 70A ORGANIC CHEMISTRY LABORATORY - 2 Units (F)

Prerequisite: CHEM 1B

Note: Chemistry majors are required to take CHEM 70A concurrently with CHEM 70.

Class Hours: 108 lab total

Theory and application of organic chemistry laboratory techniques.

CHEM 71 ORGANIC CHEMISTRY - 3 Units (S)

Prerequisite: CHEM 70

Note: CHEM 71A should be taken concurrently with CHEM 71 for science majors for transfer

Class Hours: 54 lecture total

A continuation of CHEM 70. Structure, bonding, nomenclature, isomerism, stereochemistry and physical properties of organic compounds. Reactions and mechanisms of arenes, aromatic amines, phenols, carboxylic acids and their derivatives, aldehydes, ketones, heterocyclics, macromolecules and biomolecules. 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.

CHEM 71A ORGANIC CHEMISTRY LABORATORY - 2 Units (S)

Prerequisite: CHEM 70A

Note: Chemistry majors are required to take CHEM 71A concurrently with CHEM 71.

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 (CR/NC Option) (I)

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.

Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

CHEM 98 SPECIAL TOPICS IN CHEMISTRY - LAB SKILLS - .5-2 Units (CR/NC Option) (I)

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 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.*

CHEM 101 FUNDAMENTALS OF CHEMISTRY - 4 Units (I)

Class Hours: 54 lecture/54 lab total

A study of the fundamentals of matter, chemical arithmetic, atomic structure, and chemical reactions designed to prepare the student for general Chemistry IA, but may be used to satisfy general education requirements for AA degrees at Shasta College.

COMMUNICATIONS (COM)

COM 20 INTRODUCTION TO MULTI-MEDIA - 3 Units (CR/NC Option) (F)

Class Hours: 54 lecture total

This class 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 AUTHORIZING - 3 Units (CR/NC Option) (S)

Class Hours: 54 lecture total

This course will acquaint you with the process of designing and producing effective multi-media presentations. You will work individually and as a part of a creative team. The focus is on identifying and analyzing audiences; designing, adapting, and organizing information for multi-media presentations. Software such as Final Cut Pro, Adobe Premier and Macromedia Director are complex tools that will be explored. The class also will explore basic planning strategies, production techniques, materials and equipment involved in a computer multimedia production. Students will be expected to complete at least two projects suitable for a portfolio.

COM 22 BEGINNING TV PRODUCTION - 3 Units (F/S)

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 (CR/NC Option) (F)

Class Hours: 36 lecture/54 lab total

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.

COM 31 INTRODUCTION TO DIGITAL AUDIO - 3 Units (CR/NC Option) (S)

Class Hours: 36 lecture/54 lab total

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.

COM 97 SPECIAL TOPICS IN COMMUNICATION DESIGN - .5-3 Units (CR/NC Option)

Class Hours: 27-162 lab

This course is designed to give students experiential instruction in a variety of communication settings. 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 (CAN# MIS 6) (F/S)

Note: Class will require outside time using a computer with appropriate software. Some access is allowed on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Office 2000 (or better).

Class Hours: 45 lecture/27 lab total (when offered in the Distance Education format, hours will total 162)

This course is designed to help students achieve a degree of computer literacy by presenting a complete discussion of computers and data-processing – hardware, software, history, programming languages, computer ethics, and cultural implications. Simulations provide a broad knowledge of computer components and usage. Practical hands-on applications of system software and productivity software increase literacy and competency in the rapidly changing world of computers. The equivalent of this course in content and objectives may also be offered on the Internet.

CIS 2 INTRODUCTION TO COMPUTER SCIENCE (formerly MIS 20) - 4 Units (CAN # CSCI 2) (F/S)

Class Hours: 72 lecture total

This course is designed as an introduction to business data processing for those students planning on a career in the general field of computer science. Computer history, hardware, software, processing, systems, programming languages, storage devices, careers, and impact on society will be explored to enable the student to become computer literate. Common business applications are used to examine a wide range of methods for processing data in the interactive mode. The student will design, code, and debug programs in languages such as Machine, Assembler, Java, C and/or BASIC as assigned.

CIS 3 SYSTEMS ANALYSIS METHODS (formerly MIS 29) - 3 Units (S)

Class Hours: 54 lecture total

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.

CIS 4 BUSINESS DATA COMMUNICATIONS (formerly MIS 30) - 3 Units (F)

Advisory: A grade of C or higher in CIS 1 or CIS 2 or equivalent computer experience recommended for success.

Note: Students taking the Internet format of this course must have access to and a working knowledge of the Internet and Windows.

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

Covers the concepts, vocabulary, design issues, and techniques currently used in the area of data communications. Topics include history and evolution, transmission media, interconnection topology, control methods, protocols, types of nodes, network interfaces, bridges, gateways, performance considerations, maintenance considerations, and security considerations. The equivalent of this course in content and objectives may also be offered on the Internet.

CIS 5 HELP DESK – LEVEL 1 (formerly MIS 90) - 1 Unit (CR/NC Option) (F/S/I)

Class Hours: 54 lecture total

The program is designed to educate students as computer support specialists in order to compete for positions such as help desk or technical support technicians. Students will examine the different types of help desks, the available help desk career paths, and the kinds of knowledge, skills, and abilities they need to be successful in a help desk environment. They will gain an understanding of how people, processes, technology and information affect the typical help desk structure and how outstanding customer service is the bottom line.

CIS 9 MICROCOMPUTER WORKSHOP (formerly MIS 40) - 1 Unit (CR/NC Option) (F/S)

Note: Class will require outside time using a computer with appropriate software. Some access is allowed on campus at the Math and Business Learning Center.

Class Hours: 18 lecture/9 lab total

This is strictly a beginner's introductory course that surveys the principal types of application software. It introduces the concepts, principles, and use of this software through multi-media lecture/demonstration/discussion on an IBM compatible microcomputer. Instruction will include the Windows environment and file management, plus basic use of word processing, spreadsheets, databases, and graphs/charts.

CIS 10 EXCEL FOR WINDOWS – I (formerly MIS 73) - 1 Unit (CR/NC Option) (F/S)

Advisory: Ability to type 25 wpm

Note: Class will require outside time using a computer with appropriate software. Some access is allowed on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Office 2000 (or better).

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hour will total 54)

This is an introductory course that introduces the concepts, principles, and uses of the EXCEL spreadsheet through multi-media lecture/demonstration/discussion on an IBM compatible microcomputer. Instruction will include use of the Windows environment; creating, editing, formatting, and printing a worksheet; charts/graphs development; and formulas/functions using relative, absolute and mixed cell reference. The equivalent of this course in content and objectives may also be offered on the Internet.

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

CIS 11 EXCEL FOR WINDOWS – II (formerly MIS 74) - 1 Unit (CR/NC Option) (F/S)

Advisory: A grade of C or higher in CIS 10. Ability to type 25 wpm

Note: Class will require outside timeusing 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 (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Office 2000 (or better)

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hour will total 54)

Designed to expand and improve worksheet skills through multi-media lecture/demonstration/discussion on an IBM compatible microcomputer. Instruction will include workbook management, control, and protection; utilizing the worksheet as a database, customizing charts/graphs; exchanging data between software programs; and using EXCEL to collaborate over the Internet. This course provides preparation for Microsoft Office User Specialist (MOUS) Excel Certification. The equivalent of this course in content and objectives may also be offered on the Internet.

CIS 12 EXCEL FOR WINDOWS – III (formerly MIS 75) – 1 Unit (CR/NC Option) (F/S)

Advisory: A grade of C or higher in CIS 11. Ability to type 25 words per minute.

Note: Class will require outside timeusing 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 (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Office 2000 (or better).

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hour will total 54)

Designed to expand and improve worksheet 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 file management and worksheet concepts; macros; filtering, subtotaling, and validating data lists; worksheets analysis tools – input areas, Scenario Summary, data tables, Goal Seek, Solver and Pivot Tables; customizing and controlling the worksheet; workgroups; and VBA (Visual Basic Applications). This course provides preparation for Microsoft Office User Specialist (MOUS) Excel Certification, Expert. The equivalent of this course in content and objectives may also be offered on the Internet.

CIS 20 ACCESS FOR WINDOWS – I (formerly MIS 53) - 1 Unit (CR/NC Option) (F/S)

Advisory: Ability to type 25 wpm

Note: Class will require outside timeusing a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center.

Class Hours: 18 lecture/9 lab total

This course introduces the concepts, principles, and creation of the database through multi-media lecture/demonstration/discussion using Microsoft ACCESS on an IBM compatible microcomputer. Topics to be covered will include: Windows file management; the principles and elements of the database; design of tables and data entry; maintenance of the database for 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.

CIS 21 ACCESS FOR WINDOWS II (formerly MIS 54) - 1 Unit (CR/NC Option) (F/S)

Prerequisite: A grade of C or higher in CIS 20 (or equivalent)

Advisory: Ability to type 25 wpm

Note: Class will require outside timeusing a computer with appropriate software. Some computer access is provided on campus at the Math and Business Learning Center.

Class Hours: 18 lecture/9 lab total

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 file management and database concepts; queries involving linked tables. Logical operators, calculated fields, and crosstab and update queries; presentation of data through forms and reports (including field calculations and graphics); creating hyperlinks among programs and web pages; and advanced queries. This course provides preparation for Microsoft Office User Specialist (MOUS) Access Certification.

CIS 22 ACCESS FOR WINDOWS – III (formerly MIS 55) – 1 Unit (CR/NC Option) (F/S)

Prerequisite: A grade of C or higher in CIS 21 (or equivalent)

Note: Class will require outside time using a computer with appropriate software. Some access is allowed on campus at the Math and Business Learning Center.

Class Hours: 18 lecture/9 lab total

Designed to expand and improve database management 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 file management and database 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 Microsoft Office User Specialist (MOUS) Access Certification, Expert.

CIS 31 CISCO NETWORKING CCNA 1 - NETWORKING FUNDAMENTALS (formerly MIS 32/MIS 1) - 3 Units (F/S)

Advisory: A grade of C or higher in CIS 2 or equivalent

Class Hours: 45 lecture/27 lab total

This course is the first in a four-course series designed to prepare students for the Cisco Certified Networking Associate (CCNA) Exam. This course is offered by Shasta College as the Cisco Regional Networking Academy in the region. Instructional materials developed by Cisco Systems are utilized for the course. The course covers the fundamentals of computer networking. Specific topics will include: OSI Model, industry standards, networking protocols, networking components and media, IP addressing, subnet masks, network topologies, LAN design, cables and jacks, power and noise,

network installation, network management and troubleshooting, introduction to routing and routed protocols.

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- CIS 32** **CISCO NETWORKING CCNA 2 – ROUTING TECHNOLOGY (formerly MIS 32/MIS 2) - 3 Units (F/S)**
Prerequisite: A grade of C or higher in CIS 31
Class Hours: 45 lecture/27 lab total
 This course is the second in a four-course series designed to prepare students for the Cisco Certified Networking Associate (CCNA) Exam. This course is offered by Shasta College as the Cisco Regional Networking Academy in the region. Instructional materials developed by Cisco Systems are utilized for the course. The course covers WANs and Routers, Router CLI, Router Components, Router Start-up and Setup, Router Configuration, IOS Images, TCP/IP, IP Addressing, Routing, Routing Protocols, and Network Troubleshooting. The course utilizes multi-media, computer-based training materials plus hands-on lab experience with LAN switches and routers.
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- CIS 33** **CISCO NETWORKING CCNA 3 – LAN SWITCHING AND DESIGN (formerly MIS 33/MIS 3) – 3 Units (F/S)**
Prerequisite: A grade of C or higher in CIS 32
Class Hours: 45 lecture/27 lab total
 This course is the third in a four-course series designed to prepare students for the Cisco Certified Networking Associate (CCNA) Exam. This course is offered by Shasta College as the Cisco Regional Networking Academy in the region. Instructional materials developed by Cisco Systems are utilized for the course. The course covers LAN Switching, Virtual LANs, LAN Design, IGRP protocols, Access Control Lists, Novell IPX protocol, and network management. The course utilizes multi-media, computer-based training materials plus hands-on lab experience with LAN switches and routers.
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- CIS 34** **CISCO NETWORKING CCNA 4 – WAN TECHNOLOGY & DESIGN (formerly MIS 34/MIS 4) – 3 Units (F/S)**
Prerequisite: A grade of C or higher in CIS 33
Class Hours: 45 lecture/27 lab total
 This course is the fourth in a four-course series designed to prepare students for the Cisco Certified Networking Associate (CCNA) Exam. This course is offered by Shasta College as the Cisco Regional Networking Academy in the region. Instructional materials developed by Cisco Systems are utilized for the course. The course covers WANs, WAN Design, Point to Point Protocol, ISDN, and Frame Relay. The course utilizes multi-media, computer-based training materials plus hands-on lab experience with LAN Routers.
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- CIS 35** **CISCO NETWORKING CCNP 1 – ADVANCED ROUTING CONFIGURATION (formerly MIS 5) – 3 Units (F/S)**
Prerequisite: A grade of C or higher in CIS 34 or CCNA certification
Note: CIS 35, CIS 36, and CIS 37 may be taken in any order
Class Hours: 36 lecture/54 lab total
 CIS 35 is the first in a four-course series designed to prepare students for the Cisco Certified Networking Professional (CCNP) Exam. 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 covers advanced routing topics including managing IP Traffic, traffic queuing, routing protocols (OSPF, EIGRP, BGP), VLSMs, Quality of Service. The course utilizes multi-media, computer-based training materials developed by Cisco Systems, plus hands-on lab experience with routers.
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- CIS 36** **CISCO NETWORKING CCNP 2 – REMOTE-ACCESS NETWORKS (formerly MIS 6) – 3 Units (F/S)**
Prerequisite: A grade of C or higher in CIS 34 or CCNA certification
Note: CIS 35, CIS 36, and CIS 37 may be taken in any order
Class Hours: 36 lecture/54 lab total
 CIS 36 is the second in a four-course series designed to prepare students for the Cisco Certified Networking Professional (CCNP) Exam. 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 covers topics related to remote access to networks including asynchronous connections, accessing central site with Microsoft Windows, PPP, ISDN and DDR, configuring Cisco 700 series router, dedicated frame relay connections, traffic shaping, backup connections, optimizing traffic, scaling IP addresses with PAT and NAT, troubleshooting. The course utilizes multi-media, computer-based training materials developed by Cisco Systems plus hands-on lab experience with routers.
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- CIS 37** **CISCO NETWORKING CCNP 3 – MULTI-LAYER SWITCHING (formerly MIS 7) – 3 Units (F/S)**
Prerequisite: A grade of C or higher in CIS 34 or CCNA certification
Note: CIS 35, CIS 36, and CIS 37 may be taken in any order
Class Hours: 36 lecture/54 lab total
 CIS 37 is the third in a four course series designed to prepare students for the Cisco Certified Networking Professional (CCNP) Exam. 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 covers topics related to multi-layer switching in computer networks including: network design, media types, switch configuration, LANs, trunking, spanning tree protocol, redundant links, multiplayer switching, hot standby routing protocol, multicasting, restricting network access. The course utilizes multi-media computer-based training materials developed by Cisco Systems, plus hands-on lab experience with routers.
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- CIS 38** **CISCO NETWORKING CCNP 4 – INTERNETWORK TROUBLESHOOTING (formerly MIS 8) – 3 Units (F/S)**
Prerequisite: A grade of C or higher in CIS 35, CIS 36, CIS 37
Class Hours: 36 lecture/54 lab total
 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

“F” and “S” indicate semester course is usually offered. “I” indicates course may not be offered every year.

Subject to change. Check the current class schedule.

Academy in the area. Instructional materials developed by Cisco Systems are utilized for the course. The course covers topics related to multi-layer switching in computer networks including: problem-solving model, network, management software, diagnostic commands, troubleshooting TCP/IP, troubleshooting in LAN switching environment, troubleshooting VLANs, routing & switching processes, troubleshooting frame relay, troubleshooting ISDN, Novell IPX, Appletalk, troubleshooting EIGRP, troubleshooting OSPF, troubleshooting BGP. The course utilizes multi-media computer-based training materials developed by Cisco Systems, plus hands-on lab experience with routers.

CIS 40 IMPLEMENTING AND ADMINISTERING MS WINDOWS 2000 PROFESSIONAL (formerly MIS 82) - 1 Unit (F)

Advisory: Six months experience installing and configuring computer operating systems.

Class Hours: 9 lecture/27 lab total

A Microsoft Certified Professional course. The terminology, planning, installation, configuring, administering and troubleshooting of Microsoft Windows 2000 Professional will be covered. This course is specifically designed to prepare the student to successfully participate in the Installing, Configuring, and Administering Microsoft Windows 2000 Professional examination to become a Microsoft Certified Professional (MCP).

CIS 41 IMPLEMENTING & ADMINISTERING MS WINDOWS 2000 SERVER (formerly MIS 83) – 1 Unit (F)

Advisory: Six months experience installing and configuring computer operating systems.

Class Hours: 9 lecture/27 lab total

The terminology, planning, installation, configuring, administering and troubleshooting of Microsoft Windows 2000 Server will be covered. This course is specifically designed to prepare the student to successfully participate in the Installing, Configuring, and Administering Microsoft Windows 2000 Server examination to become a Microsoft Certified Professional (MCP).

CIS 42 IMPLEMENT & ADMINISTER MS WINDOWS 2000 NETWORK INFRASTRUCTURE (formerly MIS 84) – 1 Unit (F)

Advisory: CIS 40 and CIS 41

Class Hours: 9 lecture/27 lab total

The terminology, planning, installation, configuring, administering and troubleshooting of Microsoft Windows 2000 Network Infrastructure will be covered. This course is specifically designed to prepare the student to successfully participate in the Implementing and administering a Microsoft for Windows 2000 Network Infrastructure examination to become a Microsoft Certified Professional (MCP).

CIS 43 IMPLEMENT & ADMINISTER MS WINDOWS 2000 DIRECTORY SERVICES (formerly MIS 85) – 1 Unit (S)

Advisory: CIS 40 and CIS 41

Class Hours: 9 lecture/27 lab total

The terminology, planning, installation, configuring, administering and troubleshooting of Microsoft Windows 2000 Directory Services Infrastructure will be covered. This course is specifically designed to prepare the student to successfully participate in the Implementing and Administering a Microsoft Windows 2000 Directory Services Infrastructure examination to become a Microsoft Certified Professional (MCP).

CIS 44 DESIGNING A MS WINDOWS 2000 DIRECTORY SERVICES INFRASTRUCTURE (formerly MIS 86)–1 Unit (S)

Advisory: CIS 40 and CIS 41

Class Hours: 9 lecture/27 lab total

The terminology, planning and designing of Microsoft Windows 2000 Directory Services Infrastructure will be covered. This course is specifically designed to prepare the student to successfully participate in the Designing of a Microsoft Windows 2000 Directory Services Infrastructure examination to become a Microsoft Certified Professional (MCP).

CIS 45 DESIGNING SECURITY FOR A MS WINDOWS 2000 NETWORK (formerly MIS 87) – 1 Unit (S)

Advisory: CIS 40 and CIS 41

Class Hours: 9 lecture/27 lab total

The terminology, planning and design of security for a Microsoft Windows 2000 Network will be covered. This course is specifically designed to prepare the student to successfully participate in the Designing Security for a Microsoft Windows 2000 Network examination to become a Microsoft Certified Professional (MCP).

CIS 46 DESIGNING A MS WINDOWS 2000 NETWORK INFRASTRUCTURE (formerly MIS 88) - 1 Unit (Su)

Advisory: CIS 40 and CIS 41

Class Hours: 9 lecture/27 lab total

The terminology, planning and design of a Microsoft Windows 2000 Network Infrastructure will be covered. This course is specifically designed to prepare the student to successfully participate in the Designing a Microsoft Windows 2000 Network Infrastructure examination to become a Microsoft Certified Professional (MCP).

CIS 47 MANAGING A MICROSOFT WINDOWS 2000 NETWORK ENVIRONMENT – 1 Unit (S)

Class Hours: 9 lecture/27 lab total

Advisory: CIS 40, CIS 41 and CIS 42

A Microsoft Certified Professional course. The administration, support and troubleshooting of a Microsoft Windows 2000 network environment will be covered. This course is specifically designed to prepare the student to successfully participate in the Managing a Microsoft Windows 2000 Network Environment examination to become a Microsoft Certified Professional (MCP).

CIS 60 VISUAL BASIC PROGRAMMING (formerly BUSI 27/MIS 27) - 3 Units (CAN# CSCI 6) (I)

Advisory: CIS 2

Class Hours: 36 lecture/54 lab total

This course is intended to teach programming techniques using Visual Basic language. 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. 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 (CAN # CSCI 16) (I)

Advisory: CIS 2

Class Hours: 36 lecture/54 lab total

A 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 (I)

Advisory: CIS 2 or equivalent

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). This course covers Java programming language and the standard Java class libraries.

CIS 63 ASSEMBLER LANGUAGE PROGRAMMING (formerly MIS 24) - 4 Units (CAN # CSCI 10) (I)

Advisory: CIS 2

Class Hours: 54 lecture/54 lab total

Fundamentals of computer functions and concepts as they relate to programming will be discussed. Programming concepts will include, but not be limited to machine representation of data, memory addressing techniques, address modification including indexing, program linkage, assembler construction, etc. An elective for CIS concentration majors and computer science transfer students.

CIS 70 WINDOWS I (formerly MIS 45/OAS 74) - 1 Unit (CR/NC Option) (F/S)

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 a working knowledge of the Internet.

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 54)

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 disk with Explorer and My Computer.

The equivalent of this course in content and objectives may also be offered on the Internet.

CIS 71 WINDOWS II (formerly MIS 46) – 1 Unit (CR/NC Option) (I)

Advisory: CIS 70

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: 18 lecture/9 lab total

This course extends beyond the basics of the Windows' graphical user interface. Topics will include sharing data between applications, using Print manager, customizing folders and toolbars, advanced file management and system maintenance. Multimedia and communications will be introduced.

CIS 72 FUNDAMENTALS OF UNIX – 3 Units (I)

Advisory: ELEC 21, CIS 2

Class Hours: 45 lecture/27 lab total

Fundamentals of Unix is an introductory course for new users of the UNIX operating environment. Students will learn fundamental command-line features of UNIX including file system navigation, changing file permissions, directory management, the vi and emacs text editors, Korn and Bash shell features, backup/archive and recovery, and basic network use. The course teaches how to use the UNIX operating system and introduces the CDE, GNOME, and KDE graphical user interface (GUI). The course will utilize both the Linux and Sun Solaris versions of the UNIX operating system, as well as GUI features that include Application Managers, File Managers, Text Editors, printing and mail.

CIS 80 INTERNET BASICS (formerly MIS 81) - 1 Unit (CR/NC Option) (F/S)

Note: Students taking the Internet format of this class must have access to the Internet and Windows 98 (or better)

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 54)

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, news groups, etc. The equivalent of this course in content and objectives may also be offered on the Internet.

CIS 81 WEB PAGE DESIGN I (formerly MIS 80) - 1 Unit (CR/NC Option) (S)

Advisory: Basic knowledge of word processing, windows, and the Internet

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: 18 lecture/9 lab total

This course introduces the student through lecture and hands-on operation to the use of various software (IBM compatible) for Web page authoring. Microsoft FrontPage and other web authoring tools will be demonstrated and used. Focus is on

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Subject to change. Check the current class schedule.

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.

CIS 82 **WEB PAGE DESIGN II – 1 Unit (CR/NC Option) (F/S)**

Prerequisite: A grade of C or higher in CIS 81

Class Hours: 18 lecture/9 lab total

This course introduces the student through lecture and hands-on operation to the use of advanced **elements** of the page authoring software used in the Web Page Design I course. Microsoft FrontPage and other web authoring tools will be demonstrated and used. Focus is on the advanced functions of creating, editing, saving, and publishing Web pages. Topics include advanced design principles, advanced graphical elements, page transitions, hit counters, hyperlink hot spots, creation of sub-webs and discussion webs, creation of PDF files and forms, and other active web authoring elements.

CIS 84 **HTML – BEGINNING – 1 Unit (CR/NC Option) (I)**

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. Computer access is provided on campus at the Math and Business Learning Center.

Class Hours: 18 lecture/9 lab total

Introductory course to the Hypertext Markup Language for web page authoring, through lecture and hands-on classes. Topics include: HTML "TAG" structure and attributes. Basic <HTML>, <HEAD> and <BODY> components of a web document. Text formatting: color, font types, sizes, subscripts and superscripts, underlining, special symbols, paragraph structure, text highlighting and hiding. Creating links, targeting to specific windows. Page layout: indents, background colors and images, line breaks, horizontal rules and text alignment. Creation and usage of images and animations, transparency effects. Scaling, aligning and embedding images. Using images as links. Creating and defining lists and nested lists. Creating tables, row and column structure, alignment and spanning in complex tables. Editing, saving and publishing web pages.

CIS 85 **HTML – INTERMEDIATE – 1 Unit (CR/NC Option) (I)**

Prerequisite: A grade of C or higher in CIS 84 or equivalent skill level

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.

Intermediate level course on the Hypertext Markup Language for web page authoring, through lecture and hands-on classes. Topics include: use of FRAME structures and targeting links within FRAMES, FORMS and their attributes. Layout and text formatting with the use of the STYLE tag. Basic multimedia creation, and incorporation of multimedia files in web pages. Insertion of applets in an HTML document. Importing Dynamic HTML to the web page structure.

CIS 94 **COMPUTER INFORMATION SYSTEMS WORK SITE LEARNING – 1-4 Units (CR/NC Option) (F/S)**

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Course Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs related to the student's major. All WSL classes are supervised by a faculty member 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. *This course may be repeated three times for a maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

CIS 97 **SPECIAL TOPICS IN MANAGEMENT INFORMATION SYSTEMS (formerly MIS 97) - .5-2 Units (CR/NC Option) (I)**

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 (CR/NC Option) (I)**

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 (CR/NC Option) (I)**

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. Recommend for any of the Office Technologies majors 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.*

CIS 198 **SPECIAL LAB TOPICS IN COMPUTER TECHNOLOGY (formerly MIS 198) - .5-2 Units (CR/NC Option) (I)**

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 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)

See Also: INDE and WELD

CONS 46 EQUIPMENT OPERATIONS & MAINTENANCE (formerly AGRI 46/ENVR 46) - 3 Units (CR/NC Option) (F/S)

Note: Student must produce a negative test result for substance abuse through the Federal Highway Administration (FHWA) certified testing process for pre-employment at a student cost of \$115.00.

Class Hours: 27 lecture/81 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 48 SURVEYING FOR EQUIPMENT OPERATORS (formerly AGRI 48) - 2 Units (CR/NC Option) (F)

Advisory: 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 work on a heavy equipment construction crew.

CONS 52 RESIDENTIAL ESTIMATING - 3 Units (S)

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 (F)

Class Hours: 54 lecture total

A general survey course covering building materials from concrete to roofing. It includes estimating materials, costs, labor, taxes, insurance, fees, overhead, transportation and contingencies common in the residential construction industry. It also covers topics such as map reading, blueprint interpretation, building code requirement and the methods of application of said materials as they relate to building construction techniques.

CONS 55 EQUIPMENT OPERATIONS SKILLS DEVELOPMENT (formerly AGRI 56EH/AGRI 55/ENVR 55) 1-4 Units (CR/NC Option) (F)

Prerequisite: CONS 46

Note: Student must produce a negative test result for substance abuse through the Federal Highway Administration (FHWA) certified testing process for pre-employment at a student cost of \$115.00.

Class Hours: 54 lab hours per unit

The practical application of skills needed to be successful in equipment operation. Includes farm and industrial equipment such as wheel and crawler tractors, forklift, backhoe, motor grader and scraper. Service and adjustment will also be a part of this course. Required of all transfer agriculture, production agriculture, and ornamental horticulture majors. *Note: This course may be repeated three times for a maximum of four enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

CONS 71 WOODWORKING (formerly CONS 71A) - 3 Units

Class Hours: 36 lecture/54 lab total

This course is designed to develop skill and appreciation in the woodworking craft. Instruction is given on safety and proper use of hand tools and power machinery. In this course the student may work on a project of their own choice.

CONS 72 CABINETMAKING (formerly CONS 71B) - 3 Units

Prerequisite: Completion of CONS 71 with a C or better

Class Hours: 36 lecture/54 lab total

This course will enable the student to have an understanding of cabinet standards, typical types found in most kitchens, bathrooms and garages. Styles of kitchens, types of layouts for all four 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: Completion of CONS 71 with a C or better

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

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

Prerequisite: Completion of CONS 71 with a C or better

Class Hours: 36 lecture/54 lab total

This course will provide essential knowledge and skill related to deck, closet treatments, inside and outside window and door treatments.

CONS 94 WORK SITE LEARNING FOR CONSTRUCTION TECHNOLOGY - 1-4 Units (F/S)

Prerequisite: Must have completed 30 units of required construction technology course work

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

This course is designed for employment on approved jobs related to the students 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 jobs. One unit of work site learning credit is granted for 75 hours paid or 60 hours non-paid of on-the-job activity. Student must enroll in seven units including work site learning. *Note: This course may be repeated three times for a total of four enrollments since content differs and skills are enhanced by supervised repetition and practice.*

CONS 150 INTRODUCTION TO RESIDENTIAL CONSTRUCTION - 3 Units (F/S)

Class Hours: 54 lecture total

This course is recommended for entry-level students in the construction trades. Instruction will include tool safety, estimating costs, foundations, framing, plumbing, electrical, mechanical, and finish carpentry work. The student will gain a basic knowledge of the building trades.

CONS 151 CARPENTRY PRACTICES I - 6 Units (F)

Class Hours: 54 lecture/162 lab total

The purpose of this two-year course is to train competent persons for the construction field. Related information including interpretation of layout, estimation of construction costs and choice quantities of materials will be emphasized. Basic skill will be developed with each phase of the job: foundation, framing, exterior and interior trim, and cabinet work. The course will permit the student to fulfill the greater portion of apprenticeship requirement while enjoying the atmosphere of higher education. Basic information of building codes will be covered.

CONS 152 CARPENTRY PRACTICES II - 6 Units (S)

Class Hours: 54 lecture/162 lab total

The purpose of this class is to train and develop educational opportunities for persons in the construction industry. 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. The course will permit the student to fulfill the greater portion of apprenticeship requirements while enjoying the atmosphere of higher education. Basic information about building codes will be covered.

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 168 GENERAL SHOP/WOODWORKING - 2 Units (CR/NC Option) (I)

Class Hours: 18 lecture/54 lab total

A skill development course in furniture construction. Course activities will stress power tool setup and use. Related instruction will include wood selection and ordering, furniture plan reading and development, joints, adhesives, abrasives, finishes, furniture hardware, and fasteners. Students will select projects that will demonstrate skills. *Note: Since skills are enhanced by supervised practice and repetition, this course may be repeated three times for a total of four enrollments.*

CONS 178 BUILDING CODES AND STANDARDS - 3 Units (F/S)

Class Hours: 54 lecture total

This course is designed to provide the craftsperson, building, designer, and inspector with knowledge and insight regarding building regulations and requirements for minimum construction guidelines and specifications. It covers the use of the latest Uniform Building, Plumbing, Mechanical and Electric Codes and assists in using them to the builder's advantage.

The class also provides information on sources of assistance and publications to meet the needs for dwelling construction industry.

CONS 197 SPECIAL TOPICS IN CONSTRUCTION TECHNOLOGY - .5-2 Units (CR/NC Option) (I)

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 class is taught and will be listed in the schedule of classes. Recommended for Construction 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.*

COOPERATIVE EDUCATION (COOP)

COOP 94 COOPERATIVE EDUCATION – 4 or 8 Units (F/S)

Prerequisite: Successful completion of 7 units of course work in their occupational discipline (as defined in the Shasta College Related Disciplines List) prior to enrollment

Note: Student limited to one other class during a semester of Co-op Ed (alternative Plan)

Place of employment must be an "Approved Site" as determined by the Co-op Ed Coordinator

Class Hours: 300 hours per four (4) units paid work/240 hours per four (4) units non-paid work

The Cooperative Education (Co-op Ed) course is considered as an Alternative Plan of Work Site Learning designed to offer students work experience related to their occupational area. Co-op Ed allows the student to alternatively attend college and work in an occupational area (as defined in the Shasta College Related Disciplines List). A maximum of (8) eight units per semester, for a total of 12 units can be earned for Co-op Ed. Sixteen (16) units is the maximum a student can earn for the combined Co-op Ed/WSL occupational courses. A student cannot transfer between the WSL and Co-op Ed Plans until they have earned at least seven (7) units of additional class work after completion of the WSL or Co-op Ed course. The Co-op Ed course can be repeated one time for a maximum of 12 units.

CULINARY ARTS (CULA)

The following courses will require extensive reading and math exercises.

CULA 45 BASIC FOOD PRODUCTION – 5 Units (F/S)

Class Hours: 18 lecture/216 lab total

This course involves preparing and cooking of foods, understanding kitchen operations and the proper use of safety and sanitation procedures in the kitchen. This will prepare the students for the Advanced Food Preparation class and will prepare skilled food personnel in kitchen procedures.

CULA 46 ADVANCED FOODS – 5 Units (F/S)

Prerequisite: CULA 45

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 49 MENU PLANNING AND COST ANALYSIS – 2 Units (S)

Class Hours: 27 lecture/27 lab 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 (F/S)

Advisory: Eligibility for ENGL 190

Class Hours: 36 lecture

The course examines the basic principles of hygiene and sanitation and the application of these principles to food service operations. It also includes safety elements in good service planning; description of maintenance and operation of the appropriate food service equipment, and OSHA regulations. Emphasis will be placed on the supervisors' responsibilities in maintaining high sanitation and safety standards.

CULA 55 PURCHASING (formerly CULA 155) - 2 Units (S)

Advisory: A grade of C or higher in ENGL 280 or qualifying score on the English Placement Test.

Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

Class Hours: 36 lecture total (when offered in the Distance Education format, hour 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. The equivalent of this course in content and objectives may also be offered on the Internet.

CULA 56 CATERING (formerly CULA 156) - 1 Unit (I)

Corequisite: CULA 94

Advisory: Eligibility for ENGL 190

Class Hours: 18 lecture total

This course is an overview of different aspects of operating a successful catering business. The focus is to learn various management techniques that will assist students in the catering industry. Students must concurrently enroll in a minimum of one unit in CULA 94 at a catering training facility. (This one unit of CULA 94 applies to the program requirement of three units of Work Site Learning for the spring semester.)

CULA 60 BEVERAGE MANAGEMENT – 2 Units (S)

Class Hours: 36 lecture total

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

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 (F/S)

Class Hours: 36 lecture/54 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 (F/S)

Note: In order to taste alcohol products in class, students must be 21 years of age or older. Students under 21 years of age may take this class, but not taste alcoholic products.

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 94 CULINARY ARTS WORK SITE LEARNING - 1-4 Units (F/S/Su)

Corequisite: Students must be co-enrolled in either CULA 52, CULA 53, CULA 56, CULA 57, or have been enrolled to attend class, and enrolled in a minimum of seven (7) units including the Worksite Learning course

Advisory: Eligibility for ENGL 190

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice. Culinary Arts majors must have a minimum of 3 units for both fall and spring semesters for each year.

CULA 97 SPECIAL TOPICS IN CULINARY ARTS - .5-2 Units (CR/NC Option) (I)

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 98 SPECIAL LAB TOPICS IN CULINARY ARTS - .5-2 Units (CR/NC Option) (I)

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 (I)

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 culinary arts and required for American Culinary Federation Apprentice.

CULA 161 THE ART OF GARDE MANGER (PREPARATION & PRESENTATION OF GARNISHED FOODS)-2 Units (F)

Class Hours: 18 lecture/54 lab total

This course stresses basic garde manger principles as well as thorough understanding of the functions and duties of the department as it relates and integrates into kitchen operations. In addition to that, specific focus is placed on introduction to specialty work which includes ice carving, buffet decorations, and understanding equipment and area planning. Emphasis is placed on eye appeal, texture, method, individual creativity, artistic touches and harmony of combinations. This course is required for American Culinary Federation apprentices and helpful for individuals interested in furthering their education in the hospitality industry.

CULA 167 CAFETERIA BASIC SKILLS: BASIC FOODS - 3 Units (I)

Class Hours: 45 lecture/27 lab total

An overview of basic skills involved in preparing and serving nutritious, acceptable foods in schools, child care centers, and family day care programs. Subject areas include food preparation principles and standardized recipes including qualities of standard food products; components of the 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 record keeping; and methods for developing positive staff morale.

CULA 170 MENU DESIGN - 3 Units (I)

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 (I)

Class Hours: 54 lecture total

An overview of challenges and 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 (F)

Class Hours: 18 lecture/54 lab total

Students in this course will learn and practice dessert and bread production from formulas used in quantity food service. Cost and nutritional content will be emphasized.

CULA 173 INTRODUCTION TO WINES - 2 Units (S)

Prerequisite: 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.

DANCE (DAN)

DAN 20 MODERN DANCE I (formerly PE 43) - .5-1 Unit (CR/NC Option) (F/S)

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 PE 40 and HPE 36AD) - .5-1 Unit (CR/NC Option) (S)

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 one time for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

DAN 30 BALLET 1 (formerly PE 41 and HPE 37AD) - .5-1 Unit (CR/NC Option) (F/S)

Class Hours: 27 or 54 total activity

A class of beginning ballet techniques, the use of accompaniment and choreographing short ballet patterns. *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 31 BALLET 2 (formerly PE 44 and HPE 45AD) - .5-1 Unit (CR/NC Option) (F/S)

Class Hours: 27 or 54 total activity

A class for ballet students interested in more technical and sophisticated performing and choreography. *Note: This course may be repeated one time for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

DAN 40 JAZZ DANCE 1 (formerly PE 42 and HPE 72AD) - .5-1 Unit (CR/NC Option) (F/S)

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 41 JAZZ DANCE 2 (formerly PE 45 and HPE 46AD) - .5-1 Unit (CR/NC Option) (F/S)

Class Hours: 27 or 54 total activity

A class for jazz dance students interested in more technical and sophisticated performing and choreography. *Note: This course may be repeated one time for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

DAN 50 TAP DANCE 1 (formerly PE 46) - .5-1 Unit (CR/NC Option) (F)

Class Hours: 27 or 54 total activity

This class will introduce beginning sounds of tap. It will build technique, both physical and mental of this classic art form. *Note: Course may be repeated three times for a total of four enrollments since skill and proficiencies are enhanced by repetition and practice.*

DENTAL (DN TL)

DN TL 10 ORAL BIOLOGY - 3 Units

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.
Subject to change. Check the current class schedule.

Prerequisite: 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

Prerequisite: Enrollment in the Dental Hygiene Program

Class Hours: 36 lecture/54 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

Prerequisite: 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

Prerequisite: 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

Prerequisite: 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: Successful completion of all first semester Dental Hygiene Program courses

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: Successful completion of all first semester Dental Hygiene Program courses

Class Hours: 72 lecture total

Pathological processes of inflammation, immunology defense, degeneration, neoplasm, 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: Successful completion of all first semester Dental Hygiene Program courses

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 (CR/NC Only)

Prerequisite: Successful completion of all first semester Dental Hygiene Program courses

Class Hours: 18 lecture/162 lab total

Provides beginning clinical experience in the treatment of adult and child patient. 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. This course is offered on a Credit/No Credit basis only.

DNTL 25 CLINIC I SEMINAR - 2 Units

Prerequisite: Successful completion of all first semester Dental Hygiene Program courses

Class Hours: 36 lecture total

Provides an expanded learning experience through lectures, demonstrations and guest speakers.

DNTL 26 NUTRITION IN DENTISTRY - 1 Unit

Prerequisite: Successful completion of all first semester Dental Hygiene Program courses

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 (CR/NC Only)

Prerequisite: Acceptance in the Dental Hygiene Program. 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 PERIODONTICS I - 3 Units

Prerequisite: Successful completion of all first and second semester Dental Hygiene Program courses

Class Hours: 54 lecture total

A course in periodontics teaching identification of the normal periodontium and recognition of deviations from normal; the etiology and principles of periodontal diseases, examination procedures, treatment and preventative measures.

DNTL 31 PHARMACOLOGY - 2 Units

Prerequisite: Successful completion of all first and second semester Dental Hygiene Program courses

Class Hours: 36 lecture total

Classification and study of drugs according to origin, physical and chemical properties, therapeutic effect and values, particularly of drugs used in dentistry.

DNTL 32 DENTAL MATERIALS - 2 Units

Prerequisite: Successful completion of all first and second semester Dental Hygiene Program courses

Class Hours: 27 lecture/27 lab total

The composition and use of various materials used in the dental procedures; fundamentals of chairside assisting while using dental materials. The concepts of the entire dental team; and principles and application of expanded duties for registered dental hygienists.

DNTL 33 ADVANCED CLINICAL TOPICS - 2 Units

Prerequisite: Successful completion of all first and second semester Dental Hygiene Program courses

Class Hours: 36 lecture total

To teach the student to perform proficiency in soft tissue diagnosis and evaluation. To develop clinical proficiency under supervision by performing curettage and soft tissue management procedures.

DNTL 34 CLINICAL PRACTICE II - 4 Units

Prerequisite: Successful completion of all first and second semester Dental Hygiene Program courses

Class Hours: 216 lab total

Provide intermediate experience in the treatment of dental hygiene patients to expand on the procedures and techniques introduced in Introduction to Clinic and Clinical Practice I and to provide more experience on more difficult cases.

DNTL 35 CLINICAL II SEMINAR - 1 Unit

Prerequisite: Successful completion of all first and second semester Dental Hygiene Program courses

Class Hours: 18 lecture total

Provides an expanded clinical and didactic learning experience through lectures, demonstrations and guest speakers.

DNTL 40 PERIODONTICS II - 1 Unit

Prerequisite: Successful completion of all first, second and third semester Dental Hygiene Program courses

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: Successful completion of all first, second and third semester Dental Hygiene Program courses

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: Successful completion of all first, second and third semester Dental Hygiene Program courses

Class Hours: 18 lecture/54 lab total

Provides an expanded clinical experience exposure through independent study or seminar study in clinical experience. To present the students to nitrous oxide analgesia and its proper use in the dental office.

DNTL 43 CLINICAL PRACTICE III - 4 Units

Prerequisite: Successful completion of all first, second and third semester Dental Hygiene Program courses

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 - 2 Units

Prerequisite: Successful completion of all first, second and third semester Dental Hygiene Program courses

Class Hours: 36 lecture total

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

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: Successful completion of all first, second and third semester Dental Hygiene Program courses

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 (CR/NC Only)

Prerequisite: Acceptance in the Dental Hygiene Program. Completion of 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 in previous clinical courses and to prepare for success on their state clinical licensing examinations. This course is offered on a credit/no credit basis only.

DNTL 94 COMMUNITY DENTAL HEALTH WORK SITE LEARNING – 1 Unit (CR/NC Option)

Corequisite: DNTL 44

Class Hours: 75 hours paid or 60 hours non-paid total

This course emphasizes teaching and presentation techniques for dental health education to target populations ranging from preschool to elderly. Students design lesson plans on a variety of dental health topics and present dental health education in school classrooms and adult group meetings.

DIESEL TECHNOLOGY (DIES)

See Also: AUTO and INDE

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.

DIES 30 HYDRAULIC TROUBLESHOOTING - 1 Unit (F/S)

Prerequisite: DIES 48

Class Hours: 18 lecture/18 lab total

This class is intended to demonstrate safe and effective troubleshooting procedures as required for industrial and mobile hydraulic equipment.

DIES 48 HYDRAULICS - 4.5 Units (CR/NC Option) (F/S)

Class Hours: 72 lecture/36 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 ADVANCED HYDRAULICS - 3 Units (CR/NC Option) (S/I)

Prerequisite: 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 drives will be covered. Recommended for Equipment Operations and Maintenance, production, agriculture, and diesel majors.

DIES 94 WORKSITE LEARNING FOR DIESEL TECHNOLOGY - 2 Units (F/S)

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course. DIES 161

Class Hours: 150 hours paid or 120 hours non-paid Worksite-based Learning

Employment on approved jobs related to the student's major. All WSL classes are supervised by a faculty member 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.

DIES 158 DIESEL TUNE-UP AND FUEL SYSTEMS - 4 Units (I)

Class Hours: 36 lecture/108 lab total

This course will cover diesel fuel systems as related to testing, calibrating and diagnostic procedures. Mechanical and electronic diesel engine fuel controls will be covered.

DIES 160 DIESEL ENGINE ELECTRONIC CONTROL – 4.5 Units (I)

Prerequisite: DIES 164

Class Hours: 72 lecture/36 lab total

This course will cover electronic diesel engine control systems as related to testing, calibrating and diagnostic procedures. The use industry software generated computer programs will be utilized.

DIES 161 DIESEL TECHNOLOGY FIELD TRAINING – 2 Units (F/S)

Prerequisite: DIES 162, student must be 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.

Corequisite: DIES 94

Class Hours: 36 lecture total

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.

DIES 162 HEAVY DUTY POWER TRAIN - 4 Units (F)

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 - 8 Units (F)

Class Hours: 108 lecture/108 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 Tampering Inspection Program as mandated by Senate Bill 1997 of 1988 will be covered.

DIES 165 AIR BRAKE SYSTEMS AND TROUBLESHOOTING - 2 Units (I)

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 (S)

Prerequisite: 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 168 DISASSEMBLY AND ASSEMBLY OF THE CUMMINS DIESEL ENGINE - 2.5 Units (S)

Class Hours: 27 lecture/72 lab total

This course is an in-depth study of Cummins diesel engines, theory of design, operation and application. The lab will provide training in the disassembly and inspection of Cummins diesel engines, practical assembly procedures and technical analysis of engine service.

DIES 170 HEAVY DUTY BRAKING SYSTEMS - 4 Units (S)

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 191 DISASSEMBLY AND ASSEMBLY OF THE DETROIT DIESEL ENGINE - 2.5 Units (I)

Class Hours: 27 lecture/72 lab total

An in-depth study of Detroit diesel engines, theory of design, operation and application. The lab will provide training in the disassembly and inspection of Detroit diesel engines, practical assembly procedures and technical analysis of engines service.

DIES 197 SPECIAL TOPICS IN DIESEL TECHNOLOGY - .5-2 Units (CR/NC Option) (I)

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. 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 - 4 Units (CR/NC Option) (I)

Advisory: CULA 50

Class Hours: 54 lecture/54 lab total

This course will cover effective management skills in food production and the role of the Dietary Service Supervisor. Basic institutional cooking skills will be developed including using weight 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.

DSS 63 PERSONNEL MANAGEMENT, SUPERVISION TECHNIQUES, AND TRAINING - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

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.

DSS 94 DIETARY SERVICE SUPERVISOR WORK SITE LEARNING - 1-4 Units (I)

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

Prerequisite: DSS 10, DSS 20, DSS 63

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

Dietary Service Supervisor majors must have a minimum of 3 units for both fall and spring semesters for each year.

DIRECTED STUDY (IS)

IS 99/199 DIRECTED STUDY – .5-2 Units

Class Hours: 27 hours for each _ unit

Directed study provides a forum for advanced work in a given field of study. A student may contract with a full-time instructor to do directed study in a specific subject area in which he/she has exhausted the regular curricular offerings. For transfer level courses, the student must have a declared major or already possess a degree and have completed a minimum of 12 transfer units at Shasta College. For non-transfer level courses, the student has completed a minimum of 12 units at Shasta College. Any combination of these courses may be repeated three times for a total of four enrollments or a maximum of four directed study units.

EARLY CHILDHOOD EDUCATION (ECE)

ECE 1 HUMAN DEVELOPMENT - 3 Units (F/S)

Class Hours: 54 lecture total

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.

ECE 2 CHILD, FAMILY, COMMUNITY - 3 Units (F/S)

Class Hours: 54 lecture total

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 community systems and resources that promote quality outcomes for children, families, schools, and communities.

ECE 3 EARLY CHILDHOOD PROGRAM ADMINISTRATION - 3 Units (F)

Prerequisite: ECE 7

Class Hours: 54 lecture total

This course identifies and assesses the principles and practices of early childhood program planning and administration. Course content will focus on overall operational procedures for various programs providing care and learning for children. The topics include: regulatory agencies, licensing and compliance with local and state requirements, funding and budgeting, staff selection and scheduling, and enrollment and operational policies and reports.

ECE 4 INTRODUCTION TO EARLY CHILDHOOD EDUCATION - 1 Unit (F/S)

Note: This class can be used to meet Work Site Learning 94 co-requisite of an Early Childhood Education career planning course.

Class Hours: 18 lecture total

Introduction to Early Childhood Education provides the student with a basic orientation to careers related to working with young children. The course will offer an overview of child care settings, characteristics of effective child care providers and teachers, ethical issues and standards of this field, and training and employment opportunities.

ECE 5 CHILDREN'S LITERATURE - 3 Units (I)

Class Hours: 54 lecture total

A course surveying literature written for children. Text and illustrations are evaluated as to the impact on developing children. Emphasis placed on criteria of literature selection and methods of incorporating literature into family activities and classroom curriculum.

ECE 6 EXPLORING FAMILY CHILDCARE (formerly ECE 153) - 3 Units (I)

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 AND ASSESSMENT - 3 Units (F/S)

Prerequisite: ECE 1

Note: Lab hours will be fulfilled at the on-campus Early Childhood Center

Class Hours: 36 lecture/54 lab total

This course provides the student with opportunities for further study of development and behavior of young children by developing skills in observation and assessment

ECE 8 TEACHING PRACTICES FOR YOUNG CHILDREN - 5 Units (F)

Advisory: 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.

Class Hours: 54 lecture/108 lab total

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 they have the opportunity to work directly with the children to test the methods and refine the teaching skills explored in the course. *Note: Supervised fieldsite experience for the California Child Development Permit will be obtained through the course lab hours at the Shasta College Early Childhood Education Center.*

ECE 10 EARLY CHILDHOOD LEARNING - 3 Units (I)

Class Hours: 54 lecture total

This course focuses on the developmental learning process of children ages three to eight. Attention will be given to the application of current studies providing insight into the maturational stages. Emphasis will be given to the understanding of individuality, readiness, competence, and developmentally appropriate strategies during the preschool and primary school years.

ECE 11 MEETING SPECIAL NEEDS OF CHILDREN - 2 Units (S)

Prerequisite: ECE 1

Class Hours: 36 lecture total

This course will focus on the special needs and behaviors of young children. Emphasis will be placed on classification and assessment of special needs, and developmentally appropriate practices for behavior management.

ECE 12 INFANT TODDLER LEARNING - 3 Units (CR/NC Option) (F)

Class Hours: 54 lecture total

A course focusing on developmental research and current practices in care and learning during infancy and toddlerhood through lectures, discussion, demonstration and observations. Emphasis of this course will be on evaluation, developmental stages, planning optimum environments and understanding the care-giver roles for children during the first two years of life.

ECE 13 ENVIRONMENTS FOR INFANT/TODDLER, PRESCHOOL OR SCHOOL-AGE CHILD CARE – 2 Units (F)

Class Hours: 36 lecture total

This course provides for an in-depth study into the planning and implementation of developmentally appropriate learning environments for young children. Emphasis will be placed upon increasing the student's skills in critically analyzing educational settings for young children. Special attention will be given to room arrangement, selection and storage of materials, appropriate application of all local, state and national safety requirements. *Note: Within the first two weeks of class, students using this course for the Specialization requirement for the California Child Development Permit must inform the instructor of their intention and class assignments will be focused appropriately. Students will receive a letter of verification of Specialization upon successful completion of this course.*

ECE 14 SCHOOL AGE AND ADOLESCENT DEVELOPMENT - 3 Units (S)

Class Hours: 54 lecture total

A course focusing 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 HEALTH AND SAFETY IN CHILDREN'S PROGRAMS - 3 Units (S)

Class Hours: 54 lecture total

Provides an opportunity for teachers and child care workers to focus on the broad dimension of health and safety in children's programs. Fundamentals of a safe environment, including knowledge of state and local regulations, will be covered. Illness and disease identification, prevention, and care will be explored. Health and safety community resources and their application to the children's curriculum will also be highlighted.

ECE 16 FUNDAMENTALS OF EARLY CHILDHOOD MENTORING AND SUPERVISION -2 Units (I)

Prerequisite: ECE 7

Advisory: ECE 3

Class Hours: 36 lecture total

Designed to satisfy the Child Development Permit supervision 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 18 EARLY CHILDHOOD MENTORING SEMINAR - .5 Unit (I)

Prerequisite: Selection as a California Early Childhood Education Mentor

Class Hours: 9 lecture total

This course is designed to offer opportunities for Early Childhood Education Mentors to explore issues related to the supervisory role in early care and learning programs. Seminar content includes professionalism, ethics, support for personal growth, and strategies for construction and implementation of professional growth plans. Course work is individualized for Early Childhood Mentor participation level. *Note: This course may be repeated three times for a total of four enrollments since course content varies.*

ECE 19 MENTORSHIP SKILLS IN EARLY CHILDHOOD EDUCATION - .5 Unit (I)

Prerequisite: Selection as a California Early Childhood Education Mentor

Class Hours: 9 lecture total

Mentorship Skills In Early Childhood Education is a course for Early Childhood Mentors to expand their supervisory skills. The seminar content includes updated program requirements; advocacy implementations; emphasis on self-reflection; and the mentor network. The written assignments are individualized for each module. *One-half unit will be granted for each of the four modules.*

ECE 20 E.C. CURRICULUM: INTRODUCTION TO CURRICULUM - 2 Units (F/S)

Class Hours: 36 lecture total

This course introduces the student to developmentally-based curriculum for young children in early care and learning settings. The course includes a rationale for organizing and implementing daily, monthly, and long-range activity planning. Students will acquire an understanding of the philosophies and strategies for developing and documenting integrated curricula for early childhood programs.

ECE 22 E.C. CURRICULUM: INFANT/TODDLER CARE - 1 Unit (F)

Class Hours: 18 lecture total

A course focusing on the planning, preparation and presentation of developmentally appropriate curriculum activities and materials for use with infants and toddlers to support physical, social-emotional, cognitive and language development.

ECE 24 E.C. CURRICULUM: SCHOOL AGE CARE - 1 Unit (S)

Class Hours: 18 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 recreational skills.

ECE 30 E.C. CURRICULUM: PHYSICAL DEVELOPMENT - 3 Units (S)

Prerequisite: ECE 20

Class Hours: 54 lecture total

Students will explore the 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 (F)

Prerequisite: 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 aesthetic and social awareness. An integrated curriculum will emerge with emphasis on art expression, creative dramatics, and self understanding. 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 (S)

Prerequisite: 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. Students will learn strategies for integrating literacy practices that strengthen young children's cognitive skills.

ECE 51 EARLY CHILDHOOD STAFFING AND MANAGEMENT - 3 Units (I)

Class Hours: 54 lecture total

Course offers the early childhood educator extended administrative and operational resources in preschool, child care centers, after school programs and child development center management. Specific attention will be given to supervisory skills, staff interrelationships, legislative and funding updates.

ECE 52 GUIDANCE IN ADULT-CHILD RELATIONS - 3 Units (S)

Class Hours: 54 lecture total

A course to explore the relationship between the parenting figure and the child. Emphasis will be placed on social and emotional development; characteristic behavior patterns of both children and adults. This course would be of interest to any adult involved or interested in children.

ECE 94 EARLY CHILDHOOD EDUCATION WORK SITE LEARNING - 1-4 Units

Corequisite: During the first semester only, the student must co-enroll in one of the following: STU 1, ECE 4, STU 90 or STU 92. Enrolled in a minimum of seven (7) units including the Worksite Learning course.

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ECE 151 THE YOUNG CHILD: COOPERATIVE PRESCHOOL EDUCATION - 1 Unit (I)

Class Hours: 18 lecture total

A course designed to give students an understanding of the history, function, and variety of organization found in cooperative preschool programs. Students will explore the unique challenges of cooperative preschools for teachers/directors and parent participants. Additionally, students will consider the types of information necessary for parent participants to function effectively in a cooperative preschool program, including: developmentally appropriate behavior and practices; communication; health and nutrition concerns and guidance.

ECE 152 THE YOUNG CHILD: MOVEMENT, RHYTHM, AND SINGING (formerly ECE 152A) - 1 Unit (I)

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 152F) - 1 Unit (I)

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 EDUCATION - .5-2 Units (CR/NC 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.*

ECONOMICS (ECON)**ECON 1A PRINCIPLES OF ECONOMICS (MICRO) - 3 Units (CR/NC Option) (CAN# ECON 4) (F/S)**

Advisory: ENGL 190 eligibility (*ECON 1A is not a prerequisite for ECON 1B*)

Note: Students taking the Internet format of this course must have access to the Internet.

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

A study of the fundamental principles of economics. Stress is placed upon the comprehension and use of basic economic terms. The structure and functioning of the existing economic order, the forces which determine the distribution of wealth and income, and the increasing participation of government in the control of economic processes are given particular emphasis. ECON 1A studies the nature and problems of economics: production, income, and consumption; price; determinants of the distribution of income; corporate structure and decision making; environmental economics; and international trade. This course is also offered in several Distance Education formats but is the same in content as that offered on campus.

ECON 1B PRINCIPLES OF ECONOMICS (MACRO) - 3 Units (CR/NC Option) (CAN# ECON 2) (F/S)

Advisory: ENGL 190 eligibility (*ECON 1A is not a prerequisite for ECON 1B*)

Note: Students taking the Internet format of this course must have access to the Internet.

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

A study of the fundamental principles of economics. Stress is placed upon the comprehension and use of basic economic terms. The structure and functioning of the existing economic order, the forces which determine the distribution of wealth and income, and the increasing participation of government in the control of economic processes are given particular emphasis. ECON 1B treats government finance; fluctuations and stability in national income; domestic economic problems; international economic problems, and the challenge to American capitalism. This course is also offered in several Distance Education formats but is the same in content as that offered on campus.

ECON 2 ECONOMIC ISSUES AND POLICIES - 3 Units (I)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

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(s) 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.

ECON 17 ECONOMIC HISTORY OF THE UNITED STATES - 3 Units (CR/NC Option) (F/S)

Advisory: English 190 eligibility

Note: Combined with POLS 2, ECON 17 satisfies the CSU requirement in US History, Constitution, and American ideals

Class Hours: 54 lecture total

This survey course combines the approaches of the historian and the economist 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. Witch hunting, the revolution, our constitution, religion, media, slavery suffrage, the arts, transitional democracy, sectionalism, nationalism, wars, foreign policy, Supreme Court decision, Cold War, civil rights and ecology and political scandal are examples. 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. Brettonism, taxation, tariffs, counter cyclical fiscal policy, capitalism, industrialization, transportation, panics, depressions, money and banking are examples.

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

EDUCATION (EDUC)

EDUC 1 INTRODUCTION TO TEACHING - 3 Units (I)

Class Hours: 54 lecture total

This introductory course on contemporary education practices in the United States is designed to acquaint the student interested in becoming a teacher with leading theories and issues in education today. Topics included are educational history, organization, teacher-child relationships, teaching methods, school resources, staff relations, curriculum patterns, authority, and discipline in the schools.

EDUC 2 LITERACY AND INSTRUCTION – 3 Units (F/S)

Class Hours: 54 lecture total

This course serves as a theoretical framework for how humans acquire language and literacy skills from childhood through adulthood. It will provide practical information for developing language and literacy in a classroom program, which will enhance first and second language and cognitive academic development, in culturally diverse contexts.

EDUC 7 BEHAVIOR MANAGEMENT FOR PARAPROFESSIONALS – 2 Units (F)

Class Hours: 36 lecture total

Pending Chancellor's Office approval

Designed for preparing paraprofessionals to work effectively with individual and small groups of students in today's classroom. Topics will include effective communication and behavior management strategies.

EDUC 94 EDUCATION WORK SITE LEARNING - 1-4 Units

Corequisite: During the first semester only, the student must co-enroll in one of the following: STU 1, STU 90 or STU 92. Enrolled in a minimum of seven (7) units including the Worksite Learning course.

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

EDUC 197 SPECIAL TOPICS IN EDUCATION - .5-2 Units (CR/NC Option)

Advisory: Eligibility for ENGL 190

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.

ELECTRONIC TECHNOLOGY (ELEC)

ELEC 20 COMPUTERS FOR TECHNICIANS - 1 Unit (F)

Class Hours: 12 lecture/18 lab total

Computers for Technicians is one of five courses designed to provide students with the knowledge and skills needed to pass the Core and DOS/Windows compTIA A+ exams, a requirement to become a certified computer service technician. A+ is a nationally recognized certification. The A+ exam measures essential competencies for a microcomputer hardware service technician with six months on-the-job experience. The topics covered by this module include: fundamentals of microcomputer architecture, and introduction to personal computer hardware, and basic troubleshooting techniques.

ELEC 21 OPERATING SYSTEMS FOR TECHNICIANS – 1 Unit (F)

Class Hours: 12 lecture/18 lab total

Operating Systems for Technicians is one of five courses designed to provide students with the knowledge and skills needed to pass the Core and DOS/WindowsCompTIA A+ exams, a requirement to become a certified computer service technician. A+ is a nationally recognized certification. The A+ exam measures essential competencies for a microcomputer hardware service technician with six months on-the-job experience. The topics covered by this course include: Introduction to MSDOS and Microsoft Windows installations, configuration and troubleshooting.

ELEC 22 COMPUTER HARDWARE FOR TECHNICIANS – 1 Unit (F)

Class Hours: 12 lecture/18 lab total

This course is one of five courses designed to provide students with the knowledge and skills needed to pass the Core and DOS/Windows CompTIA A+ exams, a requirement to become a certified computer service technician. A+ is a nationally recognized certification. The A+ exam measures essential competencies for a microcomputer hardware service technician with six months on-the-job experience. The topics covered by this course include: System hardware, input and output devices, mass storage devices and video displays.

ELEC 23 COMPUTER PERIPHERALS FOR TECHNICIANS – 1 Unit (F)

Class Hours: 12 lecture/18 lab total

Computer Peripherals for Technicians is one of five courses designed to provide students with the knowledge and skills needed to pass the Core and DOS/WindowsCompTIA A+ exams, a requirement to become a certified computer service technician. A+ is a nationally recognized certification. The A+ exam measures essential competencies for a microcomputer hardware service technician with six months on-the-job experience. The topics covered by this course include: Printers and printing technologies, introduction to data communications, and multimedia hardware basics.

ELEC 24 COMPUTER MAINTENANCE FOR TECHNICIANS – 1 Unit (F)

Class Hours: 12 lecture/18 lab total

Computer Maintenance for Technicians is one of five courses designed to provide students with the knowledge and skills needed to pass the Core and DOS/Windows/CompTIA A+ exams, a requirement to become a certified computer service technician. A+ is a nationally recognized certification. The A+ exam measures essential competencies for a microcomputer hardware service technician with six months on-the-job experience. The topics covered by this course include: Customer Skills, Safety procedures, ESD prevention, and preventative maintenance procedures.

ELEC 30 AC/DC CIRCUITS - 6 Units (F)

Prerequisite: MATH 102 or concurrent enrollment in MATH 102

Note: Students will be required to provide a calculator, DMM and basic tools.

Class Hours: 72 lecture/108 lab total

Ohm's Law, power laws, resistor color codes, resistive circuit analysis, Thevenin's Theorem, Mesh Analysis, capacitance, inductance, reactance, impedance, R-C time constants, magnetism, generation of a wave, resonance, Phasors, instrumentation and Electronic simulations are studied.

ELEC 31 SOLID STATE DEVICES - 4 Units (I)

Prerequisite: ELEC 30 or equivalent

Class Hours: 54 lecture/54 lab total

This class is a study of the characteristics, applications, and simulation of semiconductor devices and circuits. Devices covered are diodes, zener diodes, bipolar transistors, junction field effect transistors, and silicon-controlled rectifiers.

Topics include rectification, power supplies, AC/DC load lines, biasing techniques, equivalent circuits, single and multi-stage amplifiers, and feedback application in power supplies and amplifiers. This class introduces the concept of device models and the use of electronic simulation.

ELEC 32 DIGITAL COMPUTER ELECTRONICS - 3 Units (CR/NC Option) (I)

Prerequisite: ELEC 30 or equivalent skill level

Class Hours: 36 lecture/54 lab total

Numbering systems, binary arithmetic, basic gates, Karnough mapping, bubble convention, adders, shift registers, multiplexers, counters, 555 timers, truth tables, and flip-flops are studied. The lab experience is rich in applications and hands-on experiments. Electronic workbench software is available for student use.

ELEC 33 MICROPROCESSOR TECHNOLOGY - 3 Units (I)

Prerequisite: ELEC 32 or equivalent

Class Hours: 36 lecture/54 lab total

A continuation of digital electronics beginning with a review of computer systems and architectures. A complete system analysis of the 8086 Intel microprocessor is performed. Chip level analysis of 8086-based microprocessor systems, computer interfacing, assembly language programming, and microprocessor troubleshooting are key topics covered.

Structured programming techniques, flow charts, stack usage, interrupts, bus structures, common interface chips, and other related topics are covered.

ELEC 35 ELECTRONIC CIRCUITS AND DEVICES I - 4 Units (I)

Prerequisite: ELEC 31 or equivalent

Class Hours: 54 lecture/54 lab total

Transistor physics, mathematical and graphical techniques are utilized to study D-C multistage amplifiers and power amplifiers. The Miller Effect is applied to the study of amplifier frequency response. In addition, the student will write a resume and give an oral, technical presentation.

ELEC 37 DIGITAL SYSTEMS - 4 Units (I)

Prerequisite: ELEC 33 or equivalent

Class Hours: 54 lecture/54 lab total

A continuation of ELEC 33 beginning with a review of the computer architecture and an overview of the IBM PC. Chip level analysis of DMA transfers, PC bus interfacing, communication protocols, CRT displays, floppy and hard disk drive technologies are discussed. Design of hardware circuits to interface microprocessors with industrial equipment and input/output transducers for control systems are also studied. Logical troubleshooting techniques of these microcomputer systems and peripheral equipment are analyzed using low level programming techniques in assembly and "C" languages.

ELEC 39 ELECTRONIC CIRCUITS AND DEVICES II - 3 Units (I)

Prerequisite: ELEC 35 or equivalent

Class Hours: 36 lecture/54 lab total

This course will cover transistor physics, graphical techniques, computer simulation and mathematical analysis. Subjects studied will include regulated power supplies, VMOS transistors, switching power supplies, and other selected topics in the analog design field.

ELEC 94 ELECTRONICS WORK SITE LEARNING – 1-4 Units (I)

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ELEC 97 SPECIAL TOPICS IN ELECTRONICS - .5-2 Units (CR/NC Option) (I)

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 electronics. 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.*

ELEC 98 SPECIAL LAB TOPICS IN ELECTRONICS - .5-2 Units (CR/NC Option) (I)

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 electronics. 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.*

ELEC 128 COMPUTER-ASSISTED CIRCUIT DESIGN - 3 Units (I)

Advisory: ELEC 30 or ENGR 29

Class Hours: 36 lecture/54 lab total

Designed for Computer Electronic A.A. Degree program students, Computer Repair students, as well as Drafting students who wish to be introduced to computer-aided circuit design techniques. Computer circuit simulation and analysis, computer-aided drawing techniques, computer-aided printed circuit board development, fabrication and assembly techniques and computer-aided data acquisition and analysis methods are studied. Electronic drafting procedures as well as non-destructive soldering techniques are also introduced.

ELEC 136 TELECOMMUNICATION TECHNOLOGY - 2 Units (I)

Prerequisite: ELEC 31 or equivalent

Class Hours: 36 lecture total

This course provides an introduction to the general field of electronic communication. The fundamentals of telecommunication systems are introduced by analyzing the various methods of transmitting data from one location to another using both wireless and wired networks. Wireless topics include noise analysis, modulation and demodulation techniques, antennas, receiver detection and signal to noise (S/N) ratio calculations. Wired communication topics include transmission lines, digital coding techniques, security considerations, error detection/correction, and large scale digital telephonic systems.

ELEC 138 FUNDAMENTALS OF ELECTRONICS - 4 Units (I)

Advisory: MATH 101 and ENGL 270

Class Hours: 54 lecture/54 lab total

Course is designed for Computer Maintenance Certification program students, as well as students who wish to be introduced to the basic principles of electronics. Topics include basic theory, semiconductor theory, digital concepts, circuits and systems and their applications.

ELEC 139 INTRODUCTION TO DIGITAL AND ANALOG ELECTRONICS AND SYSTEMS - 4 Units (I)

Advisory: MATH 101 and ENGL 270

Class Hours: 54 lecture/54 lab total

Course is designed for Computer Maintenance Certificate program students as well as students who wish to be introduced to the basic principles of digital and analog electronics. Topics include basic theory, binary number systems and math, digital and analog devices, and circuits/systems and their applications.

ELEC 144 TECHNICAL DOS AND WINDOWS - 2 Units (I)

Advisory: CIS 1 or equivalent

Class Hours: 18 lecture/54 lab total

Designed to provide students with the knowledge and skills needed to pass the DOS and Windows operating system of the CompTIA A+ DOS/Windows exam, a requirement to become a certified computer service technician. Topics covered include: the function, structure and operation of file management, DOS and Windows Memory Management, installation, configuration and upgrading DOS and Windows, diagnostic and troubleshooting procedures, basic networking configuration. This course is the first half of the ELEC 144 and 145 sequence.

ELEC 145 PC DIAGNOSTICS, REPAIR AND MAINTENANCE - 2 Units (I)

Advisory: CIS 1 or equivalent

Class Hours: 1 lecture/54 lab total

Designed to provide students with the knowledge and skills needed to pass the PC diagnostics, repair, and maintenance portion of the CompTIA A+ Core exam, a requirement to become a certified computer service technician. Topics covered include: PC installation, configuration and upgrading, diagnostic and troubleshooting procedures, motherboards, printers, and basic networking. This course is the second half of the ELEC 144 and 145 sequence.

ELEC 146 INTRODUCTION TO LAN MANAGEMENT - 1 Unit (I)

Advisory: ELEC 144

Class Hours: 18 lecture total

This course provides an introduction to the field of micro-computer and LAN management for computer technicians. Students will study issues and topics related to the installation and maintenance of LAN related hardware and topologies.

Specific topics of study include, an introduction to IPX and TCP/IP Networks, Local Area Networks, physical design, configuration and maintenance, and LAN management strategies.

ELEC 147 NOVELL LAN MANAGEMENT - 2 Units (I)

Prerequisite: ELEC 146

Class Hours: 18 lecture/54 lab total

This course is designed to teach the students the advanced mechanics of Novell Network LAN management. Topics cover both the "how" and "why" of Novell networking systems. Specific topics include: fundamentals of networking, installation of NOVELL Netware, organizing and managing users, enhancing network performance, connecting and configuring various workstations and network resources, and installing various application software.

ELEC 197 SPECIAL TOPICS IN ELECTRONICS - .5-2 Units (CR/NC Option) (I)

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 electronics. A different topic will be addressed each time the class is taught and will be listed in the schedule of classes. Recommended for electronics majors; open to anyone with an interest in the topic. *Note: The course may be repeated three times for a total of four enrollments.*

ENGINEERING (ENGR)

ENGR 1A MEASUREMENTS AND PLANE SURVEYING - 3 Units (F)

Prerequisite: MATH 10 or its equivalent

Class Hours: 36 lecture/54 lab total

Surveying fundamentals including the use and care of surveying instruments such as engineers level, transits, and theodolite. Applications include survey procedures, vertical and horizontal measurements, traverses, layout, and survey calculations. Additional topics include legal descriptions, public land surveying, mapping with CAD, advanced equipment, and GPS.

ENGR 1B PLANE SURVEYING - 3 Units (S)

Prerequisite: MATH 10 and 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 (CR/NC Option) (F)

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 and organizational skills appropriate to technology. The course is required of all engineering and engineering technology (electronics and drafting) majors.

ENGR 17 CIRCUITS AND DEVICES - 4 Units (CAN # ENGR 6) (I)

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/54 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 j operator, operational amplifiers, duality, basic digital circuits and Karnaugh mapping.

ENGR 20 RESIDENTIAL DESIGN (formerly ENGR 21A) - 2 Units (F)

Advisory: ENGL 280 and MATH 220

Class Hours: 18 lecture/54 lab total

The study of residential design including non-traditional structures and their application to single family dwellings. Topics included are costs, architectural styling, site consideration, room design and orientation, and preliminary drawings. The student designs are one dwelling and develops the preliminary drawings for completion in the succeeding course, ENGR 21.

ENGR 21 ARCHITECTURAL DRAWING (formerly ENGR 21B) - 3 Units (I)

Prerequisite: ENGR 20 or equivalent experience

Class Hours: 36 lecture/54 lab total

The student develops a complete set of residential drawings of a residence from preliminary drawings approved by the instructor. The emphasis is in drafting techniques, residential structural calculations, dimensioning, use of building codes, sections, details, etc. The drawings may be manual or CAD developed.

ENGR 22 ENGINEERING GRAPHICS - 2 Units (F)

Prerequisite: ENGR 120

Advisory: ENGL 280 and MATH 220

Class Hours: 18 lecture/54 lab total

A study of the principles and techniques of technical drafting. Teaches graphics as related to engineering design and

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

problem-solving. Satisfies graphics requirement for engineering.

ENGR 24 **DESCRIPTIVE GEOMETRY - 2 Units (S)**

Prerequisite: ENGR 22

Class Hours: 18 lecture/54 lab total

A study of graphic analysis and the solution of three-dimensional space problems through the application of the principles of multi-view projection. Fundamental problems are related to points, lines, planes, intersections and revolutions. Satisfies the graphics requirement for engineering at most universities.

ENGR 25 **STRUCTURAL DRAFTING - 3 Units (F)**

Prerequisite: ENGR 22 and ENGR 29

Class Hours: 36 lecture/54 lab total

Advanced drafting with structural drafting as the specialty focus, preparing drafters for industry. Includes reference and standards research, graphic and mathematical analysis and engineering notes. Primarily structural steel design and detailing plus reinforced concrete detailing.

ENGR 26 **INDUSTRIAL DRAFTING - 4 Units (S)**

Prerequisite: ENGR 22 and 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 AND COMPUTER-AIDED DRAFTING - 3 Units (CR/NC Option) (F)**

Advisory: ENGR 1A

Class Hours: 36 lecture/54 lab total

Prepares the student to become a drafting technician in a civil engineering office. Teaches the use of the computer and surveying software to produce maps. Includes input and processing of field data, cogo, digital terrain modeling and contours, subdivisions, roads, and deed descriptions.

ENGR 29 **COMPUTER-AIDED DRAFTING (CAD) - 2 Units (F/S)**

Prerequisite: A grade of ENGR 120 or ENGR 22 (may be taken concurrently), ENGL 280, MATH 220

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*)

A course with Basic AutoCAD as a tool for more efficient drafting and design development. This course helps prepare students for the growing numbers of jobs that require CAD, both for its greater efficiency and for its computer data base drawings. The emphasis is on graphics with engineering applications. The equivalent of this course in content and objectives may also be offered on the Internet.

ENGR 30 **INTERMEDIATE COMPUTER-AIDED DRAFTING - 2 Units (S)**

Prerequisite: ENGR 29

Class Hours: 18 lecture/54 lab total

An intermediate course with 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 APPLICATIONS FOR CAD - 2 Units (I)**

Prerequisite: ENGR 29 or equivalent balance of CAD and field experience

Class Hours: 18 lecture/54 lab total

Continued study of CAD as it pertains to architectural applications. Including two-dimensional and three-dimensional concepts as they relate to site, elevations, floor, foundation, roof, mechanical, electrical and sectional-detail construction documents.

ENGR 32 **ADVANCED CIVIL DESIGN APPLICATIONS FOR CAD - 3 Units (I)**

Prerequisite: ENGR 27

Class Hours: 36 lecture/54 lab total

Further the students' knowledge obtained in ENGR 27 in order to be better prepared as an engineering/drafting technician in a civil engineering office. The course covers the use of the computer and currently available software to process surveying data into complex topographic maps. These maps can and will 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 (I)**

Prerequisite: ENGR 29

Class Hours: 18 lecture/54 lab total

An advanced computer-aided drafting course using Mechanical Desktop and/or SolidWorks, 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. It will advance drafting skills to solve design problems and to present solutions for production or engineering processes, and to visually

communicate that solution.

ENGR 35 STATICS - 3 Units (CAN# ENGR 8) (F)

Prerequisite: PHYS 4A, MATH 4A (MATH 4A may be taken concurrently)

Advisory: ENGL 190, 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. Topics include equivalent force couple 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 36 STATICS/STRENGTH OF MATERIALS FOR ENGINEERING TECHNICIANS - 3 Units (S)

Prerequisite: MATH 10 or mathematics course with trigonometry

Advisory: ENGL 190

Class Hours: 54 lecture total

This course analyzes the external and internal forces induced in structures and machines by various types of loading. Basic concepts in the area of properties of materials are discussed. This course does not meet the requirements for transfer in the bachelors level engineering curriculum.

ENGR 45 PROPERTIES OF MATERIALS - 3 Units (CAN# ENGR 4) (I)

Prerequisite: A passing grade in PHYS 4A

Advisory: Previous or concurrent enrollment in PHYS 4B or MATH 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 MATERIALS AND PROCESSES - 3 Units (F)

Class Hours: 54 lecture total

A study of materials and processes common to industry, surveying the techniques of manufacturing industrial materials, and implementation of these elements to achieve a finished product. Required for all drafting and civil engineering technology majors.

ENGR 94 ENGINEERING WORK SITE LEARNING - 1-4 Units

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. *This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ENGR 97 SPECIAL TOPICS IN ENGINEERING - .5-2 Units (CR/NC Option) (I)

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. *Note: 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 ENGINEERING - .5-2 Units (CR/NC Option) (I)

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 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 three times for a total of four enrollments.*

ENGR 118 BLUEPRINT AND SPECIFICATION READING (MECHANICAL) - 2 Units (CR/NC Option) (F)

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 (CR/NC Option) (F)

Class Hours: 36 lecture total

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 120 MECHANICAL DRAWING - 2 Units (F/S)

Prerequisite: ENGL 270 and MATH 220

Class Hours: 18 lecture/54 lab total

Teaches the most basic fundamentals of mechanical drawing. Designed for drafting, architecture, and civil technology, aviation maintenance technology majors, and for any student desiring an introduction to this system of technical communication called drafting. The course provides a basic but useful ability with technical-mechanical drafting.

ENGR 197 SPECIAL TOPICS IN ENGINEERING - .5-2 Units (CR/NC Option) (I)

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 four enrollments.*

ENGR 198 SPECIAL LAB TOPICS IN ENGINEERING - .5-2 Units (CR/NC Option) (I)

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 four 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 READING AND COMPOSITION - 4 Units (CAN# ENGL 2) (ENGL SEQ A) (F/S)

Prerequisite: All students registering for ENGL 1A must either qualify for ENGL 1A on the English placement test or complete ENGL 190 with a grade of "C" or better. Check with the Admissions Office for placement test dates.

Note: Students taking the distance learning format of this course must have access to the Internet.

Class Hours: 72 lecture total (when offered in the Distance Education format, hours will total 216)

This course is the transferable course in composition currently offered to qualified freshmen at practically all American colleges and universities. It presupposes that the students already have a substantial grasp of grammar, syntax, and organization, and that their writing is reasonably free from errors. The course concentrates on developing effective writing and reading. A library research paper is required for successful completion of the course.

This composition course is offered in two different formats for Distance Education:

ENGL 1A on the Internet and Television Course requires one meeting in person with the faculty member on the Shasta College campus in Redding. Date, time and location of the meeting will be posted in the class schedule. Students must have access to the Internet, e-mail, and the World Wide Web during the class times published in the Shasta College schedule to participate in lecture/discussion in a virtual on-line classroom (chat room) instead of physically attending the class. The student must also have access to KIXE Channel 9 or the Learning Resource Center on campus for the viewing of videotapes. ENGL 1A on the Internet: Students taking this course must have access to the Internet.

ENGL 1B LITERATURE AND COMPOSITION - 3 Units (CAN# ENGL 4) (ENGL SEQ A) (F/S)

Prerequisite: ENGL 1A

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

Course is an introduction to the study of literature, some of its major themes and types, including poetry, short story, novel and drama. Critical and analytical thinking, reading, and writing skills are stressed, with emphasis on close textual analysis and use of textual evidence to support ideas about literary works. Students will learn to argue and refute interpretations of literature and to recognize a wide variety of strategies employed to achieve literary effects. Students taking the Internet format of this course must have access to the Internet.

ENGL 1C CRITICAL REASONING, READING, AND WRITING - 3 Units (F/S)

Prerequisite: ENGL 1A

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. ENGL 1C on the Internet: Students taking this course must have access to the Internet.

ENGL 10A WORLD LITERATURE (to 1350) - 3 Units (S)

Prerequisite: ENGL 1A

Note: Students taking the Internet format of this course should have effective computer skills, reliable Internet access, and an email account.

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 1350. The course will focus upon Chinese, Indian, classical, Islamic, Japanese, African, and medieval literature. The equivalent of this course in content and objectives may also be offered on the Internet.

ENGL 10B WORLD LITERATURE (after 1350) - 3 Units (I)

Class Hours: 54 lecture total

This course introduces students to important works in world literature, using a thematic approach. A majority of the work will be selected from non-Western literary traditions. The course explores how works from differing literary traditions handle common human experiences. ENGL 10A is not a prerequisite to ENGL 10B.

ENGL 11A A SURVEY OF AMERICAN LITERATURE- pre-colonial to 1860 - 3 Units(CR/NC Option) (CAN # ENGL 14) (F)

Prerequisite: ENGL 1A

Class Hours: 54 lecture total

The course involves a study of representative authors in the literary history of the United States from the precolonial period to the Civil War.

ENGL 11B A SURVEY OF AMERICAN LITERATURE-1860 to present - 3 Units (CR/NC Option) (CAN # ENGL 16) (S)

Prerequisite: ENGL 1A

Class Hours: 54 lecture total

This course involves a study of representative authors in the literary history of the United States from the Civil War to the present day.

ENGL 13A A SURVEY OF ENGLISH LITERATURE (Old English Period through neoclassicism) - 3 Units (CR/NC Option) (CAN # ENGL 8) (F)

Prerequisite: ENGL 1A

Class Hours: 54 lecture total

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.

ENGL 13B A SURVEY OF ENGLISH LITERATURE (from the Romantic Period to present) - 3 Units (CR/NC Option) (CAN # ENGL 10) (S)

Prerequisite: ENGL 1A

Class Hours: 54 lecture total

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.

ENGL 15 INTRODUCTION TO LITERATURE BY AND ABOUT WOMEN - 3 Units (I)

Prerequisite: ENGL 1A

Class Hours: 54 lecture total

Surveys literature by and about women in different periods and countries. Genres studied include stories, diaries and letters, poetry and drama. Emphasis is on the human condition, especially among women, as expressed in literature.

ENGL 16 POETRY - 3 Units (CR/NC Option) (I)

Prerequisite: ENGL 1A

Class Hours: 54 lecture total

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.

ENGL 18 AFRICAN AMERICAN LITERATURE - 3 Units (CR/NC Option) (I)

Advisory: ENGL 1A with a minimum grade of "C"

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 (CR/NC Option) (I)

Prerequisite: ENGL 1A

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.

ENGL 24 MULTICULTURAL PERSPECTIVES IN AMERICAN LITERATURE – 3 Units (CR/NC Option) (F)

Advisory: ENGL 1A

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

This course is an introduction to multiethnic literary currents in American literature and will focus on two or more of the following American cultures: African-American, Asian/Pacific Islander, Hispanic-American, and Native-American groups as well as other groups, including women. Mainstream literary works will also be examined. 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 background and political/cultural/historical context of the literature. Critical and analytical thinking, reading, and writing skills are stressed. Students from all backgrounds should benefit from the unique insights into American life afforded by this rich and varied tradition. In the online version of the course, students must have convenient Internet access and be computer literate.

ENGL 25 LINGUISTICS - 3 Units (CR/NC Option) (I)

Prerequisite: ENGL 1A with a minimum grade of "C"

Advisory: Completion of MATH 102 or equivalent

Note: Students taking the Internet format of this course should have effective computer skills, reliable Internet access, and an email account.

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

The emphasis of the course is to develop the student's analytical abilities and to enhance understanding of the complexities of the medium through which we communicate, 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. The equivalent of this course in content and objectives may also be offered on the Internet.

ENGL 31 CREATIVE WRITING - 3 Units (CR/NC Option) (CAN # ENGL 6) (F/S)

Advisory: Eligibility for ENGL 1A

Class Hours: 54 lecture total

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.

ENGL 33 FICTION AND FILM – 3 Units (I)

Prerequisite: Successful completion of ENGL 1A

Class Hours: 54 lecture total

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 conventions in fiction and film, and learn to appraise a work on the basis of literary and artistic merit.

ENGL 61 CRITICAL READING - 3 Units (F/S)

Prerequisite: ENGL 190

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 (CR/NC Option) (FS)

Prerequisite: ENGL 1A

Class Hours: 54 lecture total

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.

BASIC SKILLS

ENGL 127 CRAFTING EFFECTIVE SENTENCES - 1.5 Units (F/S)

Class Hours: 27 lecture total

This course teaches mastery of basic and more complex sentence patterns. The students will build clear, smooth, and focused sentences in the context of both exercises and written paragraphs and will examine models of well-written, effective sentences.

ENGL 129 GRAMMAR REVIEW 1: CORRECT AND EFFECTIVE SENTENCES - 1.5 Units (F/S)

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. This course is also offered as Distance Education but it is the same in content as that offered on campus.

ENGL 130 PARAGRAPH WRITING - 1.5 Units (F/S)

Class Hours: 27 lecture total

This course teaches paragraph structure and development. It emphasizes writing and revising clear, fully developed paragraphs as well as analyzing model paragraphs by professional authors.

ENGL 161 EFFECTIVE READING – 2 Units (F/S)

Prerequisite: ENGL 280

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 writing skills.

ENGL 171 COLLEGE STUDY AND SURVIVAL SKILLS - 1 Unit (CR/NC Option) (F/S)

Class Hours: 18 lecture total

Course is 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.

ENGL 190 READING AND WRITING II - 4 Units (F/S)

Prerequisite: "C" or higher in ENGL 280 or qualifying score on assessment test

Note: When offered in Internet assisted format, students must have access to the Internet

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 produce organized, well-supported, and generally smoothly written short essays by the end of the semester. Emphasis is placed on both correctness and on writing as a process. This course may be offered in Internet assisted format. Students enrolling in the Internet assisted section of ENGL 190 will need effective computer, email and Internet skills.

ENGL 191 WRITING IN THE WORKPLACE: GRAMMAR IN CONTEXT AND BASIC ESSAY STRUCTURE - 2 Units (F)

Prerequisite: "C" or higher in ENGL 280 or qualifying score on assessment test

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 (I)

Prerequisite: "C" or higher in ENGL 280 or qualifying score on assessment test and 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 193 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 (I)

Prerequisite: "C" or higher in ENGL 280 or qualifying score on assessment test and 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 (I)

Prerequisite: "C" or higher in ENGL 280 or qualifying score on assessment test and 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 248 BASIC READING - .5-1 Unit (CR/NC) (F/S)

Class Hours: 36-72 lab total

A course 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. Based on individual assessments, programs of study will be written for each student. Independent work skills are necessary to complete the program. *Note: This course may be repeated three times for a total of four enrollments since supervised repetition and practice may be required by some students to achieve full competency.*

ENGL 250 ELEMENTS OF READING 250 - 1-3 Units (F/S)

Advisory: A grade of "credit" in ENGL 248 (for native speakers) or ENGL 249 (for ESL students) or qualifying score on the English Placement Exam.

Class Hours: 12-36 lecture/18-54 lab total

A course designed to help students improve their reading. Students will be evaluated in class to determine strong and weak skills areas. An individualized program will cover decoding, sight vocabulary, writing, and comprehension at the literal level. Materials used will be at the fourth and fifth grade levels. The student must be capable of working independently and in small groups. Enrollment in sequential courses is based on measurable progress. *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.*

ENGL 260 ELEMENTS OF READING 260 - 1-3 Units (F/S)

Advisory: A grade of "C" or higher ENGL 250 or qualifying score on the English Placement Exam

Class Hours: 12-36 lecture/18-54 lab total

A course constructed to help students enhance personal reading and work-related language skills. Students will be evaluated in class to determine strong and weak skill areas. An individualized program will include word attack strategies, word usage, clear writing with correct spelling and usage, critical thinking opportunities, and interpretive comprehension. Materials at the sixth, seventh, and eighth grade levels will be used. The student must be capable of working independently and in small groups. Enrollment in sequential courses is based on measurable progress. *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.*

ENGL 270 ELEMENTS OF READING 270 - 1-3 Units (F/S)

Advisory: A grade of "C" or higher in ENGL 260 or qualifying score on the English Placement Exam

Class Hours: 12-36 lecture/18-54 lab total

A course intended to help vocational and transfer oriented students to augment academic reading and writing ability to successfully compete in college-level courses. Students will be evaluated in class to determine strong and weak skill areas. An individualized program will contain vocabulary nuance specific to academic disciplines, the capacity to write cogent, clear, precise prose with correct usage including grammar and spelling, plus comprehension focused on in-depth analysis and abstract reasoning. Materials at the ninth and tenth grade levels will be used. The student must be capable of working independently and in small groups. Enrollment in sequential courses is based on measurable progress. *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.*

ENGL 280 READING AND WRITING I - 4 Units (F/S)

Prerequisite: "C" or higher in ENGL 270 or qualifying score on assessment test

Note: When offered in Internet assisted format, student must have access to the Internet

Class Hours: 72 lecture total (*This course may be 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. *Note: for Internet assisted ENGL 280, students enrolling in this section will need effective computer, email and Internet skills.*

ENGL 297 SPECIAL TOPICS IN READING - .5-3 Units (CR/NC Option) (I)

Advisory: ENGL 260

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 382 READING AND WRITING WORKSHOP - 0 Units (F/S)

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)

Información General Sobre Nuestros Programas

El Colegio de Shasta sirve a su comunidad con programas educativos y culturales que amplían las experiencias de los estudiantes, desarrollan sus habilidades potenciales y los capacitan para ser productivos y para triunfar en la sociedad. A todos los estudiantes se les ofrece entrada a nuestros programas y a las oportunidades. El Colegio aspira a satisfacer las necesidades individuales, a mantener las normas académicas apropiadas, a proteger la libertad académica y personal, y a promover oportunidades sin discriminación.

Para obtener prioridad de matrícula en el siguiente semestre, complete el formulario expresando sus deseos de matricularse. Con mucha anticipación se publica un catálogo que incluye todas las clases ofrecidas en cada semestre escolar. Hay consejeros en cada periodo de matriculación para ayudarle al alumno a planear su programa escolar.

El Programa de "ESL" (Inglés como Segunda Lengua) se les ofrece a los estudiantes extranjeros y a los residentes que no hablan inglés. Hay varios niveles de cursos en ESL. Los administradores y los profesores del programa le podrán ayudar a seleccionar los cursos más beneficios para usted. Los cursos se ofrecen en las días y noches. Si desea más información visite la Oficina #206 o el Aula #210 llame al número 225-4828.

ESL 136 ORAL COMMUNICATION FOR COLLEGE SUCCESS – 4 Units (CR/NC Option) (F)

Advisory: Qualifying score on ESL assessment

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 academics.

ESL 137 ESL COMPOSITION I – 6 Units (CR/NC Option) (F)

Advisory: Qualifying score on ESL assessment

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 (CR/NC Option) (F)

Advisory: A "C" grade or better in ESL 137 or Qualifying score on ESL assessment

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 - 3 Units (CR/NC Option) (I)

Class Hours: 36 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, beginning level jobs, and/or further academic work.

ESL 229 FAMILY LITERACY - 2 Units (CR/NC Only) (I)

Class Hours: 108 lab total

ESL 229 will provide beginning level non-English speaking parents an opportunity to acquire English and English literacy skills while their children attend simultaneous language arts classes in an after school program, held at a local elementary school. A unique element of the Family Literacy class is that parents and children will participate together in developing literacy skills intermittently throughout the semester. The use of both the native language and English will be encouraged. *Note: This course may be repeated 1 time for a total of 2 enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ESL 230 BEGINNING - 4 Units (CR/NC Only) (F/S)

Class Hours: 18 lecture/198 lab total

A course designed for the absolute beginner with zero competency in English. This class introduces aural-oral communication. *Note: This course may be repeated 1 time for a total of 2 enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ESL 231 BEGINNING MID - 4 Units (CR/NC Only) (F/S)

Advisory: ESL assessment and placement process or ESL 230

Class Hours: 18 lecture/198 lab total

This course stresses the development of oral language skills and basic vocabulary related to daily needs. *Note: This course may be repeated 1 time for a total of 2 enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ESL 232 BEGINNING HIGH - 4 Units (CR/NC Only) (F/S)

Advisory: ESL assessment and placement process or ESL 231

Class Hours: 18 lecture/198 lab total

This course builds on the basic language skills from ESL 231. Language skills are expanded in communicative contexts.

Emphasis is placed on development of "social English." *Note: This course may be repeated 1 time for a total of 2 enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ESL 233 INTERMEDIATE - 4 Units (CR/NC Option) (F/S)

Advisory: ESL assessment and placement process or ESL 232

Class Hours: 18 lecture/198 lab total

This course integrates basic language skills. Students at this level build the communicative ability to function in practical areas of daily life. Introduces cultural knowledge and intermediate grammatical structures. *Note: This course may be repeated 1 time for a total of 2 enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ESL 234 INTERMEDIATE HIGH - 4 Units (CR/NC Option) (F/S)

Advisory: ESL assessment and placement process or ESL 233

Class Hours: 18 lecture/198 lab total

Intermediate grammatical structures are reinforced. Cultural competency is expanded. Students develop ability to speak and write with some degree of fluency and accuracy. *Note: This course may be repeated 1 time for a total of 2 enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ESL 235 ADVANCED - 5 Units (CR/NC Option) (F/S)

Advisory: ESL assessment and placement process or ESL 234

Class Hours: 36 lecture/180 lab total

This course reviews and reinforces language skills learned in previous ESL levels. Students will expand their general ability to communicate in oral and written English beyond the familiar. *Note: This course may be repeated 1 time for a total of 2 enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ESL 236 ADVANCED HIGH - 5 Units (CR/NC Option) (F/S)

Advisory: ESL assessment and placement process or ESL 235

Class Hours: 54 lecture/126 lab total

Advanced High, ESL 136, will provide students the opportunity to refine and expand their knowledge of the various aspects of language so that upon completion of the course, students will be able to communicate orally and in writing with a greater degree of accuracy and fluency. The course will stress the development of reading and writing skills necessary to meet the needs of daily living as well as to set the basic foundation for further academic study. *Note: This course may be repeated 1 time for a total of 2 enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

ESL 247 ENGLISH AS A SECOND LANGUAGE VOCATIONAL MATH - .5- 1 Unit (CR/NC)

Class Hours: 36-72 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 measurement (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 multisensory 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. *Note: This course may be repeated two times for a total of 3 enrollments since supervised repetition and practice may be required by some students to achieve full competency.*

ESL 249 ENGLISH AS A SECOND LANGUAGE READING LAB - .5- 1 Unit (CR/NC) (F/S)

Class Hours: 36-72 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: page format, left-to-right tracking, graphic aides, English pronunciation, cultural and idiomatic language, vocabulary development, subject/verb relationships, sound/symbol relationships, sight word spelling and understanding at the concrete level. Based on individual assessments, programs of study will be developed for each student. Delivery will be multisensory with direct teaching along with self exploration. Independent work skills are necessary to complete the study program. *Note: This course may be repeated two times for a total of 3 enrollments since supervised repetition and practice may be required by some students to achieve full competency.*

ESL 385 LITERACY - 0 Units (F/S)

Class Hours: 54-216 lab total

This course emphasizes aural-oral language skills and basic literacy.

ENVIRONMENTAL RESOURCES (ENVR)

ENVR 1 CAREER PLANNING FOR ENVIRONMENTAL RESOURCES - 2 Units (CR/NC Option) (F)

Class Hours: 36 lecture total

Career opportunities and requirements in Agriculture, Natural Resources and Ornamental Horticulture 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.

ENVR 9 AGRICULTURE AND NATURAL RESOURCES LEADERSHIP - 1 Unit (CR/NC Option) (F/S)

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, develop initiative, manage and organize 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.

ENVR 11 ENVIRONMENTAL ETHICS (formerly INTR 11) - 3 Units (F)

Class Hours: 54 lecture total

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 for all posterity. Sources of western society's historical and current attitudes toward nature as well as alternative cultural perspectives will be explored in this course in order to broaden student's range of choices of how to think and how to be with regards to nature. Students will emerge from this class with a greater understanding of their individual moral responsibilities toward the environment around them.

ENVR 24 SOILS - 3 Units (formerly AGRI 24) (CR/NC Option) (F/S)

Advisory: ENGL 190 and one year of high school chemistry or equivalent.

Class Hours: 36 lecture/54 lab total

This class is an introductory course on the physical, chemical, and biological properties of soil as related 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. 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.

ENVR 44 MECHANICAL TECHNOLOGY FOR ENVIRONMENTAL RESOURCES - 3 Units (F/S)

Class Hours: 27 lecture/81 lab total

This course covers the mechanical technology related to agriculture, natural resources, and environmental horticulture. Subjects covered will be economic analysis of equipment management, design layout, and cost analysis of mechanical structures, and material analysis. Safety will be emphasized.

ENVR 47 PROJECT CONSTRUCTION FOR EQUIPMENT OPERATIONS - 3 Units (CR/NC Option) (F/S)

Prerequisite: CONS 46 and CONS 48

Class Hours: 27 lecture/81 lab total

Note: Student must produce a negative test result for substance abuse through the Federal Highway Administration (FHWA) certified testing process for pre-employment at a student cost of \$115.00.

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.

Note: Students will not be allowed to operate road equipment without proper license and driving record.

ENVR 52 COMPUTERS IN ENVIRONMENTAL RESOURCES - 3 Units (CR/NC Option) (F)

Class Hours: 36 lecture/54 lab total

This class introduces the place of microcomputers in agriculture, horticulture and natural resources. Students will learn to operate microcomputers by working with standard types of industry software. The class is not designed to give competency in computer programming. It is required for all agricultural, horticulture and natural resources majors.

ENVR 60 ENVIRONMENTAL SCIENCE - 3 Units (CR/NC Option) (F/S)

Advisory: Students who wish to add a lab component to this class should co-enroll in ENVR 61

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

This course is an introduction to the conservation of all natural resources and includes the relationship of man to the ecosystem. An emphasis is placed on the practical aspects of conservation and Environmental Science as it relates to every day living. The social and economic aspects of conservation will also be discussed in this class. Each of the major natural resources such as water, energy, forestry, air, man, agriculture, wildlife and soils will be covered in this course. This course is also offered as Distance Education, but it is the same in content as that offered on campus.

ENVR 61 ENVIRONMENTAL SCIENCE LABORATORY - 1 Unit (CR/NC Option) (I)

Prerequisite: Concurrent enrollment in ENVR 60 or previous completion of ENVR 60 or equivalent.

Class Hours: 54 lab total

A laboratory course designed to complement ENVR 60 and to acquaint the students with some of the more common laboratory and field tests and procedures utilized in environmental science.

ENVR 66 INTRODUCTION TO ENVIRONMENTAL TOXICOLOGY - 3 Units (I)

Prerequisite: CHEM 101 or equivalent, BIOL 10

Advisory: ENGL 190 or MATH 220

Class Hours: 54 lecture total

A basic course covering the major concepts of toxicology to familiarize students with the characteristics and effects of exposure to toxicants, dose-response relationships, toxicokinetics, and health risks assessment. This course will cover major groups of hazardous chemicals including inorganic toxicants, biotoxins, and industrial chemicals.

ENVR 90 ENVIRONMENTAL RESOURCES FIELD TRAINING - 1 Unit (I)

Corequisite: ENVR 94

Class Hours: 18 lecture total

This course is designed to prepare students for careers in Environmental Resources and includes Agriculture, Horticulture, and Natural Resources. Emphasis will be placed on understanding ecosystem concepts as they apply to the work setting. Classroom instruction will focus on worksite expectations as related to the Secretary's Commission on achieving necessary skills.

ENVR 94 ENVIRONMENTAL RESOURCES WORK SITE LEARNING - 1-4 Units (F/S)

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. Stresses good work habits through actual job performance. One to four units per semester depending on hours and nature of job. One unit of work site learning credit is granted for each 75 hours paid or 60 hours of non-paid on-the-job activity. Student must enroll in seven units including work site learning.

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.

FAMILY STUDIES AND SERVICES (FSS) (formerly Home Economics - HOEC)

FSS 16 MARRIAGE AND FAMILY - 3 Units (CAN# FCS 12) (F/S)

Note: Students must have access to the Internet in order to complete assignments.

Class Hours: 54 lecture total

A study of the function and importance of the modern family. Information for building a successful marriage is stressed. Courtship, learning to live together as husband and wife, financial and legal problems, conflicts and their solution, relatives, family and community relations are included.

FSS 18 ADULTHOOD AND AGING – 3 Units (CR/NC Option) (S)

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 span. 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 - 3 Units (CAN# FCS 2) (F/S)

Class Hours: 54 lecture total

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.

FSS 26 NUTRITION THROUGH THE LIFE SPAN - 3 Units (I)

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 revised nutrition labeling.

FSS 27 THERAPEUTIC NUTRITION - 2 Units (I)

Prerequisite: FSS 25

Class Hours: 36 lecture total

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.

FSS 46 PERSONAL FINANCE - 3 Units (S)

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 - 3 Units (CR/NC Option) (F/S)

Class Hours: 54 lecture total

This course provides students with skills for understanding and using internal and external resources to function effectively in our present and future society. An investigation of the effects of cultural, social and temporal forces on paradigms, values, and standards will be a priority. Strategies and skills for time-management, stress management, interpersonal relationships, conflict management, decision-making and goal-setting will be examined and implemented.

FSS 94 FAMILY STUDIES AND SERVICES WORK SITE LEARNING - 1-4 Units

Corequisite: During the first semester only, the student must co-enroll in one of the following: STU 1, STU 90 or STU 92. Enrolled in a minimum of seven (7) units including the Worksite Learning course.

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

FSS 120 SEWING SERIES: SPORTSWEAR AND ACTIVE WEAR - .5 Unit (CR/NC Option) (I)

Class Hours: 27 lab total

A sewing course emphasizing creative techniques with specialty fabrics. Projects ranging from swimwear, biking outfits, sweatsuits to outerwear will be covered. Use of the serger sewing machine will be included. *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.*

FSS 121 SEWING SERIES: SPECIAL OCCASION FABRICS – 1 Unit (CR/NC Option) (I)

Class Hours: 54 lab total

A sewing course designed to cover sewing techniques used with special occasion fabrics including lace, silk, sheers, velvets, sequins, and metallic fabrics. Sewing methods for seams, hems, edges, and details will be presented. *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.*

FSS 123 SEWING - 1 Unit (CR/NC Option) (F/S)

Class Hours: 54 lab total

Students at each of the following levels will be combined in this class and appropriate demonstration and individualized instruction will be given to each group. Beginning Level: This level will include instruction in fabric selection, simple pattern alterations, use and care of equipment and the basic construction techniques such as facing, collars, sleeves, zippers and hems. Intermediate Level I: This level will involve refinement of the above techniques and alternative methods used in applying them. Interfacing types and their applications will be covered. Basic pant alterations, pocket applications, and types of closures will be included. Intermediate Level II: This level will include instruction in the care of current fibers and fabrics. Construction techniques such as tucks, pleats, specialized seams, hand stitches, and machine stitches will be covered. The use of underlinings and linings will also be included. Advanced Level: This level will emphasize proper fitting techniques along with designer finishing details. Units in special fabrics and men's wear will be presented. *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.*

FSS 127 A PRACTICAL APPROACH TO NUTRITION - 3 Units (I)

Note: Students will be required to go on local field trips for a total of 18 hours. Students must provide transportation.

Class Hours: 54 lecture total

Course is designed for the non-major who will study contemporary issues and applications of nutrition. The emphasis will be on a problem-solving approach to dietary planning and food selection as it relates to fitness and optimal health. It will help people focus on their own eating practices within the framework of the dietary guidelines for Americans.

FSS 150 COOKING CLINIC - .5 Unit (CR/NC Option) (I)

Note: This course is designed for students in 3rd to 8th grades.

Class Hours: 27 lab total

This short-term course is designed for students (grades 3-8) who are interested in learning basic cooking principles. Students will be introduced to principles of a healthy diet and nutritious snack preparation. Activities will include, menu planning, sound shopping habits, cooking techniques, and safety and sanitation in cleanup of work area. *Note: This course may be repeated three times for a total of four enrollments.*

FSS 151 SEWING CLINIC - .5 Unit (CR/NC Option) (I)

Note: This course is designed for students in 3rd to 8th grades.

Class Hours: 27 lab total

This short-term class is designed to give an introduction into the world of sewing. It will include instruction on the use and care of equipment and some basic construction techniques such as: pinning a pattern onto fabric, cutting it out, sewing straight and curved seams and threading elastic through a casing. *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.*

FSS 152 MODELING AND GROOMING CLINIC - .5 Unit (CR/NC Only) (I)

Class Hours: 27 lab total

This short-term course is designed for students (4-8 grades) who are interested in modeling and grooming techniques. Students will learn about grooming basics and simple modeling techniques. Activities will include demonstrations on skin, hair and nail care, clothing selection, care of clothing, color analysis and modeling basics. *Note: This course may be repeated three times for a total of four enrollments.*

FSS 155 LEADERSHIP TRAINING FOR JUNIOR & SENIOR HIGH SCHOOL STUDENTS - .5 Unit (CR/NC Option) (I)

Class Hours: 9 lecture total

This course is designed for students in grades 6-12 who are interested in developing leadership skills or enhancing their existing skills. Students will be introduced to communication skills, organizational training to raise ideas, and tips on

team-building activities.

FSS 197 SPECIAL TOPICS IN HOME ECONOMICS - .5-2 Units (CR/NC 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 home economics. 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 INTRODUCTION TO FIRE TECHNOLOGY - 3 Units (F)

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 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 (F)

Class Hours: 54 lecture total

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.

FIRS 72 FIRE PREVENTION TECHNOLOGY - 3 Units (S)

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. Provides skills necessary for California Fire Service Training and Education System, Certified Firefighter I and Fire Inspector I.

FIRS 73 WILDLAND FIREFIGHTER I ACADEMY - 4 Units (CR/NC Only) (S)

Class Hours: 36 lecture/90 lab total

Review of fire behavior, equipment, and apparatus; cover basic wildland fire fighting 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 Services (USFS). *Note: To be considered for seasonal Firefighter positions by CDF, you must also hold the following certificates: Hazmat Operations, First Responder Medical.*

FIRS 74 FIRE PROTECTION EQUIPMENT AND SYSTEMS - 3 Units (CR/NC Option) (F)

Class Hours: 54 lecture total

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.

FIRS 76 FIRE HYDRAULICS - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture 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 (CR/NC Option) (I)

Class Hours: 54 lecture total

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.

FIRS 85 FIRE COMMAND IA - 2 Units (CR/NC Option) (I)

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 (S)

Class Hours: 54 lecture total

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.

FIRS 87 FIRE COMMAND IB - 2 Units (CR/NC Only) (I)

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 WORK SITE LEARNING - 1-4 Units

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major and supervised by a college representative to ensure experience is of educational value. Stresses good work habits through actual job performance. One to four units per semester depending on hours and nature of job. One unit of work site learning credit is granted for each 75 hours paid or 60 hours non-paid on the job activity. Students must enroll in seven units, including work site learning. *Note: These may be repeated three times for a total of four enrollments since course content varies and skills are enhanced by supervised repetition.*

FIRS 100 BASIC FIRE COMPANY OPERATIONS - 2 Units (CR/NC 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 (CR/NC Option) (S)

Class Hours: 18 lecture 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 (CR/NC Option)

Class Hours: 18 lecture/27 lab total

This course will cover hazardous building materials/construction methods, rescue 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.*

FIRS 104 FIREFIGHTER I ACADEMY - 21 Units (F/S)

Note: Based on scheduling and instructor availability issues, this course may meet four or 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 listed on the first class handout.

Class Hours: 234 lecture/450 lab total

This course exceeds the minimum 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 Firefighter for one year and has their final paperwork signed by the Fire Chief of the Department where they have worked.

FIRS 105 DRIVER/OPERATOR 1A: EMERGENCY VEHICLE OPERATIONS – 1.5 Units (I)

Note: Student must provide a fire engine for the driving portions of the course.

Class Hours: 18 lecture/27 lab total

Designed to provide the student with information on driver techniques for emergency vehicles and techniques of basic inspection and maintenance for emergency vehicles, including actual driving exercises under simulated emergency conditions.

FIRS 106 DRIVER/OPERATOR 1B: PUMP OPERATIONS – 1.5 Units (I)

Note: Agency must provide driving apparatus.

Class Hours: 18 lecture/27 lab total

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

FIRS 108 FIREFIGHTER II ACADEMY - 5 Units (S)

Note #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.

Note #2: To receive a California State Fire Marshall'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.

FIRS 113 FIRE CREW SUPERVISOR - 1 Unit (CR/NC 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 experiences. *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 (CR/NC Option) (S)

Note: Students must have completed the following course prior to enrollment in FIRS 116 in order to receive a USDA certification; Crew Boss S-230 114, U.S. Forest Operator's Permit for Engine Operator F-5.

Class Hours: 36 lecture/54 lab total

A course 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 (S)

Class Hours: 18 lecture/27 lab total

This course meets requirements in the natural resources and fire technology programs. A review of fire chemistry, equipment, and manpower, basic fire fighting strategy, methods of attack, pre-planning fire 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 119 PREPARING FOR INCIDENT COMMAND - 1 Unit (CR/NC Option)

Class Hours: 18 lecture total

This course deals with the preparation phase of commanding an emergency incident. Subjects covered are: Firefighters Survival, Fire Behavior, Fire Flow and Communications. This course is designed for the professional firefighter.

FIRS 120 INCIDENT COMMAND SYSTEM ICS 200 - .5 Unit (CR/NC Option)

Class Hours: 12 lecture total

Designed to introduce firefighters to the Incident Command System. Emphasis will be on system design principles, components of the system, positional responsibilities, and the common responsibilities of personnel assigned to the organization. (This course is a prerequisite to further positional training under the Incident Command System).

FIRS 123 DIVISION/GROUP SUPERVISOR (I-339) - .5 Unit (I)

Class Hours: 9 lecture total

The Division/Group Supervisor course covers training that is needed by staff to perform the position of Division/Group Supervisor during an emergency situation. The course will teach management skills within the framework of the Incident Command System.

FIRS 124 FIRE FIGHTING IN THE I-ZONE - .5 Unit (CR/NC Option)

Class Hours: 9 lecture total

I-Zone is a course designed to meet the training needs for initial and extended attack incident commanders and company officers confronting wildland fires that threaten life, property and improvements. This course is designed for professional firefighters.

FIRS 131 HAZARDOUS MATERIALS TECHNICIAN IA – 2.5 Units (CR/NC) (I)

Class Hours: 45 lecture total

An intense introduction to the nature and behavior of inorganic and organic chemicals. This course examines the physical and chemical properties of matter, its atomic structure, salts and non-salts, hydrocarbons and hydrocarbon derivatives, the forms of energy, flammable and combustible liquids, cryogenics, and the combustion process. Various laws of chemistry are discussed as they apply to organic compounds, flammable liquids and gases and other types of hazardous materials. Module 1 of 4 of the Haz-Mat Technician certification series. *Note: To receive a Calif. State Fire Marshal's Office (CSFMO) Certification or a Calif. 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 CSFM or CSTI Certification will be required to take a supplemental certification test and pay a certification fee to the CSFMO or CSTI.*

FIRS 132 HAZARDOUS MATERIALS TECHNICIAN 1B – 2.5 Units (CR/NC) (I)

Class Hours: 45 lecture total

An application of the information covered in FIRS 131 Hazardous Materials Technician IA, including the chemistry and hazards of various materials, chemicals incompatibilities, and the products of combustion. Provides the technical foundation for specific operational strategies, field monitoring and detection devices with an emphasis placed on the safety associated with working around chemicals. Module 2 of 4 Haz-Mat Technician certification series. CSTI certification fees and materials fees will be charged. *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 133 HAZARDOUS MATERIALS TECHNICIAN 1C – 2.5 Units (CR/NC) (I)

Class Hours: 45 lecture total

A study of the legal, organizational, technical, and practical aspects of response to hazardous materials emergencies including the laws and regulations related to hazardous materials, the use of the Incident Command System, and protective actions, clothing, and equipment. Examines the Hazardous Materials Group I depth and the positions are exercised in a practical evaluation scenario. Module 3 of 4 of Haz-Mat Technician certification series. CSTI certification fees and materials fees will be charged. Course meets CSFM certification requirements and is graded Credit/No Credit.

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 134 HAZARDOUS MATERIALS TECHNICIAN 1D – 1.5 Units (CR/NC) (I)

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 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 I 300 - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture total

Pending Chancellor's Office approval

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 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 Div. or at the National Interagency Fire Center Web Site (NIFC.gov).*

FIRS 136 ADVANCED INCIDENT COMMAND SYSTEM I-400 - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture total

Pending Chancellor's Office approval

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, 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).*

FIRS 140 JUVENILE FIRESETTER - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture total

This course will focus on psychodynamics and treatment options, interviewing techniques, legal issues, community resources and networking concerning juvenile firesetters. 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 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 145 LOW ANGLE RESCUE - 1 Unit (CR/NC Option)

Class Hours: 9 lecture/27 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 (CR/NC 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 causes of fatalities and injuries, and methods to implement recommended solutions.

FIRS 147 CONFINED SPACE AWARENESS AND RESCUE - .5 Unit (CR/NC 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 them for operational level training.

FIRS 148 RESCUE SYSTEMS I – 1.5 Units (I)

Note: Students are required to provide personal safety equipment at a significant cost to the student.

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 will be required to train at heights of up to 200' above ground.

FIRS 149 VEHICULAR EXTRICATION - .5 Unit (CR/NC) (F/S)

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 vehicular extrications; 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.

FIRS 151 FIRE CONTROL 1: BASIC FIRE CHEMISTRY - 1 Unit (CR/NC 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.

FIRS 152 FIRE CONTROL 2: STRUCTURAL - 1 Unit (CR/NC 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.

FIRS 153 FIRE CONTROL 3: STRUCTURAL FIRE FIGHTING - 1 Unit (CR/NC Option)

Class Hours: 18 lecture total

This course utilizes the burning of derelict building 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.

FIRS 154 FIRE CONTROL 4: GAS & OIL FIREFIGHTING - .5 Unit (CR/NC Option)

Class Hours: 9 lecture/9 lab total

Classroom and field instruction on Basic Fire Control relating to Emergency Operations. To develop the knowledge & 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 (CR/NC Option)

Class Hours: 18 lecture total

This wildland fire fighting course provides information, methods and techniques for the utilization of: wildland tactics, hand tools, and hoselays; wildland hand crew operations; and the use of aircraft and bulldozers for wildland fire fighting.

FIRS 157 FIRE ENGINE DRIVER TRAINING - 1 Unit (CR/NC Option)

Prerequisite: 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.

Note: 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.

Class Hours: 9 lecture/27 lab total

A course of both classroom instruction and field application on basic driving laws relating to a California "Restricted Firefighter Drivers License." This course is designed to develop driving knowledge, attitudes, and skills necessary to operate fire engines safely.

FIRS 158 PUMP OPERATIONS - 1 Unit (CR/NC 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 (CR/NC 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.

FIRS 160 TITLE 19 & 24 (FIRE TECHNOLOGY) – 1.5 Unit (I)

Class Hours: 27 lecture total

Designed specifically for fire prevention bureau personnel and others responsible for, or interested in, the enforcement of Title 19 and 24 regulations of the California administrative codes. These codes cover public assembly buildings, such as schools, hospitals, and rest homes. Offered every 3 to 6 years as needed.

FIRS 179 FIRE ATTACK STRATEGY & TACTICS - 1 Unit (CR/NC 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 (I)

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 181 FIRE INSTRUCTOR 1A – 1.5 Units (S)

Class Hours: 18 lecture/27 lab total

This course will prepare students to deliver manipulative (hands on) lesson plans within the fire service training system. Material includes; course development, constructing behavioral objectives, writing manipulative lesson plans and theories of learning. Each student must complete 2 student teaching demonstrations.

FIRS 182 FIRE INSTRUCTOR 1B – 1.5 Units (S)

Class Hours: 18 lecture/27 lab total

This course prepares students to deliver “technical” lesson plans within the fire service training systems. Topics include; evaluation, test development, test administration, selections and developing instructional aids and techniques for presentation instruction. Each student must complete 2 student teaching demonstrations.

FIRS 183 FIRE PREVENTION 1A - 2 Units (S)

Class Hours: 40 lecture total

Designed to instruct students in the areas of fire prevention functions, responsibilities, authority for code enforcement. Identify occupancies and building preparation. Records management, exiting requirements, plan review, and fire safety education. Course is one of a series for fire officer course work to meet State of California Fire Officer Certification.

FIRS 184 FIRE PREVENTION 1B - 2 Units (I)

Prerequisite: FIRS 183

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 – 1.5 Units (I)

Class Hours: 18 lecture/27lab 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 (CR/NC Option) (I)

Class Hours: 40 lecture total

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 fire cause and origin expert.

FIRS 191 FIRE INVESTIGATION 1B - 2 Units (I)

Class Hours: 36 lecture/9 lab total

This course concentrates on fire evidence identification, preservation and collection including blood stains, paint and fiber evidence, volatile flammables, soil and gunshot residue, fingerprint/shoe print and the track impressions, etc. In addition, this course covers interviewing, fire information sources, and investigation of fatal fires.

FIRS 192 FIRE INVESTIGATION REVIEW - .5 Unit (CR/NC Option)

Class Hours: 9 lecture total

This is a review course to update fire service personnel in the latest techniques used in fire investigation work, and give information on the following: juvenile firesetter, report writing, evidence collection, preservation procedures, law and legal problems.

FIRS 197 SPECIAL TOPICS IN FIRE TECHNOLOGY - .5-2 Units (CR/NC Option) (I)

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 (CR/NC 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.*

FIRE TECHNOLOGY/WILDLAND FIRE TECHNOLOGY LOGISTICS (FTWL)

FTWL 101 WILDLAND FIRE BEHAVIOR - 3 Units (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

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 (I)

Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

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-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).*

FTWL 110 DISPLAY PROCESSOR S-245 .5 Unit (I) Pending Chancellor's Office approval

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 create required maps, overlays and displays. *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).*

FTWL 111 CHECK-IN RECORDER/STATUS RECORDER J-248 - 2 Units (I) Pending Chancellor's Office approval

Class Hours: 36 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 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-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).*

FTWL 112 ORDERING MANAGER J-252 - .5 Unit (I) Pending Chancellor's Office approval

Class Hours: 9 lecture total

This course of study presents the necessary information for the student to be able to function as an Ordering Manager on a wildland fire incident. The course includes establishing order 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-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).*

FTWL 113 RECEIVING AND DISTRIBUTION MANAGER J-253 - .5 Unit (I) Pending Chancellor's Office approval

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 upon 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-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).*

FTWL 114 BASE/CAMP MANAGER J-254 - 2 Units (I) Pending Chancellor's Office approvalClass 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-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).*

FTWL 115 EQUIPMENT MANAGER J-255 – 1.5 Units (I) Pending Chancellor's Office approvalClass 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 maximize use of available transportation, inspection of 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-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).*

FTWL 116 TOOL AND EQUIPMENT SPECIALIST J-256 – .5 Unit (I) Pending Chancellor's Office approvalClass 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 of kinds of tools ordered/on 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-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).*

FTWL 117 INCIDENT COMMUNICATIONS MANAGER J-257 – 1.5 Units (I) Pending Chancellor's Office approvalClass 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-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).*

FTWL 118 COMMUNICATIONS EQUIPMENT/PROCEDURES S-258 – 2 Units (I) Pending Chancellor's Office approvalClass 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 clear text 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-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).*

FTWL 119 SECURITY MANAGER I-259 – .5 Unit (I) Pending Chancellor's Office approvalClass 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-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).

FTWL 120 FIRE BUSINESS MANAGEMENT PRINCIPLES S-260 – 1.5 Units (I) Pending Chancellor's Office approvalClass 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 for wildland firefighting, and provide fiscally sound 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-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).*

FTWL 121 PERSONNEL TIME RECORDER J-261 – 1 Unit (I) Pending Chancellor's Office approvalClass 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 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 contractors and commissary records, and personnel pay documents. *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).*

FTWL 122 EQUIPMENT TIME RECORDER J-262 – 1 Unit (I) Pending Chancellor's Office approvalClass Hours: 18 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, the necessary steps 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-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).*

FTWL 123 CLAIMS MANAGER J-263 – 1 Unit (I) Pending Chancellor's Office approvalClass Hours: 18 lecture total

This course of study presents information necessary for the student to be able to function as a Claims Manager on a wildland fire incident. This course represents 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-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).*

FTWL 124 COMPENSATION FOR INJURY MANAGER J-264 – 1 Unit (I) Pending Chancellor's Office approvalClass 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 investigate and document all personnel injury or deaths related to activities on the incident, utilization of the 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-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).*

FTWL 125 COMMISSARY MANAGER J-266 – 1 Unit (I) Pending Chancellor's Office approval

Class Hours: 18 lecture total

This course of study presents the information needed for a student to be able to function as a Commissary Manager on a wildland fire incident. The course includes how to set up and provide commissary operation to meet incident needs maintaining complete record of commissary stock including invoices for material received, issuance records, transfer records and closing inventories, and demobilize commissary operation 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-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).

FTWL 126 DOCUMENTATION UNIT LEADER J-342 – 1 Unit (I) Pending Chancellor's Office approval**Class Hours:** 18 lecture total

This course of study provides the student with the information necessary 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 for planning section chief when requested and maintain, retain, 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-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).

FTWL 127 DOCUMENTATION UNIT LEADER J-346 – 1 Unit (I) Pending Chancellor's Office approval**Class Hours:** 18 lecture total

This course of study provides the student with the information necessary 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 continue for duration of 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-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).

FTWL 128 DEMOBILIZATION UNIT LEADER J-347 – 1 Unit (I) Pending Chancellor's Office approval**Class Hours:** 18 lecture total

This course of study provides the student with the information necessary 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(s), 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-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).

FTWL 129 RESOURCES UNIT LEADER J-348 – 1.5 Units (I) Pending Chancellor's Office approval**Class Hours:** 27 lecture total

This course provides the student with the information necessary to be able to function as a Resource Unit Leader. This course covers how to gather, post, and maintain incident resource status, gather, post, and maintain resources 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-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).

FTWL 130 FACILITIES UNIT LEADER J-354 – 2 Units (I) Pending Chancellor's Office approval**Class Hours:** 36 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

FTWL 131 GROUND SUPPORT UNIT LEADER J-355 – .5 Unit (I) Pending Chancellor's Office approvalClass 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, activating fueling, maintenance, and repair of ground resources, how to requisition maintenance and repair supplies, and how to maintain incident roads. *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).*

FTWL 132 SUPPLY UNIT LEADER J-356 – 1.5 Units (I) Pending Chancellor's Office approvalClass 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 setup 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, 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).*

FTWL 133 FOOD UNIT LEADER J-357 – 1.5 Units (I) Pending Chancellor's Office approvalClass 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-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).*

FTWL 134 COMMUNICATIONS UNIT LEADER J-358 – 4 Units (I) Pending Chancellor's Office approvalClass Hours: 72 lecture total

This course of study provides the student with the information necessary to function as a Communications Unit Leader on a wildland fire incident. The 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-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).*

FTWL 135 MEDICAL UNIT LEADER J-359 – 1.5 Units (I) Pending Chancellor's Office approvalClass 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 medical activities, activate medical unit, Preparation of the Medical Emergency Plan, 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-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).*

FTWL 136 COST UNIT LEADER J-362 – .5 Unit (I) Pending Chancellor's Office approvalClass 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 expenditures 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-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).*

FTWL 137 COMPENSATION/CLAIMS UNIT LEADER J-363 – 1 Unit (I) Pending Chancellor's Office approvalClass 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, 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-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).*

FTWL 138 TIME UNIT LEADER J-365 – .5 Unit (I) Pending Chancellor's Office approval

Class Hours: 12 lecture total

This course of study represents 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 commissary operations, 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-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).*

FTWL 139 PROCUREMENT UNIT LEADER J-368 – .5 Unit (I) Pending Chancellor's Office approval

Class Hours: 12 lecture total

This course of study represents the information necessary for the student to be able to function as a Procurement Unit Leader on a wildland fire incident. The 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-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).*

FTWL 140 PLANNING SECTION CHIEF J-440 – 1.5 Units (I) Pending Chancellor's Office approval

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 situation unit field observers 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-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).*

FTWL 141 LOGISTICS SECTION CHIEF J-450 – 2 Units (I) Pending Chancellor's Office approval

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, demobilize 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-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).*

FTWL 142 FINANCE SECTION CHIEF J-460 – 2 Units (I) Pending Chancellor's Office approval

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-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 FIRE SUPPRESSION ORIENTATION – .5 Unit (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

Class Hours: 8 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 INTRODUCTION TO WILDLAND FIRE BEHAVIOR S-190 – 1.5 Units (I) Pending Chancellor's Office approval

Class Hours: 27 lecture total

This course of study is designed for the initial attack commander of small non-complex wildland fires 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 (I) Pending Chancellor's Office approval

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 URBAN INTERFACE S-205 – 2 Units (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

Class Hours: 16 lecture/12 lab total

Wildfire Powersaws is a required course for those planning to operate, or directly supervise, the operation of chain saws 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 (I) Pending Chancellor's Office approval

Class Hours: 33 lecture/15 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 (I) Pending Chancellor's Office approval

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).*

FTWO 121 CREW BOSS S-230 – 1.5 Units (I) Pending Chancellor's Office approval

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 various wildland fire situations. The course also identifies crew boss responsibilities prior to and during 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 (I) Pending Chancellor's Office approval

Class Hours: 9 lecture total

This course of study is to prepare advanced firefighters/squad bosses with the ability to understand and 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 (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

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 FIRING METHODS AND PROCEDURES S-234 – 1 Unit (I) Pending Chancellor's Office approval

Class Hours: 18 lecture 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 (I) Pending Chancellor's Office approval

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 needed 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 (I) Pending Chancellor's Office approval

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 fire assignment. The Staging Manager is responsible for all activities in the staging area including determine if there is any need for temporary assignment of logistics service and support (fuel tender, food delivery, sanitation) to staging areas and make arrangements for temporary logistics, if required, by notifying logistics section chief.

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 – 2 Units (I) Pending Chancellor's Office approval

Class Hours: 36 lecture 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 FIRE BUSINESS MANAGEMENT PRINCIPLES S-260 – 1.5 Units (I) Pending Chancellor's Office approval

Class Hours: 27 lecture total

This course of study is designed to teach the basic concepts of fiscal management of wildland fire incidents. It includes

correct and fiscally sound personnel and equipment procurement, time recording, and proper documentation.

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 (I) Pending Chancellor's Office approval

Class Hours: 18 lecture total

This course of study presents an understanding of the duties and responsibilities if the Facilities Unit Leader is 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 (I) Pending Chancellor's Office approval

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, activating fueling, maintenance, and repair of ground resources, how to requisition maintenance and repair supplies, and how to maintain incident roads. *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 132 INTERMEDIATE WILDLAND FIRE BEHAVIOR S-290 – 2 Units (I) Pending Chancellor's Office approval

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 setup 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, 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 133 INCIDENT COMMANDER MULTIPLE RESOURCES S-300 – 1.5 Units (I) Pending Chancellor's Office approval

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-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 S-301 – 1.5 Units (I) Pending Chancellor's Office approval

Class Hours: 27 lecture 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, 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 135 TASK FORCE/STRIKE TEAM LEADER S-330 – 1.5 Units (I) Pending Chancellor's Office approval

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 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, 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 136 FIRE SUPPRESSION TACTICS S-336 –2 Units (I) Pending Chancellor's Office approval

Class Hours: 36 lecture total

A course study that represents 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 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, 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 137 DIVISION/GROUP SUPERVISOR S- –1 Unit (I) Pending Chancellor's Office approval

Class Hours: 20 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. The course defines and differentiates between the division and group supervisory positions, and teaches the difference between 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, 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 138 INTERMEDIATE AVIATION OPERATIONS S-370 – 2 Units (I) Pending Chancellor's Office approval

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, 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 139 HELIBASE MANAGER S-371 – 2 Units (I) Pending Chancellor's Office approval

Class Hours: 36 lecture total

A course of study that provides the information necessary for an advanced firefighter/crew boss or helicopter 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, 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 140 HELICOPTER COORDINATOR J-374 – 1.5 Units (I) Pending Chancellor's Office approval

Class Hours: 27 lecture total

This course of study reaches the duties and responsibilities of the Helicopter Coordinator on a wildland incident. This course includes how to determine aircraft (air tankers and helicopters) operating within incident area of assignment, implement 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, 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 141 AIR SUPPORT GROUP SUPERVISOR S-375 – 1.5 Units (I) Pending Chancellor's Office approval

Class Hours: 27 lecture total

The Air Support Group Supervisor is primarily responsible for supporting and managing logistical support for helibase and helispot operations. This position identifies resources/supplies dispatched for air support group, requests special air

support times from appropriate sources through logistics section, determines need for assignment of personnel and equipment at each helibase and helispot, and maintains coordination with airbases supporting 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-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 142 AIR TANKER COORDINATOR S-376 – 2 Units (I) Pending Chancellor's Office approval

Class Hours: 36 lecture total

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 of assignment. Survey incident 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 (I) Pending Chancellor's Office approval

Class Hours: 40 lecture total

Air Tactical Group Supervisor is primarily responsible for the coordination of aircraft operations when fixed and/or rotary-wing aircraft are operating on a wildfire. *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 – 1 Unit (I) Pending Chancellor's Office approval

Class Hours: 18 lecture total

This course of study teaches the concepts required in calculating wildland fire behavior for safe and effective fire management operations. It includes local and regional fire behavior issues that are critical to wildland firefighting, comparison of the effects of daytime solar radiation and nighttime heat losses from various sources, descriptions of the effects of terrain, vegetation, clouds, and wind on relative humidity, three types of inversions, and descriptions of their effects on wildland fire behavior. 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 (I) Pending Chancellor's Office approval

Class Hours: 36 lecture total

This course of study presents the duties and functions of the wildland fire 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 146 LIAISON OFFICER S-402 – .5 Unit (I) Pending Chancellor's Office approval

Class Hours: 12 lecture total

This course of study presents the information necessary for the student to become familiar with the functions and role of the Liaison Officer. This course includes the flow of information between command and all agencies involved in the incident, solving problems with the various agencies involved in the incident, and the differences between assisting and cooperating agencies. *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 (I) Pending Chancellor's Office approval

Class Hours: 36 lecture total

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 the highest potential for accidents or injury and follow through with those of 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 PMS-416 – .5 Unit (I) Pending Chancellor's Office approval

Class Hours: 9 lecture total

This course of study presents the introductory information for wildland firefighters on the safety aspects of how to fight fire aggressively but provide for safety first. This course includes information on how to initiate all action based on current and expected fire behavior, how to recognize current weather conditions and obtain forecasts, obtain current information on fire status, and to remain in communication with crew members, your supervisor, and adjoining forces. *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 HAZARDOUS MATERIALS AWARENESS PROGRAM FOR FIREFIGHTERS PMS-418 – .5 Unit (I) Pending Chancellor's Office approval

Class Hours: 9 lecture total

This course of study prepares the student to respond to a Haz-Mat 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 150 COMMAND AND GENERAL STAFF S-420 – 2 Units (I) Pending Chancellor's Office approval

Class Hours: 36 lecture total

This course of study 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 151 LOOK UP, LOOK DOWN, LOOK AROUND PMS-427 – .5 Unit (I) Pending Chancellor's Office approval

Class Hours: 9 lecture total

This course of study is 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. *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 152 LEARN TO BEHAVE PMS-428 – .5 Unit (I) Pending Chancellor's Office approval

Class Hours: 9 lecture total

This course of study, "The BEHAVE" fire behavior prediction and fuel modeling system is a set of interactive, user-friendly computer programs. It is a flexible system that can be adapted to a variety of specific wildland fire management needs. BEHAVE is ideally suited to real-time predictions of the behavior of wildfires or prescribed natural fires. *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 154 OPERATIONS SECTION CHIEF S-430 – 1 Unit (I) Pending Chancellor's Office approval

Class Hours: 18 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, delineation 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 TRAINING SPECIALIST S-445 – 1 Unit (I) Pending Chancellor's Office approval

Class Hours: 18

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 assignments to fulfill individual development needs of trainees, and 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 – 1.5 Units (I) Pending Chancellor's Office approval

Class Hours: 27 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 latest aviation tools and equipment used 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. *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 (I)

Class Hours: 40 lecture total

Pending Chancellor's Office approval

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 PMS-925 – 2 Units (I) Pending Chancellor's Office approval

Class Hours: 40 lecture total

This course of study is to provide experienced wildland firefighting personnel with technical competence in fire management and other disciplines to become effective adult 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).*

FTWO 160 HAZARDOUS MATERIALS FIRST RESPONDER UPDATE – .5 Unit (I) Pending Chancellor's Office approval

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 (I) Pending Chancellor's Office approval

Class Hours: 9 lecture total

This course of study meets California Code of Regulations Title 22 requirements that all personnel that respond to any emergency incidents, must be trained in first aid. Further requirements in California Code of Regulations, Title 22 require an annual refresher course to maintain competency. This course meets these re-certification requirements. *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 (I) Pending Chancellor's Office approval

Class Hours: 18 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 variation 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 display and communicate the fire potential. *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).*

FIRE TECHNOLOGY/WILDLAND FIRE TECHNOLOGY PREVENTION (FTWP)

FTWP 110 PRESCRIBED FIRE FOR BURN BOSSES RX-300 – 3 Units (I) Pending Chancellor's Office approval

Class Hours: 44 lecture/36 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 to 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 P101 – .5 Unit (I) Pending Chancellor's Office approval

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 mitigate unplanned ignitions, 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 (I) Pending Chancellor's Office approval

Class Hours: 9 lecture total

This course of study is to provide the student with little or no experience in inspecting property, now to conduct inspections of fire prone property, including houses and surrounding structures in forested or rural 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, 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 P140 – 2 Units (I) Pending Chancellor's Office approval

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 WILDFIRE ORIGIN AND CAUSE DETERMINATION P151 – 1.5 Units (I) Pending Chancellor's Office approval

Class Hours: 18 lecture/27 lab total

This course of study presents the information necessary for the student to be able to conduct wildland fire investigation. This course includes how to identify and collect 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 PUBLIC INFORMATION OFFICER S-203 – 2 Units (I) Pending Chancellor's Office approval

Class Hours: 32 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 wildland fire. This course includes, a description of the duties and responsibilities of a Type 3 Information Officer, the kinds and sources of information needed now 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 (I) Pending Chancellor's Office approval

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 prevention 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 (I) Pending Chancellor's Office approval

Class Hours: 36 lecture total

This course of study is designed for fire managers, fire prevention specialists and planners, 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 (I) Pending Chancellor's Office approval

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 the 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 (I) Pending Chancellor's Office approval

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 of 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 INTRODUCTION TO FIRE EFFECTS RX-340 - 2 Units (I) Pending Chancellor's Office approval

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 resource 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).*

FTWP 124 INFORMATION OFFICER S-403 – 2 Units (I) Pending Chancellor's Office approval

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 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 126 SMOKE MANAGEMENT TECHNIQUES RX-450 – 2 Units (I) Pending Chancellor's Office approval

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 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).*

FIRST AID/CPR/EMT (FAID)

FAID 130 PUBLIC SAFETY FIRST AID (EMS) - 1 Unit (I)

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 FIRST RESPONDER (EMS) - 3 Units (F/S)

Note: A State or local certification as an EMTs not allowed unless the student is 18+ years old, has a valid Professional Rescuer CPR Certificate, passes a recognized EMT Course, has not been convicted of specific crimes and completes an additional state/local EMS authority written exam.

Class Hours: 54 lecture/9 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 Standard covered by the U.S. Department of Transportation curriculum and approved by the local EMS agency. *Note: Students may make application through Nor Cal E.M.S. for certification.*

FAID 133 CERTIFICATION CPR FOR THE PROFESSIONAL RESCUER - .5 Unit (CR/NC Option)

Class Hours: 12 lecture total

This course will cover CPR and how to treat for foreign body obstruction in adults, children, and infants. Designed for the professional rescuer. 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 Units (CR/NC 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 rescuer who needs recertification. Upon successful completion of this course, students may apply to be re-certified in CPR by the agency having jurisdiction.

FAID 175 EMERGENCY MEDICAL TECHNICIAN 1 BASIC – 3.5 Units (F/S)

Notes: 1. 10 hours of observation time at a hospital emergency room or on an ambulance will be required.

2. State or local certification as an EMT is not allowed unless the student is 18+ years old, has a current 'Healthcare Provider' CPR card or 'CPR for the Professional Rescuer' card, passes a recognized EMT

course, has not been convicted of specific crimes and completes an additional state/local EMS authority written exam.

3. This class meets for additional time "outside" of the scheduled weekly meeting time. This may include Saturdays, Sundays or night shifts. Students are required to purchase or provide items such as safety clothing, BBP protection supplies, gloves, safety glasses, etc.
4. Students will need to submit proof of a current TB skin test, Hepatitis B vaccination or declination, MMR less than 8 years old, Tetanus less than 10 years old, and either past history of, or a titer for Varicella (Chicken Pox), before participating in any ride-along as mandated by AMR.

Class Hours: 36 lecture/81 lab (includes 63 hours of skills training and 18 hours auto extrication)

An intensive course to assist the student with developing skill in recognition of symptoms of illness and injuries, and proper procedures in emergency care. Course is approved by Northern California Emergency Medical Services, Inc. Upon successful completion of the course, students may make application through Northern California Emergency Medical Services, Inc. for certification. (NCEMS, Inc., requires a minimum grade of 80 percent or better on the Certification Examination for certification.)

FAID 178 EMT RECERTIFICATION/FIRST RESPONDER - 1 Unit (F/S)

Class Hours: 18 lecture/14 lab total

A comprehensive review of signs and symptoms of illness and traumatic injuries. Skills necessary to provide immediate temporary care of such victims are also reviewed. Course is approved by Northern California Emergency Medical Services, Inc. In order to maintain certification as an EMT 1A or a First Responder, the course must be repeated every two years. Upon successful completion of the course, the student may make application through Northern California Emergency Medical Services, Inc. for re-certification. (NCEMS, Inc. requires a minimum grade of 80 percent or better on the Certification Examination for re-certification.) *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.*

FAID 197 SPECIAL TOPICS IN FIRST AID/CPR/EMT - .5-2 Units (I)

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. *Note: 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 (CR/NC 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.*

FRENCH (FREN)

FREN 1 ELEMENTARY FRENCH - 5 Units (CAN # FREN 2) (FREN SEQ A) (F)

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 eating and foods. Also, students are introduced to the culture of French-speaking people.

FREN 2 ELEMENTARY FRENCH - 5 Units (CAN # FREN 4) (FREN SEQ A) (S)

Prerequisite: FREN 1 or 2 years of high school French

Class Hours: 90 lecture total

In this continuation of Elementary French, there is continued emphasis on listening to and reading French (receptive skills) and on speaking and writing French. Students expand their language skills and vocabulary, improving their ability to ask and answer questions and to discuss daily life, current events, 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.

FREN 3 INTERMEDIATE FRENCH - 4 Units (CAN# FREN 8) (FREN SEQ B) (F)

Prerequisite: FREN 2 or 3 years of high school French.

Class Hours: 72 lecture total

A thorough review of basic communication skills and formal study of the structure of the language. Students continue to strengthen their skills as they work toward a more accurate use of oral and written French. The course includes reading of literary texts and discussing them in French.

FREN 4 INTERMEDIATE FRENCH - 4 Units (CAN# FREN 10) (FREN SEQ B) (S)

Prerequisite: FREN 3 or 4 years of high school French

Class Hours: 72 lecture total

The fourth semester of the language emphasizes conversation, contemporary literature, and composition. Reading selections include poetry, theatre, and journalistic expressions.

GEOGRAPHIC INFORMATION SYSTEMS (GIS)

See also: *GEOG, INTR, and NR*

GIS 10 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS - 3 Units (CR/NC Option) (F)

Advisory: GEOG 10 and ENVR 52, or CIS 1, or equivalent. (Basic computers skills include Windows, database, spreadsheet)

Class Hours: 36 lecture/54 lab total

This course is an introduction to Geographic Information Systems (GIS). Basic GIS concepts will be covered as well as sample applications of GIS to contemporary problems. Topics covered will include principles of spatial data and skills needed to utilize GIS. Use of existing data will provide a foundation for developing more advanced skills such as data retrieval, manipulation and analysis. In addition, students will learn methods of data acquisition and map productions. Practical applications of GIS to natural resources and other disciplines will be undertaken by students. This course is intended as an overview of GIS with laboratory time focused on hands-on GIS skills. ESRI ArcView software will be used in the class.

GIS 11 ADVANCED GEOGRAPHIC INFORMATION SYSTEMS - 3 Units (S)

Prerequisite: GIS 10

Advisory: GEOG 10

Class Hours: 36 lecture/54 lab total

This course is intended to provide students with a survey of some of the more advanced GIS capabilities, building upon skills developed in GIS 10. GIS analysis will be explored in greater depth, including networks analysis. Students will work with imagery, digital photos and grid data. The growing integration of GIS with the Internet will also be explored. Finally, students will design and implement a GIS project for the course.

GIS 12 DATABASES FOR GEOGRAPHIC INFORMATION SYSTEMS (GIS) (formerly NR 82) - 2 Units (S)

Class Hours: 18 lecture/54 lab total

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. Microsoft Access database management and Arc View GIS software will be used in the course.

GIS 90 WORKING WITH GEOGRAPHIC INFORMATION SYSTEMS (GIS) (formerly NR 80) - 1 Unit (CR/NC Option) (F/S)

Class Hours: 18 lecture/6 lab total

This course gives students a basic introduction to working with geographic information systems (GIS). ArcView (ESRI, Inc) will be used to introduce students to viewing and manipulating GIS data and processing maps. Students will learn about the many applications of GIS by looking at case studies.

GIS 94 GEOGRAPHIC INFORMATION SYSTEMS WORK SITE LEARNING – 1-4 Units (F/S)

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Advisory: NR 84

Hours: 75 hours paid or 60 hours non-paid per unit

Work experience using geographic information systems to be approved and supervised by a college representative to ensure experience of educational value. Stresses good work through actual on the job performance. A student may enroll in one to four units per semester. One unit of work site learning credit is granted for each 75 hours of paid or 60 hours non-paid on-the-job activity. Students must enroll in at least seven units, including work site learning. 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.

GIS 97 SPECIAL TOPICS IN GEOGRAPHIC INFORMATION SYSTEMS (GIS) – 1-4 Units (CR/NC Option) (F/S)

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 ENVIRONMENTAL PHYSICAL GEOGRAPHY - 3 Units (CAN # GEOG 2) (F/S)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

This course is a spatial study of planet Earth's dynamic physical systems and processes. Topics include weather, climate, hydrology, geomorphology, and the biosphere. The emphasis is on inter-relationships among systems and processes and their resulting patterns and distributions. Tools of geographic inquiry include maps, remote sensing, geographic data, and models.

GEOG 1B **CULTURAL GEOGRAPHY - 3 Units (CAN # GEOG 4) (F/S)**

Advisory: ENGL 190 eligibility

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.

GEOG 7 **CALIFORNIA GEOGRAPHY - 3 Units (F/S)**

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

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.

GEOG 8 **WORLD REGIONAL GEOGRAPHY - 3 Units (I)**

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

This course will introduce students to the world's major geographic regions. This course will increase student's 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.

GEOG 10 **MAP READING AND INTERPRETATION - 3 Units (F)**

Advisory: ENGL 190 eligibility

Class Hours: 36 lecture/54 lab total

This course covers map reading, interpretation, and analysis. Following a brief history of maps, students will learn about the various types of maps that are available. Basic characteristics of maps including scale, projections, coordinate systems, symbology, and cartographic principles will be covered in considerable detail. The use of aerial photos for capturing map information will also be covered. In addition, students will be exposed to new mapping technologies including digital atlases, geographic information systems (GIS) and global positioning of systems (GPS). Several field trips will help to reinforce the use of maps for interpretation of land features.

GEOLOGY (GEOL)

See Also: ASTR, CHEM, ENVR, NHIS, NR, PHSC, and PHYS

GEOL 1 **PHYSICAL GEOLOGY - 4 Units (CAN# GEOL 2) (F)**

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 inter-relationships. 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.

GEOL 2 **HISTORICAL GEOLOGY - 4 Units (S)**

Prerequisite: GEOL 1, or GEOL 5, or GEOL 6, or GEOL 7, or GEOL 10, or PHSC 2/3

Note: Required 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.

GEOL 3 **MINERALOGY AND CRYSTAL OPTICS – 5 Units (F)**

Prerequisite: GEOL 1 and CHEM 1A (CHEM 1A may be taken concurrently)

Class Hours: 54 lecture/108 lab total

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

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.

GEOL 4 *ROCK ORIGINS AND RELATIONSHIPS – 4 Units (S)*

Prerequisite: GEOL 2 and GEOL 3

Note: Required 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 topic for the course and laboratory. Specialized topics include magmatic differentiation 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.

GEOL 5 *INTRODUCTION TO GEOLOGY - 4 Units (F/S)*

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*)

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 on natural resources consumption on society, and the economic geology and exploration for ores and petroleum deposits.

GEOL 6 *ANCIENT LIFE – 4 Units (F/S)*

Note: Required day field trips.

Class Hours: 54 lecture/54 lab total

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.

GEOL 7 *INTRODUCTION TO THE GEOLOGY OF CALIFORNIA – 4 Units (I)*

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 geomorphic 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, desert land-forms, and the geologic history of the state. Laboratory exercises will include mineral and rock identification and classification, topographic and geologic maps; landforms; stratigraphy; aerial photo interpretation; and mineral, rock and data collection on field trips.

GEOL 8 *ASTROGEOLOGY - 2 Units (I)*

Note: Required field trips when possible.

Class Hours: 36 lecture total

An introduction to the physical processes that shape planetary surfaces. The course will explore the origins of the solar system and use Earth as a planetary "model" to perform a systematic investigation of the planets. Recent information gathered by Earth-based and orbiting observation platforms and un-manned planetary probes will be used to develop planetary histories and differentiate the varied pathways and processes which have influenced each planet's evolution. The course will also consider asteroids and comets, as well as impacts on planetary surfaces.

GEOL 9 *EARTHQUAKES, VOLCANOES, AND OTHER GEOLOGIC HAZARDS - 3 Units (I)*

Note: Required day field trips

Class Hours: 54 lecture total

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 dynamics of these two phenomena. Other topics to be discussed include tsunami origination and development, types of mass wasting and their controlling 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, ground-water contamination and ground subsidence. Engineering mitigation, hazard preparedness and remediation strategies complete the course.

GEOL 10 *ENVIRONMENTAL GEOLOGY - 4 Units (I)*

Note: Required day 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 and environmental interactions with discussions regarding natural resources and their exploitation, pollution and waste disposal, climate change, land use and engineering, and energy resources. Earth processes which result in environmental catastrophes, environmental change, and an impact on society are also considered including topics such as earthquakes, volcanism, flooding, mass wasting, coastal processes, and climate trends. Laboratory activities will focus on Earth materials, water resources and contamination, hazardous waste storage, mining and resource exploitation, and pollution.

GEOL 11 ECONOMIC GEOLOGY – 3 Units (I)

Prerequisite: GEOL 1 and GEOL 3

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.

GEOL 23 INTRODUCTION TO GEOLOGY IN THE FIELD – 2 Units (CR/NC Option) (F/I)

Prerequisite: GEOL 1, or GEOL 5, or GEOL 6, or GEOL 7, or GEOL 10, or PHSC 2/3 and GEOL 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 period 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 geologic maps, utilization and construction of geologic maps and cross sections, construction of stratigraphic columns, utilization of aerial and satellite imagery, 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.

GEOL 26 GEOLOGY OF THE NORTH COAST RANGES - 2 Units (CR/NC Option) (F/I)

Prerequisite: GEOL 1, or GEOL 5, or GEOL 6, or GEOL 7, or GEOL 10, or PHSC 2/3

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 geohazards are also investigated.

GEOL 27 GEOLOGY OF THE KLAMATH MOUNTAINS - 2 Units (CR/NC Option) (I)

Prerequisite: GEOL 1, or GEOL 5, or GEOL 6, or GEOL 7, or GEOL 10, or PHYS 2/3

Note: Includes two required overnight field trips.

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 conceptual background needed to frame the assembly of varied tectonostratigraphic terranes which represent this province. Structural, magmatic, lithologic, economic, and geomorphologic aspects of the province, as well as geohazards are also investigated.

GEOL 32 GEOLOGY OF THE NORTHERN SIERRAS - 1 Unit (CR/NC Option) (I)

Note: Required overnight field trip.

Class Hours: 9 lecture /27 lab total

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, multiple mountain building and landscape development, glaciation and related geomorphology, and "mother-lode" economic geology. Field trip exercises will also be conducted at various stops.

GEOL 33 GEOLOGY OF THE SACRAMENTO VALLEY - 1 Unit (CR/NC Option) (I)

Note: Required overnight field trip.

Class Hours: 9 lecture /27 lab total

An introduction to the geology of the Sacramento Valley which will culminate with a two-and-a-half day field trip through this geomorphic 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.

GEOL 34 **GEOLOGY OF THE MODOC PLATEAU – 1 Unit (CR/NC Option) (I)**

Note: Required overnight field trip.

Class Hours: 9 lecture/27 lab total

An introduction to the geology of the Modoc Plateau which will culminate with a two-and-a-half-day 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.

GEOL 35 **GEOLOGY OF LASSEN VOLCANIC PARK – 1 Unit (CR/NC Option) (I)**

Note: Required overnight field trip.

Class Hours: 9 lecture/27 lab total

An introduction to the geology of Lassen Volcanic Park which will culminate with a two-and-a-half day 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, volcanic and geothermal hazards, geothermal potential, glaciation and faulting. Field trip exercises will also be conducted at various stops.

GEOL 36 **GEOLOGY OF MOUNT SHASTA AND VICINITY – 1 Unit (CR/NC Option) (I)**

Note: Required overnight field trip.

Class Hours: 9 lecture/27 lab total

An introduction to the geology of Mount Shasta and surrounding areas which will culminate with a two-and-a-half day field trip to and around the mountain. Lecture meetings will present basic concepts in geology needed to understand the geologic history of Mount Shasta as well as outcrops visited during the field trip. Topics to be discussed include volcanic processes and features, volcanic hazards, earthquakes, eruption predictability, geothermal activity, glaciation and mass wasting events. Field trip exercises will also be conducted at various stops.

GEOL 37 **GEOLOGY OF THE NORTHERN CALIFORNIA COAST – 1 Unit (CR/NC Option) (I)**

Note: Required overnight field trip.

Class Hours: 9 lecture/27 lab total

An introduction to the geologic processes which have shaped and continue to shape northern California's coastline. The course will culminate with a two-and-a-half day field trip along 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, erosional and depositional processes, active mountain building, and geomorphology. Field trip exercises will also be conducted at various stops.

GEOL 38 **GEOLOGY OF POINT REYES NATIONAL SEASHORE – 1 Unit (CR/NC Option) (I)**

Note: Required overnight field trip.

Class Hours: 9 lecture/27 lab total

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 to 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 geomorphology. Field trip exercises will also be conducted at various stops.

GEOL 42 **GEOLOGY OF THE REDDING AREA (formerly GEOL 100) – .5 Unit (CR/NC Option) (I)**

Note: Required day field trips.

Class Hours: 9 lecture/8 lab total

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 during a single 8-hour outing.

GEOL 43 **GEOLOGY OF THE SHASTA LAKE AREA (formerly GEOL 102) – .5 Unit (CR/NC Option) (I)**

Note: Required day field trip.

Class Hours: 9 lecture/27 lab total

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 damming the Sacramento River including engineering and ecosystem considerations. The geologic history of record in the area will be demonstrated through rock features such as fossil content. Field trips activities will explore rock relationships, river, lake and relationships and other points of significance during a single 8-hours outing.

GEOL 44 **GEOLOGY OF THE WHISKEYTOWN AREA – .5 Unit (CR/NC Option) (I)**

Note: Required day field trip.

Class Hours: 9 lecture/8 lab total

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 theory with field application as we visit points of interest and significance during a single 8-hour outing.

GEOL 45 GEOLOGY OF CASTLE CRAGS AND VICINITY – .5 Unit (CR/NC Option) (I)

Note: Required day field trip.

Class Hours: 9 lecture/8 lab total

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 a single 8-hour outing.

GEOL 46 GEOLOGY OF BURNEY FALLS AND VICINITY – .5 Unit (CR/NC Option) (I)

Note: Required day field trip.

Class Hours: 9 lecture/8 lab total

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. Volcanology, surface and subsurface hydrogeology including 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 a single 8-hour outing.

GEOL 97 SPECIAL TOPICS IN THE GEOSCIENCES – .05 -2 Units (I)

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 multidisciplinary 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.*

GEOL 98 SPECIAL LAB TOPICS IN THE GEOSCIENCES – .05 - 1 Unit (I)

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.*

GERMAN (GERM)

GERM 1 ELEMENTARY GERMAN - 5 Units (CAN# GERM 2) (GERM SEQ A) (F)

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 an aural comprehension level of German, through basic conversation and listening skill development. Customs and culture are also emphasized.

GERM 2 ELEMENTARY GERMAN - 5 Units (CAN# GERM 4) (GERM SEQ A) (S)

Prerequisite: GERM 1 or 2 years of high school German

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 culture and traditions are provided, concerning Germany's position in the world today.

GERM 3 INTERMEDIATE GERMAN - 3 Units (CR/NC Option) (CAN # GERM 8) (GERM SEQ B) (I)

Prerequisite: GERM 2 or equivalent

Class Hours: 54 lecture total

This course is designed to give the student advanced training in pronunciation, essentials of grammar, reading, writing and speaking. Composition and literature are introduced. The student is also exposed to the customs and cultures of the German-speaking people.

GERM 4 INTERMEDIATE GERMAN - 3 Units (CR/NC Option) (CAN # GERM 10) (GERM SEQ B) (I)

Prerequisite: GERM 3 or equivalent

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)

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- GERO 24** **ETHNIC DIVERSITY AND AGING – 2 Units (CR/NC Option) (I)**
Hours: 36 lecture total
 This course examines general trends in minority aging with a look at how culture influences their utilization of services 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.
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- GERO 64** **COPING WITH MENTAL ILLNESS AND DEMENTIA IN OLD AGE – 3 Units (CR/NC Option) (I)**
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 and interventions to provide them with a better quality of life. Topics include dementia, depression, stereotypes, social bonds, environmental factors, home modifications, caregiver options, medical interventions, and placement.
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- GERO 75** **DEATH AND DYING – 2 Units (CR/NC Option) (I)**
Hours: 36 lecture total
 This course examines dying, death, and bereavement. History of dying and how Americans die today will be covered. Topics include social bonds, environmental factors, dying process, quality of life, cultural differences in death, ethical issues, and dealing with death.
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- GERO 77** **FAMILY DYNAMICS AND AGING – 3 Units (CR/NC Option) (I)**
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.
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HEALTH OCCUPATIONS (HEOC)

See Also: MEDA, REGN, and VOCN

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- HEOC 94** **HEALTH OCCUPATIONS WORK SITE LEARNING - 1-4 Units**
Corequisite: During the first semester only, the student must co-enroll in one of the following: STU 1, STU 90 & STU 92. Enrolled in a minimum of seven (7) units including the Worksite Learning course.
Hours: 75 hours paid or 60 hours non-paid per unit
 Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.
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- HEOC 101** **NURSE UPDATE - 5 Units (I)**
Prerequisite: California registered nurse or licensed vocational nurse license
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 hospital experience will be conducted to prepare the RN/LVN to assume staff nurse duties upon completion of the course. The program allows for individual differences of learning. Approved for 30 hours Continuing Education credit.
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- HEOC 110** **BEGINNING MEDICAL TERMINOLOGY (formerly MEDA 151) - 3 Units (F/S)**
Class Hours: 54 lecture total
 This course provides students with an understanding of the language of medicine through the study of basic word structures and anatomical, pathological, and operative terms used within the integumentary, musculoskeletal, nervous, cardiovascular, and respiratory systems, blood and lymphatic systems.
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- HEOC 111** **ADVANCED MEDICAL TERMINOLOGY (formerly MEDA 152) - 3 Units (F/S)**
Prerequisite: HEOC 110
Class Hours: 54 lecture total
 This course is a continuation of HEOC 110 providing students with an understanding of medical terms used within: the digestive, endocrine, special senses, urinary, male and female reproductive systems, and specialty areas such as Obstetrics, Pharmacology, and Mental health.
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- HEOC 125** **INTRODUCTION TO CAREGIVING FOR THE NONPROFESSIONAL – 3 Units (CR/NC Option) (I)**
Note: Students will be responsible for transportation to at least 1 field trip.
Class Hours: 36 lecture/54 lab total
 This course will assist individuals in mastering the personal growth and practical skills required in the caregiving role. It will be beneficial to individuals facing the challenges of caring for others in their own homes, as well as those interested in eventually pursuing a career in the health care profession. Nursing, life management/nutrition skills will be covered.
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- HEOC 150** **BASIC CARDIAC CARE (formerly HEOC 191AB) - 3 Units (F)**
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Prerequisite: RN, LVN, or senior nursing student.

Class Hours: 54 lecture total (*twelve total hours of clinical observation in a CCU without an instructor present is also required*)

Designed to provide nursing personnel with the basic information needed to function effectively in a coronary care unit.

Content will include a review of normal cardio-vascular anatomy and physiology, an overview of cardiovascular pathophysiology and resulting major complications, electro-physiology and cardiography, and the current medical and nursing interventions employed in the care of the patient with heart disease and its complications.

HEOC 151 ADVANCED CARDIAC CARE (formerly HEOC 191CD) - 3 Units (S)

Prerequisite: Completion of HEOC 150 (formerly HEOC 191AB) or equivalent. Licensed Registered Nurses and Licensed Vocational Nurses only.

Class Hours: 54 lecture total

Designed to provide coronary care certified nurses an expanded scope of information in advanced cardiac care techniques, nursing assessment, and advanced electro-cardiography. Content will include arrhythmogenesis, axis determination, hemodynamic monitoring, invasive diagnostic cardiology, pacemakers, with emphasis on complicated cardiac conditions and nursing treatment regimes. Medical and surgical treatment approaches for the complicated cardiac patient will be emphasized.

HEOC 152 CRITICAL CARE NURSING I (formerly HEOC 192) - 4 Units (F/S)

Advisory: Designed for the Registered Nurse

Class Hours: 72 lecture total

Designed to provide registered nurses currently practicing or intending to practice in a critical care area with an in-depth knowledge base necessary to deliver optimal care to patients in the critical care units. The course will include a study of anatomy, physiology and pathophysiology of the cardiovascular, respiratory, renal and neurologic systems. Emphasis will be placed on assessment of the critical care patient and medical and nursing interventions in current practice. This course will heavily utilize the case study approach and practice of clinical application.

HEOC 153 CRITICAL CARE NURSING II (formerly HEOC 192CD) - 4 Units (S)

Advisory: Designed for the Registered Nurse

Class Hours: 72 lecture total

Designed to provide registered nurses currently practicing or intending to practice in a critical care area with clinical application of the knowledge and skills required for critical care nursing. The course will include advanced problems related to cardiovascular, respiratory, renal, and neurologic systems and will heavily utilize the case study approach.

HEOC 159 PSYCHIATRIC NURSING - 3 Units (F/S)

Note: Designed for Registered Nurse, Licensed Vocational Nurse, or Human Service Worker

Class Hours: 54 lecture total

This course is designed to provide a basic knowledge of psychiatric intervention for those nurses with only medical-surgical experience. It is also designed to provide skill improvement and updated information for the practicing psychiatric nurse as well as other human services workers. The content is designed to emphasize nursing assessment, care planning, therapeutic interventions specific to each diagnostic area, and current trends in practice.

HEOC 160 STRESS MANAGEMENT (formerly HEOC 185) - 2 Units (F/S)

Class Hours: 36 lecture total

This class is designed to teach students the skills needed to recognize that all stressors affecting our actions are driven 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 lifestyle change.

HEOC 166 BASIC OPHTHALMIC DISPENSING (formerly HEOC 166AB) - 2 Units (F)

Class Hours: 36 lecture total

This course is designed to prepare students for entrance into the ophthalmic dispensing field. This course will consist of lecture, videotapes, slides and films. No special materials are necessary.

HEOC 167 ADVANCED OPHTHALMIC DISPENSING AND ASSISTING (formerly HEOC 166 CD) - 2 Units (S)

Prerequisite: HEOC 166 (formerly 166AB)

Class Hours: 36 lecture total

This course is designed to assist students who are currently working in, or seeking to reenter, the ophthalmic dispensing field to improve their skills. This course will consist of lectures, videotapes, slides and films. No special materials are necessary.

HEOC 168 EMERGENCY DEPARTMENT NURSING - 3 Units (I)

Advisory: Registered nurse or licensed vocational nurse licensure

Class Hours: 54 lecture total (an additional 12 hours of Emergency Room observation, to be arranged, is required)

This course is designed to teach nurses the patterns of patient care and organization found in the modern Emergency Department (E.D.). It will include the Trauma System, Chest Pain ER (CPEER) concepts, management of clinic level patients in the E.D., Triage concepts for disaster/non-disaster nursing, and the management of violent patients in compliance with AB 508. Students will recognize common life threatening events that present to the E.D. and identify the appropriate nursing role and intervention. Students will practice skills commonly used in the care of E.D. patients such as C-spine precautions, traction splinting, and airway management of the unconscious patient. Upon completion of this course, students will recognize common E.D. nursing roles and responsibilities of the E.D. nurse. An additional 12 hours of Emergency Room observation, to be arranged, is required.

HEOC 170 C.E.: CARING FOR THE PATIENT & THE CAREGIVER – 1 Unit (I)

Note: This course is designed to meet the continuing education requirements for the nurse aide in acute care, skilled care, intermediate care and home health.

Class Hours: 18 lecture total

This course is designed to meet the continuing education requirements for the nurse aide in acute care, skilled care, intermediate care and home health. The course content will assist the nurse aide in understanding the importance of caring for self while caring for others. Included topics will be caring for the caregiver, reducing nurse exposure to physical and disease hazards and meeting nurse and patient nutritional needs.

HEOC 180 NURSE AIDE/HOME HEALTH AIDE - 13 Units (F/S)

Note: All students enrolling in a CNA-HHA Program must be fingerprinted and cleared of all criminal convictions before they can be competency tested and/or certified.

Class Hours: 144 lecture/288 lab 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 care settings. Course is approved by the State Department of Health Services 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 (Summer Session)

Note: All students enrolling in a CNA-HHA Program must be fingerprinted and cleared of all criminal convictions before they can be competency tested and/or certified.

Class Hours: 96 lecture/192 lab total

This course is designed to prepare students to perform the basic skills required of a nurse aide. Course content consists of theory, laboratory, and clinical experience in long term and acute 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 182 C.E.: CARING FOR THE DYING PATIENT- 1 Unit (I)

Prerequisite: Current Nurse Aide certification

Note: This course is approved by the State Department of Health Services to meet the continuing education hours required to maintain certification.

Class Hours: 18 lecture total

This course is designed to meet the continuing education requirements for the nurse assistant working in acute care, skilled care, intermediate care, and home health. The physical and psychosocial needs of the dying older adult will be discussed in this course. The nurse assistant role in caring for the dying patient and the needs of their family members will be examined.

HEOC 183 C.E.: UNDERSTANDING BEHAVIORAL CHANGES COMMON TO THE AGING RESIDENT - 1 Unit (I)

Note: This course is approved by the State Department of Health Services to meet the continuing education hours required to maintain certification.

Class Hours: 18 lecture total

This course is designed to meet the continuing education requirements for the nurse assistant working in acute care, skilled care, intermediate care, and home health. Behavioral changes common to the aging population in health care settings will be discussed in this course. New skills will be presented which will guide the nurse assistant in practicing effective interpersonal relations by recognizing and understanding behavioral problems encountered in the care of the aging resident.

HEOC 184 CE: CARING FOR THE OLDER ADULT WITH COMMON MEDICAL DISORDERS (form. HEOC 196) – 1 Unit (I)

Note: This course is approved by the State Department of Health Services to meet the continuing education hours required to maintain certification

Class Hours: 18 lecture total

This course is designed to meet the continuing education requirement for the nurse assistant working in acute care, skilled care, intermediate care, and home health. Common medical disorders of the older adult affecting the endocrine, musculoskeletal, respiratory, cardiovascular, and neurological systems will be discussed in this course. The role of the nurse assistant in caring for these patients will be examined. Significance of normal and abnormal vital signs and other reportable changes in patient condition emphasized.

HEOC 186 HOME HEALTH AIDE - 3 Units (I)

Prerequisite: Currently Certified as Nurse Aide

Class Hours: 36 lecture/48 lab total, 12 weeks

Designed to prepare Certified Nurse Assistants to perform the basic nursing skills required in the home. This course is approved by the State Dept. of Health Services and students completing the course are eligible for certification given upon successful completion of the course.

HEOC 187 CE: MEETING PATIENT COMMUNICATION NEEDS (formerly HEOC 198) - 1 Unit (I)

Prerequisite: Nurse Aide certification

Note: This course is approved by the State Department of Health Services to meet the continuing education hours required to maintain certification

Class Hours: 18 lecture total

Designed to meet the continuing education requirement for the nurse assistant working in acute care, skilled care, intermediate care, and home health. Approved by the State Department of Health Services to meet the continuing education hours required to maintain certification

HEOC 190 TRANSITIONING TO HOME CARE - 1 Unit (CR/NC Option) (I)

Prerequisite: Registered Nurse, Licensed Vocational Nurse, or Rehab Staff

Class Hours: 18 lecture total

This reality-based bridge course is designed to prepare nursing and rehabilitation staff currently working in the acute care setting to transition into the specialty of home care. Emphasis is placed on clinical documentation for quality assurance in the new managed care environment. The course will provide information regarding employment opportunities in this growing specialty.

HEOC 193 INTRODUCTION TO PERIOPERATIVE NURSING - 1 Unit (F/S)

Prerequisite: Must be a registered nurse or senior Associate Degree Nursing student.

Class Hours: 18 lecture total

This course is designed to provide the student with the knowledge to utilize the nursing process as it relates to the perioperative role. Classroom content emphasizes the theoretical basis for the practices of perioperative nursing.

HEOC 194 OBSTETRICAL NURSING UPDATE - 3 Units (I)

Prerequisite: Must be a registered nurse or senior A.D.N. student

Class Hours: 54 lecture total

Designed to provide the student with updated knowledge to utilize the nursing process as it is related to the obstetrical role. Classroom content emphasizes the theoretical basis for the practices of current obstetrical nursing. Essential skills such as physical assessment of the expectant woman, fetal monitoring, assessment of the labor progress and concurrent management, along with assessment of high risk factors and appropriate labor management, VBAC deliveries, cesarean sections, postpartum and postoperative care for the new mother.

HEOC 197 PHARMACOLOGICAL BASIS OF NURSING PRACTICE - 3 Units (I)

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

The course provides current information to nursing students and licensed nurses on drug mechanisms and the therapeutic use of common agents. Emphasis is on the nursing role in administering drugs and monitoring for therapeutic and adverse reactions to drugs. This course may also be offered as Distance Education but it is the same in content as that offered on campus.

HISTORY (HIST)

HIST 1A HISTORY OF WESTERN CIVILIZATION - 3 Units (CR/NC Option) (CAN# HIST 2) (HIST SEQ A) (F/S)

Advisory: A grade of C or higher in ENGL 190, or a qualifying score on the English Placement exam

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 overview the heritage of the present generation. This history class is also taught as a distance-learning course. In these sections, students will be required to attend class lectures and discussions in a virtual online classroom instead of physically attending in a classroom. This will require participation through an Internet connection utilizing a WebCT classroom. Minimum requirements: ability to access World Wide Web addresses. Students may access WebCT through any Internet server.

HIST 1B HISTORY OF WESTERN CIVILIZATION - 3 Units (CR/NC Option) (CAN# HIST 4) (HIST SEQ A) (F/S)

Advisory: ENGL 1A eligibility

Class Hours: 54 lecture total

A survey of the origins and development of civilization in the western world from 1600 to the present, with special emphasis upon institutions, thought, and culture. A course designed to show the continuity of Western civilization and to indicate the heritage of the present generation.

HIST 2 WORLD CIVILIZATION TO 500 C.E. - 3 Units (F/S/I)

Advisory: ENGL 1A eligibility

Class Hours: 54 lecture total

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.
Subject to change. Check the current class schedule.

A comparative survey of the major ancient world civilizations which developed between 3500 B.C.E. and 700 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.

HIST 17A UNITED STATES HISTORY AND GOVERNMENT - 3 Units (CR/NC Option) (CAN# HIST 8) (HIST SEQ B) (F/S)

Advisory: ENGL 1A eligibility

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

A survey of the history of the United States from the discovery of America to the close of the Civil War. The exploration and settlement of America and the growth of a movement for independence are traced. The information of a new nation and creation of the Constitution and its basic principles are described, as are the beginnings of the westward movement and the development of manifest destiny. The causes of the Civil War and the war itself are also examined. This course partially satisfies the State of California requirement in the U.S. Constitution and state and local governments. This course is also offered as Distance Education but it is the same in content as that offered on campus.

HIST 17B UNITED STATES HISTORY AND GOVERNMENT - 3 Units (CR/NC Option) (CAN# HIST 10) (HIST SEQ B) (F/S)

Advisory: ENGL 1A eligibility

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

This course traces the development of the problems of the Reconstruction Period, the movement toward regulation of the economic system, and the acceptance by the United States of world power and leadership. It discusses the causes and results of the Great Depression, the two world wars of the 20th Century, and the "Cold War." This course partially satisfies the State of California requirement for course work in U.S. Constitution and the state and local government.

This history class is also taught as a distance-learning course. In these sections, students will be required to attend class lectures and discussions in a virtual online classroom instead of physically attending in a classroom. This will require participation through an Internet connection utilizing a WebCT classroom. Minimum requirements: ability to access World Wide Web address. Students may access WebCT through any Internet server.

HIST 25 AFRICAN AMERICAN HISTORY - 3 Units (CR/NC Option) (I)

Advisory: ENGL 1A eligibility

Class Hours: 54 lecture total

Emphasizes the historical development, contributions, and present state of African American people in America. Begins with a survey of African civilizations, continues with the involvement of Europeans in the slave trade, the institution of slavery in America, the Reconstruction Period, an historical perspective of the Civil Rights Movement, the current urban crisis, and the varied philosophies of social change.

HIST 35 HISTORY OF MEXICAN AMERICANS - 3 Units (F/S/I)

Advisory: ENGL 1A eligibility

Class Hours: 54 lecture total

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 (I) (CR/NC Option)

Advisory: ENGL 1A eligibility

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 (I) (CR/NC Option)

Advisory: ENGL 1A eligibility

Class Hours: 54 lecture total

A course designed to give the student an understanding of the beliefs systems and historical development of the worlds religions and an appreciation of the contribution of religion to the cultural heritage in which she/he lives.

HIST 40 HISTORY AND GOVERNMENT OF CALIFORNIA - 3 Units (CR/NC Option) (I)

Advisory: ENGL 1A eligibility

Class Hours: 54 lecture total

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.

HIST 55 HISTORY OF THE AMERICAN FRONTIER - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

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.

HIST 57 *RUSSIAN HISTORY - EMPHASIS ON THE TWENTIETH CENTURY - 3 Units (CR/NC Option) (I)*

Class Hours: 54 lecture total

A general survey of the Russian State from the beginning of the Kievan era (1054) through Soviet Russia, and the Russian Federation. 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.

HIST 66 *HISTORY OF GREAT BRITAIN - 3 Units (CR/NC Option) (I)*

Class Hours: 54 lecture total

A survey of the development of British civilization from pre-Roman times through the 20th Century, with emphasis on the social, political and economic history of Great Britain. Other important course objectives include the Roman influence, Rise of Monarchy, The Civil War, Industrial Revolution, Rise of the British Empire and the role of Great Britain in world affairs throughout the 20th Century.

HIST 177 *LOCAL HISTORY OF SHASTA COUNTY - 3 Units (CR/NC Option) (I)*

Class Hours: 54 lecture total

A survey of Shasta County history. The course will include presentations on such topics as agriculture, water resources, lumbering, growth of electric power, county government, city government, Native Americans, mining, and growth of industry.

HIST 187 *ORAL HISTORY OF SHASTA COUNTY – 3 Units (CR/NC Option) (I)*

Class Hours: 54 lecture total

This is a course in experiencing Shasta County history through oral responses and commentary – interviews – with living people, with an emphasis on events, major industries, places and people. The class will hear presentations from people who are experts in their particular field. Students will learn how to collect and record history in order to preserve and facilitate research in history.

HORTICULTURE (HORT)

See also: AGRI and ENVR

HORT 3 *CAREER PLANNING FOR ORNAMENTAL HORTICULTURE - 1 Unit (F)*

Class Hours: 18 lecture total

This course addresses Ornamental Horticulture as a career and gives a preview of nursery, florist, and landscape industries. There will be discussion concerning requirements for the vocational A.A. degrees, certificate programs, and transfer to four-year degree colleges. It will also cover how best to apply for the job and how the student can prepare as a well-qualified candidate. The course will include discussion by area employers.

HORT 7 *HORTICULTURE CAREERS SURVEY AND PLACEMENT - 1 Unit (CR/NC Option) (S)*

Advisory: ENVR 1

Class Hours: 9 lecture/27 lab total

This class is designed to give the student an overview of the California horticulture industry and how to obtain a job within the industry. This class includes a four-day, three-night tour of nurseries, florists, botanical gardens, universities and much more. On the tour, students will learn about many of the different careers the horticulture industry offers, meet perspective employers, and learn valuable job-seeking skills. Students will develop career portfolio, life goals and plan of action. This class is required for all ornamental horticulture majors.

HORT 22 *NURSERY PRACTICES AND PLANT PROPAGATION (formerly HORT 32A) - 2 Units (F)*

Advisory: ENGL 190 and MATH 220

Class Hours: 18 lecture/54 lab total

This course is required for all Environmental Horticulture Management majors. The methods and principles used in the propagation of plants, including both 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.

HORT 23 *NURSERY PRACTICES AND MANAGEMENT (formerly HORT 32B) - 2 Units (S)*

Advisory: ENGL 190 and MATH 100

Class Hours: 18 lecture/54 lab total

This course is required for all Environmental Horticulture Management 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.

HORT 26 *PLANT PROTECTION - 3 Units (CR/NC Option) (I)*

Class Hours: 36 lecture/54 lab total

Weeds, insects and diseases as related to the production of agricultural and horticultural production will be presented.

A basic understanding, both physiological and morphological, of these plant pests and their control is the emphasis of the class. Pesticide safety is also emphasized and students are required to take the state certification test for application

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Subject to change. Check the current class schedule.

of pesticides. This course is required for all horticulture majors.

HORT 27 PLANT IDENTIFICATION AND TAXONOMY OF EVERGREEN TREES, SHRUBS AND GROUND COVERS - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture/12 lab total

This is a course which will familiarize the student with approximately 65 commonly used landscape plants. The plants taxonomic description, landscape uses, and culture will be emphasized. This is the first of three plant identification courses the student working toward an AA degree in Environmental Horticulture is required to take. HORT 27, HORT 28 and HORT 29 are a series and may be taken in any order.

HORT 28 PLANT IDENTIFICATION AND TAXONOMY OF DECIDUOUS TREES, SHRUBS AND GROUND COVERS - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture/12 lab total

This is a course which will familiarize the student with approximately 65 commonly used landscape plants. Each plants taxonomic description, landscape uses, and culture will be emphasized. This is the second of three plant identification courses students working toward an AA degree in Environmental Horticulture are required to take. HORT 27, HORT 28 and HORT 29 are a series and may be taken in any order.

HORT 29 PLANT IDENTIFICATION AND TAXONOMY OF TREES, SHRUBS AND GROUND COVERS - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture/12 lab total

This is a course which will familiarize the student with approximately 65 commonly used landscape plants. The plants taxonomic description, landscape uses, and culture will be emphasized. This is the third of three plant identification courses students working toward an AA degree in Environmental Horticulture are required to take. HORT 27 and HORT 28 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. This course will use flower anatomy as a primary means of identification.

HORT 31 LANDSCAPE IRRIGATION - 3 Units (CR/NC Option) (S)

Advisory: MATH 100 or equivalent; ENGL 190

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 and installation, but commercial design and installation will be covered. This course is required for all Ornamental Horticulture majors.

HORT 31.1 LANDSCAPE IRRIGATION - 1 Unit (CR/NC Option) (S)

Advisory: MATH 100 or equivalent; ENGL 190

Class Hours: 12 lecture/18 lab total

Modular delivery of HORT 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 Ornamental Horticulture majors. *Note: HORT 31.1, HORT 31.2, and HORT 31.3 is the equivalent to HORT 31.*

HORT 31.2 LANDSCAPE IRRIGATION - 1 Unit (CR/NC Option) (S)

Advisory: MATH 100 or equivalent; ENGL 190

Class Hours: 12 lecture/18 lab total

Modular delivery of HORT 31. This is a study of irrigation systems design, water hydraulics, and plant/soil/water relationships. Emphasis will be placed on residential design and commercial design. *Note: Completion of HORT 31.1, HORT 31.2, and HORT 31.3 is the equivalent to HORT 31.*

HORT 31.3 LANDSCAPE IRRIGATION - 1 Unit (CR/NC Option) (S)

Advisory: MATH 100 or equivalent; ENGL 190

Class Hours: 12 lecture/18 lab total

Modular delivery of HORT 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. *Note: Completion of HORT 31.1, HORT 31.2, and HORT 31.3 is the equivalent to HORT 31.*

HORT 33 ENVIRONMENTAL HORTICULTURE - 3 Units (CR/NC Option) (F/S)

Class Hours: 54 lecture total

An examination of the scientific concepts on which plant growth is based in varied environments. This includes the interactions which result when introducing exotic species of plants into foreign environments; the relationship of plants to their natural environments and how man manipulates plants and environments to serve his needs.

HORT 34 BEGINNING FLORAL DESIGN (formerly HORT 34AB) - 2 Units (F/S)

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. *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. 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.

HORT 35 LANDSCAPE DESIGN - 3 Units (CR/NC Option) (S)

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.

HORT 36 FLORAL DESIGN FOR WEDDINGS AND SPECIAL OCCASIONS - 2 Units (CR/NC Option) (S)

Class Hours: 18 lecture/54 lab total

This course provides instruction in floristry skills pertaining to wedding 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.

HORT 37 NURSERY AND FLORIST MANAGEMENT - 3 Units (CR/NC Option) (S)

Class Hours: 54 lecture total

The study of retail and wholesale florist operations. Specific areas that will be covered are management problems, public relations, advertising, financing, wire service, sales, display and merchandising.

HORT 38 LANDSCAPE AND TURF MANAGEMENT - 3 Units

Advisory: ENGL 190 MATH 220

Class Hours: 36 lecture/54 lab total

This is a required course for Environmental Horticulture Management 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.

HORT 39 TROPICAL FLORAL DESIGN – 1.5 Units (CR/NC Option) (I)

Advisory: HORT 34

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.

HORT 40 INTERMEDIATE FLORAL DESIGN (formerly HORT 34CD) - 2 Units (F/S)

Prerequisite: HORT 34

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. *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. 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.*

HORT 56 ORNAMENTAL HORTICULTURE PRACTICES (formerly HORT 56SV) - 1-4 Units

Class Hours: 54 hours per unit

Designed to prepare students to enter into the diverse ornamental horticulture industry. The course offered will prepare the student with special skills in plant propagation, landscape construction and landscape maintenance. Directed practical work is provided with a modern ornamental horticulture facility that is equipped with all modern equipment necessary to provide the student with pre-employment skills necessary for the expanding field of ornamental horticulture.

Note: This course may be repeated 3 times for a total of 4 enrollments since course content varies and skills are enhanced by supervised repetition and practice.

HORT 70 ORGANIC GARDENING PRACTICES (SPRING) - 1 Unit (CR/NR Option) (S)

Note: This course is complementary to, but independent from sustainable gardening practices for summer (HORT 71) and fall (HORT 72) seasons.

Class Hours: 9 lecture/27 lab total

An introductory class emphasizing 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 HORT 71 and HORT 72 which addresses gardening practices for summer and fall seasons.

HORT 71 ORGANIC GARDENING PRACTICES (SUMMER) - 1 Unit (CR/NR Option) (I)

Note: This course is complementary to, but independent from sustainable gardening practices for spring (HORT 70) and fall (HORT 72) seasons.

Class Hours: 9 lecture/27 lab total

Instruction includes summer crops, irrigation, pests and cultural practices for summer. Students will be planting and maintaining a garden plot. Subject matter in this course is supplementary to HORT 70 and HORT 72 which addresses gardening practices for spring and fall seasons.

HORT 72 ORGANIC GARDENING PRACTICES (FALL) - 1 Unit (CR/NR Option) (F)

Note: This course is complementary to, but independent from sustainable gardening practices for spring (HORT 70) and summer (HORT 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 cultivating practices. Students will be planting and maintaining a garden plot. Since subject matter varies with each seasonal crop, this course is supplementary to HORT 70 and HORT 71 which addresses gardening practices for spring and summer seasons.

HORT 97 SPECIAL TOPICS IN ENVIRONMENTAL HORTICULTURE - .5-2 Units (CR/NC Option) (I)

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.*

HORT 98 SPECIAL TOPICS IN ENVIRONMENTAL HORTICULTURE - LAB SKILLS - .5-2 Units (CR/NC Option) (I)

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.*

HORT 120 SELECTED TOPICS IN ORNAMENTAL HORTICULTURE: PRUNING (formerly HORT 128E) -.5 Unit (CR/NC Option) (I)

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 short course is to teach the student why plants are pruned, when plants should be pruned and how far plants are pruned.

HORT 121 SELECTED TOPICS IN ORNAMENTAL HORTICULTURE: VITICULTURE (formerly HORT 128O) - .5 Unit (CR/NC Option) (I)

Class Hours: 9 lecture total

Course will survey the selection, propagation, training and pruning of grapevine varieties.

HORT 122 SELECTED TOPICS IN ORNAMENTAL HORTICULTURE: PLANT PROPAGATION - .5 Unit (formerly HORT 128R) (CR/NC Option)

Class Hours: 9 lecture total

Course will cover propagation by seed, cuttings, layering, grafting and budding. Rootstock selection will also be covered.

HORT 125 LOW IRRIGATION LANDSCAPING - 1 Unit (CR/NC Option) (I)

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.

HORT 130 NATIVE PLANTS I.D., PROPAGATION AND CULTURE - 1 Unit (CR/NC Option) (S)

Class Hours: 18 lecture total

Covers the strategy of drought tolerant plants, as well as the identification, collection, and propagation of native and non native plants used in the landscape. Includes one local plant collection field trip.

HORT 133 INTRODUCTION TO RESIDENTIAL LANDSCAPE DESIGN - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture total

Course designed for non-horticulture majors and includes use of plant materials, texture, form, color, and scale. The selection, arrangement, and placement of hardscape and softscape materials will be emphasized.

HORT 135 SELECTION AND CARE OF HOUSEPLANTS - 2 Units (CR/NC Option) (F/S)

Class Hours: 18 lecture/54 lab total

Designed to prepare and upgrade skills of those planning to work with houseplants in nurseries and plant shops. Emphasis on knowledge of plants and their care and use. Directed practical work in various types of planters constructed in the industry. Thorough discussion of propagation techniques, pests and diseases common to houseplants.

HORT 137 ORCHARD MANAGEMENT PRACTICES - 1 Unit (CR/NC Option) (I)

Note: There will be one four-hour lab on Saturday

Class Hours: 18 lecture/4 lab total

A study of the practices of producing fruits, nuts, and grapes. Varieties, areas, propagation, pollination, planting, pruning,

disease and insect control will be discussed.

HORT 150 SMALL SCALE SPECIALTY CROP FARMING - 1 Unit (CR/NC Option) (I)

Class Hours: 54 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.

HORT 197 SPECIAL TOPICS IN ENVIRONMENTAL HORTICULTURE MANAGEMENT - .5-2 Units (CR/NC) (I)

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.

HOSPITALITY (HOSP)

HOSP 10 INTRODUCTION TO THE HOSPITALITY INDUSTRY - 3 Units (CR/NC Option) (F)

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

Note: Students taking the Internet format of this course must have access to and a working knowledge of the Internet and Windows.

Overview of structure and relationship of components within the hospitality and travel industry. Economic and employment impact and review of food service, lodging, resorts, recreation enterprises, attractions, cruise, destination bureaus, travel agencies and related operations. Focuses on orientation to customer service, cultural/economic trends and career opportunities.

The equivalent of this course in content and objectives may also be offered on the Internet.

HOSP 20 HOSPITALITY OPERATIONS MANAGEMENT - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

Principles of organization, management, and decision models applied to the tasks and challenges of hospitality operations. Involves techniques of problem solving (including planning, organizing, staffing, directing and controlling operations) in areas of front office operations, housekeeping, personnel and security. The course also examines a systematic approach to front office procedures by detailing the flow of business through a lodging operation beginning with the reservation process and ending with check-out and settlement.

HOSP 30 FOOD, BEVERAGE AND LABOR COST CONTROLS - 2 Units (CR/NC Option) (I)

Class Hours: 36 lecture total

Covers the principles involved in an effective food and beverage control system, including standards determination; variable, semi-variable and fixed cost; the operating budget, cost-volume-profit analysis, income and cost control menu pricing, labor cost control, and computer applications.

HOSP 35 COMPUTER APPLICATIONS IN THE HOSPITALITY INDUSTRY - 3 Units (CR/NC Option) (I)

Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

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. The equivalent of this course in content and objectives may also be offered on the Internet.

HOSP 40 HUMAN RESOURCE MANAGEMENT IN THE HOSPITALITY INDUSTRY - 3 Units (CR/NC Option) (S)

Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

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 hospitality 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. The equivalent of this course in content and objectives may also be offered on the Internet.

HOSP 45 LEGAL ASPECTS OF THE HOSPITALITY INDUSTRY – 2 Units (F)

Class Hours: 36 lecture total

Legal Aspects of the Hospitality Industry explores potential legal issues and pitfalls that might impact the hospitality industry. The course covers legislation, such as the Civil Rights Act of 1991 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

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regulations, the National Labor Relations Act, copyright music laws, tax laws, tip reporting regulations, telephone resale regulations, consumer protection laws, franchise regulations, and product 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.

HOSP 50 HOSPITALITY MARKETING, SALES AND ADVERTISING - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

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.

HOSP 60 HOSPITALITY AND FINANCIAL MANAGEMENT - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

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 hospitality industry operation. 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.

HOSP 65 HOSPITALITY SUPERVISION – 3 Units (CR/NC Option) (F)

Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

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 hospitality industry. Supervisory roles, responsibilities, and essential managerial skills shall be discussed. The goal of the course is to equip students with the necessary authoritative and decision-making skills to be used in the workplace. The equivalent of this course in content and objectives may also be offered on the Internet.

HOSP 70 CUSTOMER SERVICE - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture total

This course is designed to provide the student with an understanding of the importance of customer service in a service economy. Students will gain insight into employer and customer expectations of service levels. Emphasis will be placed on developing specific traits, skills and abilities critical to providing excellent customer service.

HOSP 90 HOSPITALITY INTERNSHIP A - 3 Units (CR/NC Option) (I)

Class Hours: 162 lab total

Approved professional broad-based work experience of 162 hours in the hospitality industry.

HOSP 94 HOSPITALITY WORK SITE LEARNING – 1-4 Units

Corequisite: Students must be co-enrolled in either CULA 52, CULA 53, CULA 56, CULA 57, CULA 58, HOSP 10, HOSP 20, HOSP 30, HOSP 35, HOSP 40, HOSP 50, HOSP 60, HOSP 95, or have been enrolled to attend class. Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice. Hospitality majors must have a minimum of 3 units for both fall and spring semesters each year.

HOSP 95 HOSPITALITY INTERNSHIP B - 3 Units (CR/NC Option) (I)

Class Hours: 162 lab total

Approved professional in-depth work experience of 162 hours in the hospitality industry.

HOSP 97 SPECIAL TOPICS IN HOSPITALITY - .5-2 Units (CR/NC Option) (I)

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. *Note: 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 (CR/NC Option) (I)

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. *Note: Since subject matter varies each time the course is taught, this course is repeatable three times for a total of four enrollments.*

HUSV 94 HUMAN SERVICES WORK SITE LEARNING - 1-4 Units

Corequisite: During the first semester only, the student must co-enroll in one of the following: STU 1, STU 90 or STU 92. Enrolled in a minimum of seven (7) units including the Worksite Learning course.

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

HUSV 130 PRINCIPLES AND PRACTICES OF RESIDENTIAL CARE COUNSELORS - 3 Units (I)

Class Hours: 54 lecture total

A study of the principles and practices of child care. Research theories identifying developmental planning, developmental needs, separation, cottage 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 (I)

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 (I)

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 (I)

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 (I)

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 experience and knowledge into usable, practical skills for the work place.

HUSV 135 COUNSELING & COMMUNICATION IN RESIDENTIAL CARE - 3 Units (I)

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 communication 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 (I)

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 (CR/NC Option) (I)

Advisory: ENGL 1A eligibility

Class Hours: 54 lecture total

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 analysis, and attendance at selected performances are major requirements of this course.

HUM 4 HUMANITIES THROUGH THE FILM - 3 Units (CR/NC Option) (F/S)

Class Hours: 54 lecture total

An examination of the motion picture as an art form. Films from the silent era through contemporary works will be examined in order to analyze and appreciate them from philosophical, historical, literary, aesthetic and cultural perspectives.

HUM 70 EXPLORING CONTEMPORARY TELEVISION - 3 Units (CR/NC Option) (F/S)

Advisory: ENGL 190

Class Hours: 54 lecture total

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.
Subject to change. Check the current class schedule.

This course is designed to explore the effect that television has had on contemporary culture, with regard to language, art, history, and aesthetics. The changing content of the television medium and its influence on society will be examined through the humanities perspective.

HUM 100 SHASTA PERFORMING AND VISUAL ARTS CLINIC - .5 Unit (CR/NC) (I)

Class Hours: 24-27 lab total

A summer clinic offering students a variety of "hands-on" learning experiences and exposure to different aspects of the performing and visual arts. *Note: This course may be repeated three times for a total of four enrollments (2 units) since course content varies and skills are enhanced by supervised repetition and practice.*

HUM 304 ADVENTURES IN THE PERFORMING ARTS - 0 Units (CR/NC Option)(I)

Class Hours: 6-54 lecture total

Informal exploration of personalities and works in symphonic and chamber music, opera, modern drama, the American musical, and films, designed to promote increased personal enjoyment of these forms of artistic expression.

INDUSTRIAL TECHNOLOGY (INDE)

See Also: AUTO, CONS, DIES, and WELD

INDE 1 CAREER PLANNING FOR INDUSTRIAL TECHNOLOGY - 1 Unit (F/S)

Class Hours: 18 lecture total

Career opportunities and training requirements in automotive, heavy duty diesel and welding will be examined. Students will be assisted in identifying career opportunities and developing career goals. This class is required of all auto, diesel, and welding majors.

INDE 131 THEORY AND MECHANICS OF REFRIGERATION - 2 Units (CR/NC Option) (F/S)

Class Hours: 18 lecture/54 lab total

This course will cover the basic theory of the refrigeration cycle, the production, transmission and control of heat, refrigerants, compounds, testing and troubleshooting.

INDE 132 DIAGNOSTICS AND SERVICING OF REFRIGERATION SYSTEMS - 2 Units (CR/NC Option) (F/S)

Prerequisite: INDE 131

Advisory: INDE 133 is highly recommended

Class Hours: 18 lecture/54 lab total

INDE 132 will review the basics of the refrigeration cycle, components, and refrigerants covered in INDE 131, and proceed into diagnostics and servicing of refrigeration systems. A primary objective will be to provide the student with a working knowledge of refrigeration functions and troubleshooting methods.

INDE 133 THEORY & MAINTENANCE OF AUTOMATED ELECTRO-MECHANICAL SYSTEMS - 2 Units (CR/NC Option) (F/S)

Class Hours: 18 lecture/54 lab total

This course will cover the basics of electrical and electro-mechanical theory and applications as pertains to assembly line, light duty, vending, and related industries. Included will be reading and diagnostic interpretation of circuit diagrams and schematics, problem solving and repair of motors, mechanisms, solid state components, switches, solenoids, and delivery systems.

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 161 - 2 Units (CR/NC Option) (F/S)

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 162 - 2 Units (CR/NC Option) (F/S)

Prerequisite: INDE 161 (Four Semesters)

Class Hours: 18 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 163 - 2 Units (CR/NC Option) (F/S)

Prerequisite: INDE 162 (Four Semesters)

Class Hours: 18 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.*

INTERDISCIPLINARY STUDIES (INTR)

INTR 15 FIELD METHODS IN MATHEMATICS - 5 Units

Prerequisite: MATH 102

Class Hours: 72 lecture/54 independent field study total

This statistics course is designed for students interested in natural resources, or environmental science. The field study portion of this course will include the design and implementation of a field study, and the collection of data from a field study. The data collected will be analyzed using statistical software, graphing calculators and techniques learned in the lecture part of the course. The material covered in the lecture part of this course is equivalent to that covered in an introductory statistics course and includes: experimental design, methods of data collection, and data analysis including measures of central tendency and dispersion, elementary probability theory, the binomial distribution, the normal distribution with discrete and continuous data, sampling theory, regression and correlation, the CHI-square distribution and analysis of variance.

INTR 21 INTERDISCIPLINARY GRANT DEVELOPMENT - 2 Units (CR/NC Option)

Class Hours: 36 lecture total

In this course, students will learn about grants and how to develop grant proposals. The nature of grants, their sources, funding, preparation and form will be explored.

INTR 30 SCIENCE COLLOQUIUM - 1 Unit (CR/NC Only) (S)

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 course may be repeated three times for a total of four enrollments.*

INTR 97 SPECIAL TOPICS IN INTERDISCIPLINARY STUDIES - .5-2 Units (CR/NC 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.*

INTR 110 CLINICAL APPLICATIONS OF MATHEMATICS - 1 Unit (CR/NC Option)

Class Hours: 18 lecture total

This course is designed to assist nursing students to be successful in performing the calculations typically required for safe clinical medicine administration. Topics include review of essential math, methods of calculating dosages, and application of techniques for oral, injectable, and basic intravenous medications.

JAPANESE (JAPN)

JAPN 1 ELEMENTARY JAPANESE - 5 Units (CR/NC Option) (CAN# JAPN 2) (F)

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 (CR/NC Option) (CAN # JAPN 4) (S)

Prerequisite: A grade of C or higher in JAPN 1 or qualifying score on the Language Placement Exam

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 (CR/NC Option) (CAN # JAPN 8) (S)

Prerequisite: JAPN 2 or equivalent

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.

JAPN 4 INTERMEDIATE JAPANESE - 5 Units (CR/NC Option) (I)

Prerequisite: JAPN 3 or equivalent

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.

JOURNALISM (JOUR)

JOUR 21 INTRODUCTION TO MASS COMMUNICATIONS - 3 Units (CR/NC Option) (CAN # JOUR 4) (S)

Advisory: ENGL 1A

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 study 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 - 2 Units (F/S/I)

Advisory: ENGL 1A eligibility 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 Lance. Instructional topics include advanced newswriting (first semester), principles of editing (second semester), publication design (third semester), and management issues (fourth semester). The two-hour instructional component is a mixture of lectures, discussion and group work. The lab component will include staff meetings 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 work site 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 (CR/NC Option) (CAN # JOUR 2) (F/S)

Advisory: ENGL 190 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 (S)

NOTE: Students must furnish own camera, film and paper.

Class Hours: 18 lecture/54 lab total

Theory and practice of photography for the print media, including college publications and publicity. Picture-taking and darkroom procedures. Student must furnish own camera, film and paper.

LEGAL ASSISTANT (LEGL)

LEGL 94 LEGAL ASSISTANT WORK SITE LEARNING - 1-4 Units (F/S)

Prerequisite: LEGL 141, LEGL 142, and CIS 1

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

LEGL 97 SPECIAL TOPICS IN LEGAL ASSISTANT - .5-2 Units (CR/NC Option) (I)

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 (CR/NC Option) (I)

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.*

LEGL 139 INTRODUCTION TO PARALEGALISM - 3 Units (F)

Class Hours: 54 lecture total

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.

LEGL 140 LEGAL RESEARCH AND WRITING I -3 Units (F)

Prerequisite: A grade of C or higher in ENGL 190

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 141 LEGAL RESEARCH AND WRITING II - 3 Units (S)

Prerequisite: LEGL 140

Class Hours: 54 lecture total

Designed to expand both legal research and legal writing skills. Students prepare in-depth legal documents based on the student's research with emphasis on legal writing. Required for Legal Assistant majors.

LEGL 142 DISCOVERY - 3 Units (S)

Prerequisite: LEGL 144

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 admission and inspection demands. Required for Legal Assistant majors.

LEGL 143 REAL ESTATE LAW - 3 Units (F)

Class Hours: 54 lecture total

Analyzes form 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.

LEGL 144 CIVIL PROCEDURES AND LITIGATION - 3 Units (S)

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, pleadings, motions, appeals, and the proper means and forms by which matters are submitted to the court system. Required for Legal Assistant majors.

LEGL 145 TORTS - 3 Units (S)

Class Hours: 54 lecture total

Provides students with the study of substantive law of torts with emphasis on California law. Required for Legal Assistant majors.

LEGL 146 BANKRUPTCY PRACTICES - 2 Units (I)

Class Hours: 36 lecture total

A comprehensive study of bankruptcy regulations, procedures, pleadings and forms. Recommended as an elective in the Legal Assistant program.

LEGL 147 CONTRACT, EMPLOYMENT AND AGENCY - 2 Units (F)

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 148 FAMILY LAW - 3 Units (S)

Class Hours: 54 lecture total

A study of the law and procedures in California related to marriage, domestic violence, legal separation, spousal and child support, community property and dissolution of the marriage. Emphasis is on preparation of documents for attorney review. Required for Legal Assistant majors.

LEGL 149 COMMERCIAL LAW - 2 Units (S)

Class Hours: 36 lecture total

Analyzes forms and procedures of commercial practices with particular emphasis on common sales transactions, the nature of commercial paper, secured sales transactions, creditors' rights, and insurance. Required for Legal Assistant majors.

LEGL 150 BUSINESS ORGANIZATIONS - 2 Units (I)

Class Hours: 36 lecture total

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.

LEGL 151 ESTATE PLANNING - 3 Units (I)

Class Hours: 54 lecture total

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.

LEGL 152 COLLECTIONS AND JUDGMENTS - 2 Units (F)

Prerequisite: LEGL 144

Class Hours: 36 lecture total

Designed to acquaint the student with the procedures available for obtaining collection on an existing Money Judgment. Topics will include issuance of the Writ of Execution, Levy, Wage Garnishment and Claims of Exemption. In addition, discussion of pre-judgment collection remedies shall be presented including State and Federal Fair Debt Collection Practices Act. Required for Legal Assistant majors.

LEGL 153 PROBATE - 3 Units (S)

Prerequisite: LEGL 144

Class Hours: 54 lecture total

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 conservatorships and guardianships. Required for Legal Assistant majors.

LEGL 155 TECHNIQUES OF INTERVIEW AND INVESTIGATION - 2 Units (I)

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 checklists and the orderly assembling and collection of information necessary to assist in the evaluation of the case and issues. Recommended as an elective in the Legal Assistant program.

LEGL 156 CRIMINAL LAW AND PROCEDURE - 3 Units (I)

Class Hours: 54 lecture total

This course addresses 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.

MARKETING (MKTG)

See Also: ACCT, BUAD, MIS, OAS, and REAL

MKTG 70 SALES - 3 Units (CR/NC Option) (S)

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.

MKTG 72 ADVERTISING - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

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.

MKTG 74 PRINCIPLES OF MARKETING - 3 Units (CR/NC Option) (S)

Note: Students taking the Internet format of this course must have access and working knowledge of the Internet and Windows.

Class Hours: 54 lecture total (when offered in the Distance Education format, hour 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.

MKTG 76 EVENT MARKETING - 3 Units (I)

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 WORK SITE LEARNING - 1-4 Units

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 16 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

MKTG 97 SPECIAL TOPICS IN MARKETING - .5-2 Units (CR/NC Option) (I)

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 (CR/NC Option) (I)

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.*

MKTG 176 RETAIL MANAGEMENT - 3 Units (CR/NC Option) (I)

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

Note: Students taking the Internet format of this course must have access to and a working knowledge of the Internet and Windows.

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 business that deal with retail merchants, i.e., wholesalers, advertising media, insurance agencies, accounting firms and other service areas. The equivalent of this course in content and objectives may also be offered on the Internet.

MATHEMATICS (MATH)

MATH 2 PRECALCULUS – 5 Units (CAN # MATH 16) (F/S)

Prerequisite: A "C" or better in MATH 102 or equivalent skill level

Advisory: ENGL 190.

Class Hours: 90 lecture total (when offered in the Distance Education format, hours will total 270)

A course using graphing calculators to prepare the student for MATH 3A (Calculus). The content includes linear, polynomial, rational, logarithmic, exponential and trigonometric functions, conic sections, matrices, parametric equations, and their applications.

MATH 3A CALCULUS 3A - 4 Units (CAN# MATH 18) (MATH SEQ B) (MATH SEQ C) (F/S)

Prerequisite: A "C" or better in MATH 2 or equivalent skill level

Advisory: ENGL 190

Note: Students taking the Internet format of this course must have access to and a working knowledge of the Internet and Windows.

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. The equivalent of this course in content and objectives may also be offered on the Internet.

MATH 3B CALCULUS 3B - 4 Units (CAN# MATH 20) (MATH SEQ B) (MATH SEQ C) (F/S)

Prerequisite: A "C" or better in MATH 3A or equivalent skill level

Advisory: ENGL 190

Note: Students taking the Internet format of this course must have access to and a working knowledge of the Internet and Windows.

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. The equivalent of this course in content and objectives may also be offered on the Internet.

MATH 4A CALCULUS 4A - 4 Units (CAN# MATH 22) (MATH SEQ C) (F)

Prerequisite: A "C" or better in MATH 3B

Advisory: ENGL 190

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 CALCULUS 4B - 4 Units (CAN# MATH 24) (S)

Prerequisite: A "C" or better in MATH 3B

Advisory: ENGL 190

Class Hours: 72 lecture total

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

A course covering linear differential equations with constant coefficients; matrices and linear algebra; differential equations of linear systems; differential equations of other types; numerical methods for solving differential equations; Fourier series; and Laplace transformations.

MATH 8 FINITE MATHEMATICS - 3 Units (CAN # MATH 12) (F/S)

Prerequisite: A grade of "C" or better in MATH 102 or a qualifying score on the Math Placement Exam

Advisory: A grade of "C" or higher in ENGL 190 or a qualifying score on the English Placement Exam

Class Hours: 54 lecture total

This course is intended to provide (along with MATH 9) the mathematical skills needed for entry into upper division Business, Social, and Behavioral Science courses. The course will cover: sets, matrices, and system of equations and inequalities; linear programming; counting techniques and introduction to probability; and mathematics of finance.

MATH 9 SURVEY OF CALCULUS - 3 Units (CAN # MATH 30) (F/S)

Prerequisite: A "C" or better in MATH 102 or equivalent skill level

Advisory: ENGL 190

Hours: 54 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 (CAN# MATH 8) (S)

Prerequisite: "C" or better in MATH 102 or equivalent skill level

Advisory: ENGL 190

Class Hours: 54 lecture total

A basic course in trigonometry for those students not planning to take calculus. Topics covered include angles, units of measurement, trigonometric functions, solutions of right and oblique triangles, identities, graphs and vectors. Numerical methods and problem solving using a graphic calculator are emphasized.

MATH 11 PATTERNS OF MATHEMATICAL THOUGHT - 3 Units (F/S)

Prerequisite: A grade of "C" or better in MATH 102 or equivalent skill level

Advisory: ENGL 190

Class Hours: 54 lecture total

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.

MATH 13 COLLEGE ALGEBRA (formerly MATH 1) - 3 Units (F/S)

Prerequisite: A "C" or better in MATH 102 or equivalent skill level

Advisory: ENGL 190

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.

MATH 14 INTRODUCTION TO STATISTICS - 3 Units (F/S) (CAN# STAT 2)

Prerequisite: A grade of "C" or higher in MATH 102 or a qualifying score on the Math Placement Exam

Advisory: A grade of C or higher in ENGL 190 or a qualifying score on the English Placement Exam

Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

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

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. The equivalent of this course in content and objectives may also be offered on the Internet.

MATH 41A CONCEPTS OF ELEMENTARY MATHEMATICS - 3 Units (CAN MATH # 4) (F/S)

Prerequisite: Grade of "C" or better in MATH 102 or its equivalent

Advisory: ENGL 190

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 numeration, arithmetic processes, inductive and deductive reasoning and problem solving.

MATH 41B CONCEPTS OF ELEMENTARY MATHEMATICS - 3 Units (F/S)

Prerequisite: Grade of "C" or better in MATH 102 or equivalent skill level (MATH 41A is not a prerequisite for MATH 41B)

Advisory: ENGL 190

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 61 MATH WORKSHOP– WHOLE NUMBERS - 1 Unit (CR/NC Only) (I)

Note: This course is valuable for the student with an interest in elementary and home school teaching. It is recommended, but not required, that MATH 61-64 be taken in numerical sequence.

Class Hours: 18 lecture total

The emphasis is placed on developing a deeper understanding of the mathematics that is taught at the elementary school level. Class sessions will be devoted to developing content and developing teaching methods for problems using whole numbers.

MATH 62 MATH WORKSHOP – REAL NUMBERS - 1 Unit (CR/NC Only) (I)

Note: This course is valuable for the student with an interest in elementary and home school teaching. It is recommended, but not required, that MATH 61-64 be taken in numerical sequence.

Class Hours: 18 lecture total

The emphasis is placed on developing a deeper understanding of the mathematics that is taught at the elementary school level. Class sessions will be devoted to developing content and developing teaching methods for problems with integer, rational, and real numbers.

MATH 63 MATH WORKSHOP – RATIOS, PROPORTIONS, PERCENTS - 1 Unit (CR/NC Only) (I)

Note: This course is valuable for the student with an interest in elementary and home school teaching. It is recommended, but not required, that MATH 61-64 be taken in numerical sequence.

Class Hours: 18 lecture total

The emphasis is placed on developing a deeper understanding of the mathematics that is taught at the elementary school level. Class sessions will be devoted to developing content and developing teaching methods for problems with ratios, proportions, and percents.

MATH 64 MATH WORKSHOP – FUNCTIONS, ALGEBRA, PROBLEM SOLVING - 1 Unit (CR/NC Only) (I)

Note: This course is valuable for the student with an interest in elementary and home school teaching. It is recommended, but not required, that MATH 61-64 be taken in numerical sequence.

Class Hours: 18 lecture total

The emphasis is placed on developing a deeper understanding of the mathematics that is taught at the elementary school level. Class sessions will be devoted to developing content and developing teaching methods for problems with functions and algebra.

MATH 65 MATH WORKSHOP – PROBABILITY AND STATISTICS - 1 Unit (CR/NC Only) (I)

Note: This course is valuable for the student with an interest in elementary and home school teaching.

Class Hours: 18 lecture total

The emphasis is placed on developing a deeper understanding of the mathematics that is taught at the elementary school level. Class sessions will be devoted to developing content and developing teaching methods for probability and statistics.

MATH 66 MATH WORKSHOP – GEOMETRY - 1 Unit (CR/NC Only) (I)

Note: This course is valuable for the student with an interest in elementary and home school teaching.

Class Hours: 18 lecture total

The emphasis is placed on developing a deeper understanding of the mathematics that is taught at the elementary school level. Class sessions will be devoted to developing content and developing teaching methods for geometry.

MATH 100 TECHNICAL APPLICATIONS OF MATHEMATICS - 3 Units (F/S)

Prerequisite: A "C" or better in MATH 240 or appropriate score on the Math Placement Test

Advisory: ENGL 190 or appropriate score on the English Placement Test. MATH 100L is an optional applications lab designed to complement this course. This lab is required for some programs. Co-enrollment is advised.

Class Hours: 54 lecture total

This course blends mathematical topics with practical applications. Emphasis will be placed on the use of mathematics in solving problems, drawn from various vocational fields. Topics in arithmetic, algebra, geometry, and right-triangle trigonometry will be covered. Concurrent enrollment in MATH 100L is encouraged. MATH 100 provides a practical, hands-on means of satisfying the A.S. degree's Math Competency Requirement.

MATH 100L TECHNICAL APPLICATIONS OF MATHEMATICS - 1 Unit (F/S)

Prerequisite: MATH 100 or MATH 101 or appropriate score on the Math Placement Test (MATH 100 or MATH 101 may be taken concurrently)

Advisory: ENGL 190 or appropriate score on the English Placement Test.

Class Hours: 54 lab total

This course provides students with hands-on activities that reinforce the connection between vocational courses and mathematics. While this lab is designed to accompany MATH 100, MATH 101 students, or students already possessing the required math skills, are encouraged to utilize this lab.

MATH 101 BASIC ALGEBRA - 3 Units (F/S)

Prerequisite: A "C" or better in MATH 240 or qualifying scores on the Mathematics Placement Test

Advisory: ENGL 280

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.

MATH 102 INTERMEDIATE ALGEBRA - 4 Units (F/S)

Prerequisite: Grade of "C" or better in MATH 101 or qualifying scores on the Mathematics Placement Test

Advisory: ENGL 190

Class Hours: 72 lecture total (when offered in the Distance Education format, hours will total 216)

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.

MATH 110 ESSENTIAL MATH (FOR THE ASSOCIATE DEGREE) – 3 Units (F/S) Pending Chancellor's Office approval

Prerequisite: Grade of "C" or better in MATH 240 or appropriate score on the Mathematics Placement Test

Advisory: Grade of "C" or better in ENGL 280

Note: Students taking the Internet format of this course must have access to and a working knowledge of the Internet and Windows

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

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. The equivalent of this course in content and objectives may also be offered on the Internet.

MATH 150 OVERCOMING MATH ANXIETY – 1 Unit (CR/NC Option) (F/S)

Note: Students do not necessarily need to be concurrently enrolled in a math class.

Class Hours: 18 lecture total

Many specific techniques for managing anxiety and overcoming psychological barriers to math. Reversing negative math "self-talk". Creating positive attitudes and building self-confidence in math. Focus on learning styles and study skills, specifically for math. Techniques for overcoming test anxiety. Analysis of the importance of mathematics in all aspects of life.

MATH 197 SPECIAL TOPICS IN MATHEMATICS - .5-2 Units (CR/NC Option) (I)

Class Hours: 9-36 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 (F/S)

Prerequisite: ENGL 260 with a grade of "C" or better or appropriate score on the Reading Placement Test

Note: Students will be expected to know multiplication tables by the fourth week of class.

Class Hours: 54 lecture total

A course covering the basic skills of addition, subtraction, multiplication and division of whole numbers, fractions, and decimals, with word problem applications. Subjects also taught include prime numbers, order of operations, ratios, and proportions.

MATH 240 PRE-ALGEBRA - 3 Units (F/S)

Prerequisite: A grade of "C" or better in MATH 220 or appropriate score on the Mathematics Placement Test. ENGL 260 with a grade of "C" or better or appropriate score on the Reading Placement Test.

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

This course provides a transition from arithmetic to algebra, covering a review of arithmetic operations; introducing the concepts of variables and signed numbers; the properties of addition, subtraction, multiplication and division containing variables; solution of equations; word problems; and an introduction to factoring. This course prepares the student for entry into MATH 101, 100 and/or BUAD 106.

MATH 382 MATHEMATICS WORKSHOP - 0 Units (F/S)

Class Hours: TBA

A program to help students overcome mathematics learning problems and achieve mathematical success.

MICROBIOLOGY (MICR)

See Also: AGRI, ANAT, BIOL, BOT, PHY, and ZOO

MICR 1 MICROBIOLOGY - 5 Units (CAN # BIOL 14) (F/S)

Prerequisite: CHEM 1A, 2A, 2B or 10

Class Hours: 54 lecture/108 lab total

This course is an introduction to microorganisms, including bacteria, viruses, protozoans, fungi, and helminths. Topics covered include the general properties, characteristics, and classification of microbes, identification and control, genetics and biotechnology, physiology, metabolism, and ecology. Also discussed are immunity and the medical impact of microbial diseases.

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.

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- MUS 1 *MUSIC FUNDAMENTALS - 3 Units (CR/NC Option) (F/S)***
Advisory: Concurrent enrollment in MUS 6 and 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 singing 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.
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- MUS 2 *DIATONIC HARMONY AND MUSICIANSHIP - 5 Units (CR/NC Option) (CAN # MUS 2) (F)***
Prerequisite: Successful completion of MUS 1 or a passing grade on the MUS 2 pretest after enrollment
Class Hours: 54 lecture/72 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)
 A study of scales and modes, key signatures and intervals. The anatomy of harmony and melody. Four-part chorale writing, harmonic progression and Major-Minor Dominant 7th chords. This will be integrated with comparable practice in 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.
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- MUS 3 *DIATONIC HARMONY AND MUSICIANSHIP - 5 Units (CR/NC Option) (CAN# MUS 4) (S)***
Prerequisite: Successful completion of MUS 2 or a passing grade on the MUS 3 pretest after enrollment
Class Hours: 54 lecture/72 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)
 Course will contain idiomatic work from selected historical periods with a critical approach to stylistic analysis. The VII diminished and half-diminished 7th chords, modulation, the non-dominant 7th chords, secondary dominants, borrowed chords, 9ths, 11ths, and 13th chords will be introduced. The course work utilizes a lab period to build and apply keyboard skills. 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.
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- MUS 4 *CHROMATIC HARMONY - 5 Units (CR/NC Option) (F)***
Prerequisite: Successful completion of MUS 3 or a passing grade on the MUS 4 pretest after enrollment
Class Hours: 54 lecture/72 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)
 A study of chromatic alterations as used during the 18th and 19th century. Two-and three-part forms, the Neapolitan 6th Chords, the Augmented 6th Chords, altered dominants, chromatic mediant and altered chromatic chords will be studied to develop an understanding of the concept of Sonata-Allegro form. The course work utilizes a lab period to build and apply keyboard skills. 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.
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- MUS 5 *TWENTIETH CENTURY HARMONY - 5 Units (CR/NC Option) (S)***
Prerequisite: Successful completion of MUS 4 or a passing grade on the MUS 5 pretest after enrollment
Class Hours: 54 lecture/72 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)
 Analytical techniques: development of critical judgments about 20th Century styles. A study of the compositional 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-tertian chords, pan-diatonicism, chord cluster, meter changing, 12-tone techniques and other modern developments. Elements of Jazz and Rock will be studied with the course culminating in the writing of a composition. 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.
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- MUS 6 *COMPUTER ASSISTED MUSIC INSTRUCTION - .5 Unit (CR/NC) (I)***
Corequisite: Concurrent enrollment in a music course
Class Hours: 27 lab total
 A computer-assisted course to develop skills in writing and identifying the elements of music: rhythm, pitch, expression, scales, modes, ear-training, dictation, musical terminology, diatonic harmony, chromatic harmony, jazz harmony and other materials based upon common practice harmony. The course may be taken concurrently with Music Fundamentals, Diatonic Harmony, Chromatic Harmony, 20th Century Techniques or other music courses. *Note: This course may be repeated three times for credit for a maximum of four total enrollments as the subject matter varies and increases in difficulty.*
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- MUS 7 *BEGINNING ARRANGING & SONGWRITING - 3 Units (S)***
Prerequisite: MUS 1 or equivalent
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 transposition, rhythmic and articulation considerations, melodic embellishments, and the jazz and rock rhythm sections.
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- MUS 10 *MUSIC APPRECIATION - 3 Units (CR/NC Option) (Can # MUS 10) (F/S)***

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 (F/S)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 (I)Prerequisite: MUS 1 or equivalent skill levelHours: 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 will include: computer and electronic music terminology and usage, synthesizers, samplers, synthesis methods, Musical Instrument Digital Interface (MIDI), audio gear, MIDI sequencers, click track, quantizing, multi-track recording, and various computer software including notation, sequencing, composing and performance software. The course will involve lecture and computer music laboratory settings. This course is introductory level and is not designed for intermediate or advanced study.

MUS 20 BRASS (formerly MUS 20AB)- 1 Unit (CR/NC Option) (I)Prerequisite: Ability to read music notation.Class Hours: 36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)

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. Course recommended for Music Core Program. *Note: 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 21A/21B) - 1 Unit (CR/NC Option) (F/S)Note: Students must provide their own instrumentsClass Hours: 36 lab (for every 2 lab hours spent in class, 1 additional hour of out-of-class work is assigned)

A beginning course in the techniques of guitar, including basic chords, strums, finger-picking, and tuning. Guitar history and styles and music fundamentals are also presented. Course designed for 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 22 BEGINNING PIANO (formerly MUS 22A) - 1 Unit (CR/NC Option) (F/S)Class Hours: 36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)

A fundamental course in keyboard techniques (simple piano music, accompaniments, chords, scales, and exercises) and music fundamentals (notation, melody, harmony and rhythm). Designed for Elementary Education majors and Pre-Music Core Program.

MUS 23 INTERMEDIATE PIANO (formerly MUS 22BD) - 1 Unit (CR/NC Option) (F/S)Prerequisite: MUS 22Class Hours: 36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)

A developmental course in keyboard techniques (simple piano music, accompaniments, chords, scales, and exercises) and music fundamentals (notation, melody, harmony and rhythm). Course is designed for Elementary Education majors and Pre-Music Core Program. *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 (CR/NC Option) (I)Prerequisite: Ability to read music notationClass Hours: 36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)

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. Course is recommended for Music Core Program.

MUS 25 STRINGS (formerly MUS 25AB/25CD) - 1 Unit (CR/NC Option) (I)Prerequisite: Ability to read music notationNote: Instruments provided if availableClass Hours: 36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)

A beginning course in violin, viola, violon cello 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/ violas. 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, detache, 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 style. *Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.*

MUS 28 WOODWINDS (formerly MUS 28A) - 1 Unit (CR/NC Option) (I)

Prerequisite: Ability to read music notation

Class Hours: 36 lab (for every 2 lab hours spent in class, 1 additional hour of out-of-class work is assigned).

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.

Course recommended for Music Core Program. *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 (CR/NC Option) (F/S)

Class Hours: 36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)

A beginning course in the vocal techniques of tone quality, breath control, posture, diction and interpretation. Course recommended for Music Core Program, Theatre Arts majors and Elementary Education majors.

MUS 30 INTERMEDIATE VOICE (formerly MUS 27B) - 1 Unit (CR/NC Option) (F/S)

Prerequisite: MUS 29

Class Hours: 36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)

A developmental course in vocal techniques, with emphasis on repertoire and stage deportment. Course recommended for Music Core Program, Theatre Arts majors and Elementary Education majors.

MUS 31 CHAMBER CHOIR - 1 Unit (I)

Advisory: Concurrent enrollment in Concert Choir

Note: Admission by audition to determine performance capability

Class Hours: 54 lab total

Organized for advanced singers. Admission to the class will be by audition to determine performance capability. This course provides performance by solos, duets, trios, quartets and full ensemble. Literature is selected from all periods of music with the emphasis on madrigals. Field trips and performances are required. This course cannot be challenged, must be taken for a grade, and is transferable. Students are expected to progress in skill level to be able to master more advanced material. *Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.*

MUS 33 JAZZ ENSEMBLE - 1 Unit (F/S)

Prerequisite: Proven competency on instrument

Class Hours: 54 lab total

This class offers experience in the study and performance of big band commercial and jazz arrangements. Field trips and performances are required. Concurrent enrollment in Symphonic Band is recommended. *Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.*

MUS 35 VOCAL JAZZ ENSEMBLE - 1 Unit (I)

Note: Field trips and performances are required. Admission by audition to determine performance capability.

Class Hours: 54 lab total

Organized for students interested in singing jazz and commercial music. *Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.*

MUS 39 CHAMBER MUSIC - 1 Unit (I)

Prerequisite: Proven competency on a standard musical instrument

Note: Field trips and performances are required. Admission by audition to determine performance capability.

Class Hours: 36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)

A music activity course to study and perform literature composed for small music ensembles. Students must be proficient in music of a medium or higher grade of difficulty, either instrumentally or vocally, and should be able to sight read with some degree of fluency in order to perform more repertoire. Concurrent enrollment in a Large Ensemble is recommended. *Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.*

MUS 40 CONCERT CHOIR - 1 Unit (I)

Note: Field trips and performances are required. Admission by audition to determine performance capability.

Class Hours: 54 lab total

A performing mixed choir (S.A.T.B.) that sings with and without accompaniment. A variety music for large choral groups is studied. *Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.*

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- MUS 41 SHASTA COLLEGE WOMEN'S ENSEMBLE - 1 Unit (CR/NC Option) (I)**
Note: Field trips and performances are required (SSA). Admission by audition to determine performance capability.
Class Hours: 54 lab total
 A performing choir that sings choral works for women's chorus (SSA) from all musical period 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.*
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- MUS 42 SHASTA COLLEGE COMMUNITY CHORALE - 1 Unit (CR/NC Option) (I)**
Note: Field trips and performances are required. Admission by audition to determine performance capability.
Class Hours: 54 lab total
 A performing mixed choir (S.A.T.B.) that sings choral works from all musical periods and styles. One major choral oratorio, mass requiem or cantata is emphasized each semester. *Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.*
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- MUS 43 SHASTA COLLEGE COMMUNITY SYMPHONY (formerly MUS 43AD) - 1 Unit (CR/NC Option) (F/S)**
Prerequisite: Proven competency on instrument
Note: Admission by audition to determine performance capability.
Class Hours: 54 lab total
 A college/community symphony orchestra providing an opportunity for the students and community instrumentalists to perform standard and contemporary orchestral literature. Field trips and performances are required. All community groups rehearse evenings only. *Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.*
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- MUS 44 SHASTA COLLEGE YOUTH SYMPHONY - .5-1 Unit (CR/NC Option) (F/S)**
Note: Field trips and performances are required. Admission by audition to determine performance capability.
Class Hours: 27-54 lab total
 A college and community based symphony orchestra for the training of young musicians. Provides an opportunity for them to perform standard and contemporary literature for younger musicians preparatory to participation in the Shasta College Community Orchestra (MUS 43). 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 45 WIND BAND - 1 Unit (F/S)**
Prerequisite: Ability to read music and play a standard woodwind, brass, or percussion instrument.
Note: Admission by audition to determine performance capability.
Class Hours: 54 lab total
 A course performing both standard and contemporary band (woodwinds, brass, and percussion) literature. 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 46 SHASTA COLLEGE COMMUNITY SYMPHONIC BAND - 1 Unit (I)**
Prerequisite: Ability to read music and play a standard woodwind, brass, or percussion instrument.
Class Hours: 54 lab total
 A course performing both standard and contemporary band literature. This course does not require an audition. Rehearses evenings only. 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 COMMUNITY JAZZ ENSEMBLE - 1 Unit (F/S)**
Prerequisite: Ability to sight read and proven competency on instrument.
Class Hours: 54 lab total
 This class offers experience in the study and performance of big-band jazz arrangements. Rehearses evenings only. Performances required. *Note: This course may be repeated three times for a total of four enrollments since skills are enhanced by supervised repetition and practice.*
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- MUS 61 PERFORMANCE ANALYSIS - .5 Unit (F/S)**
Class Hours: 18 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)
 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 98 SPECIAL MUSIC TOPICS (formerly MUS 98AD) .5-2 Units (CR/NC Option) (I)**
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 301 ORCHESTRA FOR SENIORS - 0 Units (CR/NC Option) (F/S)**
Advisory: Demonstrated proficiency in music in the ensemble medium.
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 (CR/NC) (F/S)

Advisory: Demonstrated proficiency in the ensemble medium.

Class Hours: 18-54 lab total

A course designed to offer opportunities for older adults to participate in ensemble music with the Symphonic Band.

MUS 303 MUSIC FOR SENIORS - 0 Units (CR/NC) (F/S)

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)

See Also: BIOL, BOT, ENVR, NR, PHSC, PHYS, and ZOO

NHIS 15 NATURAL HISTORY - 3 Units (CR/NC Option) (F/S)

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 61 NATURAL HISTORY OF THE MODOC LAVA BEDS - .5 Units (I)

Note: Students must provide their own camping gear and food. The college requires that students utilize bus transportation provided at no additional cost.

Class Hours: 9 lecture/17 lab total

A two-day field trip designed to provide the student with a background in the flora, fauna, and geology of Northeastern California, usually scheduled in early Summer Session. The field trip will include multiple stops on the way to and from (by bus) a campground in Lava Beds National Monument. Stops will include Cow Creek; Montgomery Creek; Hatchet Mt.; Burney Falls; Petroglyphs: Captain Jack's Stronghold; Mush Pot, Mammoth, and Skull Ice Cave; Spener Chimneys; Glass Mountain; Medicine Lake, and other stops as time permits. This is a field trip course. Two pre-trip (3 hour) sessions will provide background lecture information on the region.

NHIS 62 NATURAL HISTORY OF THE LASSEN PARK AREA - .5 Unit (I)

Note: Students must provide their own camping gear and food. The college requires that students utilize bus transportation provided at no additional cost.

Class Hours: 9 lecture/17 lab total

A two-day field trip designed to provide the student with a background in the flora, fauna, and geology of the Lassen Park Area. The field trip will include multiple stops on the way to and from (by bus) a campground in Lassen Park. These stops include Bear Creek, Manzanita and Reflection Lake, Chaos Jumbles, Hot Rock, King's Creek Meadows, Lassen Summit (a strenuous/non-mandatory 2 _ mile hike), Bumpass Hell, the Sulfur Works, Butte Lake, Cinder Cone and other stops as time permits. Two pre-trips (3-hour) sessions will provide background lecture information on the region.

NHIS 63 NATURAL HISTORY OF THE BLACK ROCK DESERT - 1 Unit (I)

Note: Students must provide their own camping gear and food. The college requires that students utilize bus transportation provided at no additional cost.

Class Hours: 9 lecture/27 lab total

A four-day field trip during the summer designed to provide the student with a background in the flora, fauna, and geology of the Black Rock Desert (Northwestern Nevada). The field trip will include multiple stops on the way to and from (by bus) campgrounds in and near the Black Rock Desert. Time will be spent at specific field localities and will include instructional hikes, field exercises, and lecture. One (2-hour) pre-trip meeting for orientation and planning, and two (3-hour) pre-trip lecture sessions will be held to provide background lecture information on the region. A four-day and three-night field trip will involve primitive camping and moderately rigorous hikes. Approximately four hours per day in lecture and six hours per day field exercises.

NHIS 64 NATURAL HISTORY OF MT. SHASTA AND VICINITIES - .5 Units (I)

Note: Students must provide their own camping gear and food. The college requires that students utilize bus transportation provided at no additional cost.

Class Hours: 9 lecture/17 lab total

A two-day field trip designed to provide the student with a background in the flora, fauna, and geology of Mt. Shasta and vicinity. The field trip will include multiple stops on the way to and from (by bus) a campground near Mt. Shasta. Includes stops in the I-5/Sacramento Canyon corridor, Castella, Mt. Shasta at Panther Meadows (no strenuous hiking), Castle Lake, Black Butte, Forest Mt., Callahan, Scott's Mt., and other spots as time permits. Two pre-trip (3-hour) sessions will provide background lecture information on the region.

NHIS 65 NATURAL HISTORY OF PATRICK'S POINT - 1 Unit (CR/NC Only) (S)

Class Hours: 36 hours total - includes 1 orientation meeting plus 1 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. Students must provide their own camping gear and food. The college supplies and requires bus transportation for no additional cost. 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 – 1 Unit (CR/NC Option) (I)

Note: Required overnight field trip.

Class Hours: 9 lecture/27 lab total

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 (NR)

See also: ENVR, GIS and INTR

NR 1 INTRODUCTION TO NATURAL RESOURCES – 3 Units (CR/NC Option) (F)

Class Hours: 36 lecture/54 lab total

An introduction to the integrated 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.

NR 6 NATIVE PLANT IDENTIFICATION - 3 Units (S)

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.

NR 8 CAREER PLACEMENT – NATURAL RESOURCES - 1 Unit (F/S)

Class Hours: 18 lecture total

This course will assist the students to learn interview techniques, to develop an employment portfolio, and to interview with several potential employers. It is the purpose of the class to help the student obtain the best employment upon graduation.

NR 22 RANGE MANAGEMENT - 3 Units (CR/NC Option) (S)

Class Hours: 36 lecture/54 lab total

This course takes a holistic approach to range ecosystem management. This course covers the basic principles of range management as it relates to the complete ecosystem. The social, historical, cultural and economic aspects of rangelands will be discussed. Rangeland vegetation and analysis will be studied along with plant physiology and taxonomy. A collection of 100 range plants will be required. Several all day field trips are part of the course.

NR 50 NATURAL RESOURCES MEASUREMENTS –3 Units (CR/NC Option) (F)

Class Hours: 36 lecture/54 lab total

Students will learn basic measurement and inventory skills for ecosystem components including vegetation, water, soils, timber cruising, and forest measurement methods. Surveying and inventory skills will require the use of equipment such as the compass, chain, clinometer, prism, Biltmore stick, calipers, etc. A variety of cultural and environmental assessment protocols, including ecosystem inventory (data collection and entry) will be included in the class. Safety practices in the outdoor environment will also be emphasized.

NR 56 NATURAL RESOURCES PRACTICES - (formerly AGRI 56WZ) - 1-4 Units (CR/NC Option) (S)

Class Hours: 54 lab hours per unit

The practical application of skills needed to be successful in natural resources will be learned by working on the Shasta College Holistic Resource Center. *Note: This course may be repeated three times for a maximum of four enrollments since course content varies and skills are enhanced by supervised repetition and practice.*

NR 59 OUTDOOR RECREATION & INTERPRETATION OF NATURAL RESOURCES - 3 Units (CR/NC Option) (I)

Class Hours: 36 lecture/54 lab total

A study of the development and management of outdoor recreational areas, both private and governmental facilities. Course will include historical, economic, social, and political aspects of outdoor recreation including an emphasis on the special considerations of wilderness management. This course will also include an introduction to the interpretation of natural resources including an overview of theory and techniques for planning, developing, and implementing speeches, narrative talks, and interpretive programs as they relate to natural resources. An emphasis will be placed on organization and composition of these presentations and on developing displays and interpretive trails.

NR 64 WATER RESOURCES - 3 Units (CR/NC Option) (I)

Class Hours: 36 lecture/54 lab total

This course addresses a variety of topics concerned with the quality and quantity of water resources. Emphasis will be on the State of California. Coverage will include the hydrologic cycle, water budgets, water-soil balance, and climatic controls thereof. Sources, measurements, quality (pollution and treatment), usage, and conservation of water will be addressed. Environmental impacts of dam construction and hydroplant operation will be discussed. Laboratory work will involve measurements and interpretations of data collected or distributed. Field trips to various district facilities, federal, state, county, city, and private agencies will occur as feasible.

NR 65 FOREST ECOLOGY AND MANAGEMENT - 3 Units (CR/NC Option) (F)

Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)

This course covers the dynamic interaction of plants (especially trees), and animals and the physical environment: air, water, sunlight, and nutrients. Ecological characteristics and processes such as food web/strophic levels, succession, nutrient cycles, interspecies interactions are covered. Students will then explore the human use forests, both from a historical and contemporary perspective, including the laws and regulations relating to forest management. Forest management practices such as harvesting, site preparation, planting, and thinning are covered. Students will learn about practices for the conservation of soil, water wildlife, archaeological resources. Special attention is given to the topic of fuel and fire hazard concerns. Forestry equipment and safe practices in the forest will also be covered.

NR 66 WATERSHED RESTORATION PRACTICUM - 2 Units (CR/NC Option) (S)

Class Hours: 108 lab total

This course will use the hydrologic watershed unit as the focus which will provide a hands-on approach to ecosystem management. Focus will be on watersheds that have identified resource values and require an interdisciplinary scientific approach and community-wide resources to protect, enhance and restore. *Note: Since subject matter varies each time the course is taught, this course may be repeated three times for a total of four enrollments.*

NR 67 ENERGY AND THE ENVIRONMENT - 3 Units (CR/NC Option) (F)

Class Hours: 36 lecture/54 lab total

The focus of this course is on the environmental, technological, political and economic aspects of energy production, development and use. Conventional sources of energy production and use are, today, being scrutinized due to environmental concerns, and in some circles, for political and economic reasons. Alternative sources of energy are consequently being researched, developed and adopted. The role of the alternatives is becoming increasingly important. Practical aspects of energy conservation, such as weatherization, solar home construction, and lifestyles will be discussed. Short field trips to local energy production sites will be part of the class.

NR 69 BIRDS AND THEIR HABITAT - 2 Units (CR/NC Option)

Note: Three eight-hour field trips will be a required part of this course. Transportation will be furnished.

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. 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.

NR 70 WILDLIFE CONSERVATION AND MANAGEMENT - 3 Units (CR/NC Option) (I)

Note: Includes several all-day field trips

Class Hours: 36 lecture/54 lab total

Basic concepts in wildlife management and conservation biology. An ecosystem approach will be taken to study the common species of wildlife and their conservation problems will be emphasized. An emphasis will be placed on local mammals and waterfowl though game and non-game species will be covered. Ecological concepts such as biotic communities, biochemical systems, succession, limiting factors, predator-prey relationships will also be covered. A holistic approach will be taken in the coverage of the man-wildlife relationship situation. Includes several all-day field trips.

NR 71 FRESH WATER POND MANAGEMENT- 3 Units (CR/NC Option) (I)

Note: Several all-day field trips will be required

Class Hours: 36 lecture/54 lab total

An introduction to the ecology of a fresh water pond or small lake. The course takes a holistic approach to the study and management of the pond ecosystem. It includes basic biology concepts, conservation biology and the production of various species of fresh water fish. The relationship of all plant and animal species in a pond will be covered. The aquaculture industry will be discussed from an economic, social and ecosystem standpoint. Several all-day field trips will be required. This is a hands-on course and requires several field projects.

NR 83 INTRODUCTION TO GLOBAL POSITIONING SYSTEMS (GPS) - 1 Unit (F/S)

Class Hours: 18 lecture/12 lab (field) total

This course is an introduction to theory and practice of geopositioning (GPS) using field receivers. We will cover principles of mapping (e.g. scale, projections) and geopositioning (satellites and triangulation; accuracy and differentiation). This course is intended as an introduction to geopositioning with field time focused on hands-on GPS skills.

NR 97 SPECIAL TOPICS IN NATURAL RESOURCES - .5-2 Units (CR/NC Option) (I)

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.*

NR 98 SPECIAL TOPICS IN NATURAL RESOURCES LAB SKILLS - .5-2 Units (CR/NC Option) (I)

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.

NR 160 ENVIRONMENTAL PROBLEMS OF SHASTA COUNTY - 3 Units (CR/NC Option) (I)

Note: Includes three field trips.

Class Hours: 54 lecture total

This course deals with specific environmental issues and their impact on Shasta County. Topics related to air, soils, water, wildlife, and forest management will be discussed. Includes three field trips.

NR 161 NATURAL RESOURCES INTERPRETATION - 2 Units (CR/NC Option) (I)

Class Hours: 27 lecture/27 lab total

An introduction to the interpretation of natural resources including an overview of natural history and interpretive techniques. Principles of interpretation, audience analysis and public speaking techniques will be emphasized. Major emphasis will be on the interpretation of the major resources, such as fish, wildlife, plants, and geology. Students will be required to develop a project and make a presentation to the class.

NR 173 BEGINNING TAXIDERMY - 2 Units (CR/NC) (S)

Class Hours: 18 lecture/54 lab total

A hands-on introductory course dealing with the taxidermy of birds. It includes selecting, collecting specimens, choosing and using materials and tools, preservatives, skinning, mounting and painting. Habitat characteristics and materials, as well as composition will be discussed and applied.

NR 174 INTERMEDIATE TAXIDERMY - 2 Units (CR/NC Option) (S)

Prerequisite: NR 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.

NR 175 CHAIN SAW OPERATION AND MAINTENANCE - 1 Unit (I)

Class Hours: 9 lecture/27 lab total

Course stresses safety in all aspects of chain saw handling. Fundamental chain saw maintenance and safe chain saw operation are stressed. Upon successful completion, the student will be able to safely start and operate a chain saw, as well as sharpen chain and provide proper fuel and lubrication. Parallels U.S. Forest Service Power Saws (S-212) course.

NR 176 WILDLIFE OF NORTHERN CALIFORNIA - .5 Unit (CR/NC) (F)

Note: Overnight field trip will be required.

Class Hours: 9 lecture/18 lab total

The common species of birds and mammals found in Northern California will be observed and discussed. Habitat management and conversation problems will be covered in the class. A weekend field trip to the Tulelake area will be required.

NR 185 INTRODUCTION TO ECOSYSTEM MANAGEMENT - 1 Unit (CR/NC Option) (F)

Class Hours: 18 lecture total

Students will be introduced to ecological principles for ecosystem management. Natural Resources are considered from the standpoint of the social, economic and political influences relative to the physical and biological principles of the earth's limitations. Local ecosystem problems, such as endangered species, nutrient cycling, fuel loads, and fire will be emphasized.

WATER/WASTE WATER TREATMENT

NR 177 INTRODUCTION TO WASTE WATER TREATMENT - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

Designed to provide the student with a general background in the design, operation, and maintenance of water and waste water 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 waste water protects the environment.

NR 180 INTRODUCTION TO WATER TREATMENT TECHNOLOGY - 3 Units (CR/NC Option) (I)

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.

NR 181 INTERMEDIATE WATER TREATMENT TECHNOLOGY - 3 Units (I)

Advisory: NR 180

Class Hours: 54 lecture total

A course in water supply and treatment, covering historical development of water quality control practices, water sources, public health aspects of water supply, chemical treatment, and evaluation of the various treatment processes. Will prepare the experienced operator for certification examinations. When taken after NR 180, this class will prepare the

student for the CA water treatment plant certification examination.

NR 183 INTERMEDIATE WASTE WATER TREATMENT - 3 Units (CR/NC Option) (I)

Class Hours: 54 lecture total

To provide the student with a general background in advanced wastewater treatment processes, and prepare the operator for advance certification examinations.

NR 184 SMALL WATER SYSTEMS AND DISTRIBUTION - 3 Units (I)

Advisory: NR 180

Class Hours: 54 lecture total

Designed to provide the student with a general background in the design, operation, and maintenance of small water systems and water distribution systems, and prepares the experienced operator for the State Water Treatment Plant and Distribution Operator Certification Examinations.

NR 186 ADVANCED WASTE WATER TREATMENT - 3 Units (CR/NC Option) (I)

Advisory: NR 177 or NR 183

Class Hours: 54 lecture total

Designed to provide the student with a more in-depth background in the design, operation, and maintenance of waste water treatment plants and to prepare the experienced operator for higher level certification examinations.

NR 197 SPECIAL TOPICS IN NATURAL RESOURCES - .5-2 Units (CR/NC Only) (I)

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.*

NATURAL SCIENCE (NSCI)

NSCI 390 NATURAL SCIENCE LEARNING LAB - 0 Units (I)

Class Hours: TBA

A program and facility designed to provide the student with the resources for self-paced auto-tutorial and audio-visual learning within various courses in Natural Science. Also available is tutorial assistance for students in Natural Science who experience some difficulty in a particular subject or area.

NURSING

See Registered Nursing or Vocational Nursing

OFFICE ADMINISTRATION (OAS)

OAS 51 KEYBOARDING I (BEGINNING TYPING) - 3 Units (CR/NC Option) (F/S)

Note: Students taking the Internet format of this course must have access to (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Word 2002.

Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)

A beginning course in keyboarding on the computer. Class includes learning to type alphabetic, numeric and symbol keys by touch; developing speed and accuracy; and formatting business documents such as letters, memos, reports, tables and business forms. Recommended for all students with less than one year of high school typing or typing speed of less than 40 wpm. No prior knowledge of computers is required to enroll. *This course is also offered as Distance Education, but it is the same in content as that offered on campus.*

OAS 52 KEYBOARDING II (INTERMEDIATE TYPING) - 3 Units (CR/NC Option) (F/S)

Prerequisite: The student must meet one of the following criteria: (1) a minimum grade of "C" or higher in OAS 51 or (2) type at a minimum of 25 wpm by touch and OAS 91 or equivalent Microsoft Word experience

Note: Students taking the Internet format of this course must have access to (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Word 2002.

Class Hours: 36 lecture/54 lab total (when offered in the Distance Education format, hours will total 162)

This course continues the development of keyboard speed and accuracy and emphasizes the formatting of various kinds of business correspondence, reports, tables, forms, and desktop publishing projects from unarranged and rough-draft sources. This course provides preparation for Microsoft Office User Specialist (MOUS) Word Certification. This course is also offered as Distance Education, but it is the same in content as that offered on campus.

OAS 53 KEYBOARDING III (ADVANCED AND TECHNICAL TYPING) - 3 Units (CR/NC Option) (F/S)

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.
Subject to change. Check the current class schedule.

Prerequisite: A minimum grade of "C" in OAS 52 or type of minimum of 45 wpm by touch and OAS 92 or equivalent Microsoft Word experience

Note: Students taking the Internet format of this course must have access to (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Word 2002.

Class Hours: 36 lecture/54 lab total (*when offered in the Distance Education format, hours will total 162*)

This is a finishing course in keyboarding to enable the student to meet business requirements. The course is designed to give additional practice in building speed and accuracy and to apply previously learned word processing and document formatting competencies to a variety of integrated office projects in international marketing, hospitality, travel, energy, electronics, insurance, government, law, and medicine. This course is also offered as Distance Education, but it is the same in content as that offered on campus.

OAS 58 WORD PROCESSING TRANSCRIPTION - 3 Units (CR/NC Option) (F/S)

Advisory: OAS 52 and 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

This course is designed to prepare students to become efficient operators of transcribing machines and be able to transcribe quickly and accurately available 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. A review of word processing commands necessary for success in this class will be given.

OAS 60 OFFICE TROUBLESHOOTING (formerly MIS 60) – 1 Unit (CR/NC Option) (S)

Advisory: CIS 70 with a "C" or better.

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: 18 lecture/9 lab total

This course will provide instruction on the operation, maintenance, and use of manuals for office equipment – computer, fax, scanner, copy machine, and computer projector. The course is designed to assist the student in developing procedures for implementing solutions to daily problems encountered in the high-technology work place. The student will learn to set up a PC workstation with accompanying peripherals, install new software, and install hardware drivers. The importance of backups will be stressed along with maintaining and organizing computer files and folders. The student will be exposed to realistic hardware/software problems encountered in the workplace and learn methods for controlling and enhancing the computer environment.

OAS 63 VOICE RECOGNITION SOFTWARE – 1 Unit (CR/NC Option) (FS)

Class Hours: 18 lecture/9 lab total

This course introduces voice-recognition software to the student through multi-media lecture/demonstration/discussion and hands-on application using the IBM compatible microcomputer. Using voice-recognition software (Dragon Naturally Speaking), 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 as well as for using menus and mouse commands.

OAS 64 COMPUTERIZED TEN-KEY - .5 Unit (CR/NC Option) (F/S)

Note: Students taking the Internet format of this course must have access to and working knowledge of the Internet and Windows.

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. A required course for Accounting Clerk and Information Processing Specialist Certificate Programs. It is also a suggested elective in the Agriculture-Business and Agriculture-Industrial majors. This course has been designed for the hearing impaired. The equivalent of this course in content and objectives may also be offered on the Internet.

OAS 70 DESKTOP PUBLISHING - 1 Unit (CR/NC Option) (I)

Advisory: Ability to type 25 wpm, completion of OAS 91

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: 18 lecture/9 lab total

An introduction to desktop publishing and its uses in business and industry through use of desktop publishing software (i.e., MS Publisher, PageMaker, PrintMaster). Students should gain an understanding of basic desktop terminology, design, and layout by producing a variety of documents with varying degrees of difficulty.

OAS 72 CORELDRAW - 1 Unit (CR/NC Option) (I)

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. For the Internet section of this course the student should have the necessary/current software to complete work off-campus. All software is available on campus in the Math/Business Learning Center.

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 54)

This is a basic computer graphics course designed especially for office administration students and those interested in an elementary graphics course. This course should enable students to develop their own graphics and text styles with little or no previous training in graphic arts. The course focuses on graphic rendering and design. The equivalent of this course in content and objectives may also be offered on the Internet.

OAS 80 OUTLOOK – 1 Unit (CR/NC Option) (I)

Advisory: Ability to type 25 words per minute.

Note: Class will require outside time using a computer with appropriate software. Some access is allowed on campus at the Math and Business Learning Center. Students taking the Internet format of this course must have access to (and a working knowledge of) the Internet, plus access to software Windows 95 (or better) and Office 97 (or better).

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 54)

This course introduces the student to the use of Microsoft Outlook, a desktop information management program in the Microsoft Office. Instruction will include managing e-mail messages, scheduling appointments and activities with the Calendar, entering and updating names and address as contacts, creating and maintaining an electronic to-do list with Tasks, and formatting and sorting electronic "sticky" notes. This course will be taught on IBM compatible microcomputers.

OAS 88 WORDPERFECT FOR WINDOWS - I - 1 Unit (CR/NC Option) (I)

Advisory: The 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.

Class Hours: 18 lecture/9 lab total

This course introduces the student to the use of WordPerfect for Windows on the IBM-compatible microcomputer for word processing. WordPerfect for Windows 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 reveal codes, checking spelling, changing formats and appearance, indent and tabs, selecting, moving and copying text, find and replace, and file management.

OAS 89 WORDPERFECT FOR WINDOWS - II - 1 Unit (CR/NC Option) (I)

Advisory: Ability to type 25 wpm. Completion of OAS 88 with a "C" or better

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: 18 lecture/9 lab total

Designed to expand and improve basic word processing skills to a higher level of proficiency using the WordPerfect program on an IBM compatible microcomputer. Instruction will include a review of basic concepts and commands, graphics, columns, labels, tables, merge, sort and select, outline and table of contents, footnotes and endnotes, macros, styles, and templates.

OAS 91 WORD FOR WINDOWS - I - 1 Unit (CR/NC Option) (F/S)

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 (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Word 2002.

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 54)

This course introduces word processing through multi-media lecture/demonstration/discussion using 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. The equivalent of this course in content and objectives may also be offered on the Internet.

OAS 92 WORD FOR WINDOWS - II - 1 Unit (CR/NC Option) (F/S)

Advisory: Ability to type 25 wpm; OAS 91 and/or OAS 51 with a "C" or better

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 (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Word 2002.

Class Hours: 18 lecture/9 lab total (when offered in the Distance Education format, hours will total 54)

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. The equivalent of this course in content and objectives may also be offered on the Internet.

OAS 93 WORD FOR WINDOWS - III - 1 Unit (CR/NC Option) (F/S)

Prerequisite: A grade of C or higher in OAS 92 (or equivalent)

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 (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Word 2002.

Class Hours: 18 lecture/9 lab total (*when offered in the Distance Education format, hours will total 54*)

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. The equivalent of this course in content and objectives may also be offered on the Internet.

OAS 94 POWERPOINT - 1 Unit (CR/NC Option) (F/S)

Advisory: Ability to type 25 wpm. Familiarity with Word Processing.

Note: Class will require outside time using a computer with PowerPoint 2002 software. Some computer access is provided on campus at the Math and Learning Center.

Class Hours: 18 lecture/9 lab total

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.

OAS 96 INTEGRATED COMPUTER APPLICATIONS - 2 Units (CR/NC Option) (S)

Prerequisite: A grade of C or higher in OAS 91 or OAS 88 or equivalent; a grade of C or higher in CIS 10 or equivalent

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 (and a working knowledge of) the Internet, plus access to the software Windows 98 (or better) and Office XP Professional.

Class Hours: 27 lecture/27 lab total (*when offered in the Distance Education format, hours will total 108*)

This course combines the skills previously learned in word processing and spreadsheet and also provides experience working with database and presentation software using Microsoft Office XP. The course will teach students how to integrate these applications. Students will also receive and send electronic messages as well as create contacts in an address book. Students will be asked to compose short messages as a boss would request in an office. This course is also offered as distance education, but it is the same in content as that offered on campus.

OAS 97 SPECIAL TOPICS IN OFFICE ADMINISTRATION - .5-2 Units (CR/NC Option) (I)

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 (CR/NC Option) (I)

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 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 112 BASIC ICD-9-CM AND CPT-4 CODING (formerly HEOC 112) - 3 Units (F/S)

Prerequisite: HEOC 110

Corequisite: HEOC 111 (or previous completion of HEOC 111)

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 150 MEDICAL INSURANCE BILLING-3 Units (F/S)

Advisory: OAS 51 and HEOC 110

Class Hours: 54 lecture total

This course is designed to prepare students for entry-level positions in the medical office. 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 - .5 Unit (CR/NC Option) (F/S)

Advisory: Ability to type 20 wpm (students not typing at 20 wpm may wish to enroll in OAS 154 or OAS 51)

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: 27 lab total

A course designed to help students improve their typing skills. Specific drills will be taught to correct individual typing deficiencies. Students at any level will be able to continue their development of keyboard control through repetitive typing of specific drills designed to improve both accuracy and speed.

OAS 154 MICROCOMPUTER KEYBOARDING (formerly MIS 154) - .5 Unit (CR/NC Option) (F/S)

Class Hours: 27 lab total

Designed to provide the intensive drill necessary to learn the alphabetic keys of the microcomputer keyboard. A beginning class intended for students needing a computer terminal keyboard skill who have had no previous typing experience. Student will be required to access software and key in data. Includes speed and accuracy development.

This course does not have any document preparation or formatting instruction and does not meet the requirement of Beginning Typing for an Associate in Arts degree or certificate.

OAS 157 BASIC OFFICE PROCEDURES - 2 Units (F/S)

Advisory: OAS 51 or concurrent enrollment and eligibility for ENGL 190

Class Hours: 36 lecture/18 lab total

Entry-level office administration core course. Content includes office ethics, greeting office callers, telephone techniques, working with others on the job, mail procedures, reference sources, appointment/calendaring, office reprographics, employment testing, and career planning.

OAS 158 ADVANCED OFFICE PROCEDURES - 2 Units (S)

Prerequisite: OAS 157

Advisory: OAS 51; eligibility for ENGL 190; and eligibility for BUAD 106

Class Hours: 36 lecture/18 lab total

This is a capstone course for office administration students. Content includes: planning meetings and conferences, making travel arrangements, oral and written communication, understanding financial documents, supervising and leading, using application software, developing strategies for moving up in the organization, and employment testing.

OAS 159 WORD PROCESSING I-MEDICAL TRANSCRIPTION - 1.5 Units (F/S)

Prerequisite: HEOC 110, OAS 52

Advisory: OAS 58, BUAD 166, OAS 171

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: 18 lecture/27 lab total

A course designed to help the student reinforce and expand knowledge of medical vocabulary and to acquire transcription skills through the typing of medical notes, reports, and diagnostic case histories.

OAS 160 WORD PROCESSING II-MEDICAL TRANSCRIPTION - 1.5 Units (F/S)

Prerequisite: OAS 159

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: 18 lecture/27 lab total

The second half of a semester program designed to help the student acquire entry-level skills in the medical transcription field. Further experience in transcribing diagnostic imaging, oncology, cardiology, hematology, general surgery, plastic surgery, dentistry, orthopedics, neurology, psychiatry, urology, obstetrics, pediatrics/otorhinolaryngology, ophthalmology, respiratory, gastroenterology, and pathology.

OAS 162 LEGAL FORM PREPARATION - 3 Units (I)

Prerequisite: A grade of C or higher in OAS 52

Advisory: BUAD 166, OAS 58, OAS 171

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

This course is designed to help the student acquire entry-level skills in the formatting of the most commonly used legal forms.

OAS 166 RECORDS MANAGEMENT - 2 Units (F/S)

Class Hours: 36 lecture/9 lab total

A study of the basic principles, rules, and procedures of filing. It includes a study of alphabetic, numeric, subject, and geographic filing and of the various types of filing equipment. A required course for Medical Billing Specialist Certificate, Medical Office Specialist Degree, Information Processing Specialist Certificate and Information Processing Specialist Degree, Records Manager Certificate, Administrative Assistant Degree, Administrative Assistant-Legal Degree, Transcriptionist Legal Certificate and Medical Transcriptionist Degree

OAS 169 CORRECT SPELLING - 1 Unit (CR/NC Option) (S)

Class Hours: 18 lecture total

This course is for "creative" spellers, as well as for those who desire spelling review. A phonics approach to spelling is used, including daily quizzes for student improvement. Presentations, transparencies, and text applications are incorporated.

OAS 171 PROOFREADING SKILLS - 2 Units (F/S)

Advisory: BUAD 166; ability to type 25 wpm

Class Hours: 36 lecture total

The application of appropriate methods of proofreading documents common to the work place. Because productivity of office documents without accuracy is meaningless, a high level of proofreading skills is vital to the efficient operation

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Subject to change. Check the current class schedule.

of the word/information processing office. Proofreading has become a "must" for quality control in the work place.

OAS 172 CORELDRAW CLINIC - .5 Units (CR/NC Option) (S) (I)

Class Hours: 27 lab total

This short term course will introduce students to CorelDraw through hands-on experience. No prior knowledge of computer operation or CorelDraw experience is required. Students will become familiar with CorelDraw and graphics terminology, and very basic graphic design principles.

OAS 191 WORD FOR WINDOWS CLINIC - .5 Units (CR/NC Option) (S) (I)

Class Hours: 27 lab total

This short-term course will introduce word processing through 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 degree of difficulty. Topics to be covered include: file management; creating new documents; selecting text to move/copy/delete/format or utilize the clipboard; spelling and thesaurus tools; font, paragraph and page formatting; creating of tables and content. This short-term skills course will teach fundamental skills and techniques in word processing.

OAS 197 SPECIAL TOPICS IN OFFICE TECHNOLOGY - .5-2 Units (CR/NC Option) (I)

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. Recommended for any of the Office Technologies majors 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 (CR/NC Option) (I)

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 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.*

OAS 250 KEYBOARDING I (BEGINNING TYPING) - ADAPTIVE(formerly OAS 250AD) - 3 Units (CR/NC Option) (F/S)

Class Hours: 36 lecture/54 lab total

A personal-use individualized course in keyboarding designed to meet the needs of students with physical and/or specific learning disabilities. Interested students must be interviewed by the instructor and DSPS and/or Learning Services Office to determine if the course is appropriate for the student's abilities and interests and to make arrangements for support services. The course includes instruction in correct keyboarding techniques appropriate for the individual student. Instruction covers memos, letters, tables, reports, and business forms. Students work toward personal growth objectives. This course does not meet the requirement of Keyboarding I (Beginning Typing) for an Associate in Arts degree or certificate.

OAS 254 ADAPTIVE MICROCOMPUTER KEYBOARDING - .5 Unit (CR/NC Only) (F/S)

Class Hours: 27 lab total

A personal-use individualized course in keyboarding designed to meet the needs of students with disabilities. Interested students must be interviewed by the Learning Disabilities Specialist and/or the Physical Disabilities Counselor and the instructor to determine if the course is appropriate for the student's abilities and interests and to make arrangements for tutoring. The course is designed to provide the intensive drill necessary to master the alphabetic keys of the microcomputer keyboard. A beginning class intended for students needing a computer terminal keyboarding skill who have had no previous typing experience. Students will be required to access software and key in data. Includes speed and accuracy development. This course does not have any document preparation or formatting instruction and does not meet the requirement of Beginning Typing for an Associate in Arts degree or certificate. *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.*

PHILOSOPHY (PHIL)

PHIL 6 INTRODUCTION TO PHILOSOPHY - 3 Units (CR/NC Option) (CAN # PHIL 2) (F/S)

Advisory: Completion of ENGL 1A or equivalent

Class Hours: 54 lecture total

A transfer humanities course introducing students to the major issues which philosophers have found important. It will explore what is special about the questions philosophers ask, and it will consider the most famous answers which philosophers have tried to give to those questions. Areas covered include philosophy of mind, theory of knowledge, metaphysics, moral philosophy, political philosophy, aesthetics, and philosophical theology.

PHIL 7 ETHICS AND PERSONAL VALUES - 3 Units (CR/NC Option) (CAN # PHIL 4) (F/S)

Advisory: Completion of ENGL 1A or equivalent

Class Hours: 54 lecture total

Introduces students to a range of moral and social problems which are important in themselves and which philosophers have found especially interesting. Emphasis will be given to exploring all the positions which can be taken on these

issues, and to evaluating the arguments which can be given for those positions. Topics covered include general moral theories, abortion, euthanasia, capital punishment, warfare, gender and sexuality issues, political and economic issues, and the moral status of the natural world.

PHIL 8 LOGIC - 3 Units (CR/NC Option) (CAN # PHIL 6) (F/S)

Advisory: ENGL 1A completion or equivalent

Class Hours: 54 lecture total

Logic is the science which evaluates arguments. PHIL 8 provides students with extensive experience in identifying a range of correct and incorrect argument forms. Examples will come from everyday life. Students will also learn to use both the traditional categorical syllogism and modern statement logic.

PHIL 10 LIFE AND DEATH MORAL ISSUES - 3 Units (CR/NC Option) (F/S)

Advisory: Completion of ENGL 1A or equivalent

Class Hours: 54 lecture total

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 arguments presented 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.

PHIL 18 SYMBOLIC LOGIC - 3 Units (I)

Prerequisite: ENGL 190 eligibility and a grade of "C" or better in MATH 102

Class Hours: 54 lecture total

Symbolic logic provides a basic first look at the formal techniques of modern logic. It presents the syntax and semantics of both sentence logic and first-order predicate logic. Students will learn both natural deduction and truth tree methods for determining validity. We will also briefly look at the basic metatheoretical results concerning the consistency and completeness of these systems. This course will be of special interest to majors in mathematics, computer science, engineering, economics, pre-law, and philosophy.

PHYSICAL EDUCATION (PE)

HEALTH AND WELLNESS

PE 1 HEALTH AND WELLNESS (formerly HPE 11) - 3 Units (CR/NC Option) (F/S)

Class Hours: 54 lecture total

A general overview course in health for personal use and well being. Units covered include mental health, nutrition, physical fitness, drugs-alcohol-tobacco, sexuality, major health problems, environmental health, aging process, and death and dying. This course will emphasize the practical application of health knowledge and facts.

PE 2 NUTRITION AND FITNESS (formerly HPE 7) - 3 Units (CR/NC Option) (I)

Class Hours: 42 lecture/30 lab total

Knowledge of physical fitness, benefits, training principles, appropriate exercise, and nutrition with application to lifelong health and exercise habits. Includes lecture, laboratory, exercise, and physical fitness test.

PE 3 SUBSTANCE ABUSE AWARENESS (formerly HPE 57) - 2 Units (CR/NC Option) (F/S)

Class Hours: 36 lecture total

An introductory course for individuals who wish to increase their knowledge of substance abuse (chemical addiction). This course will introduce students to tobacco, alcohol, and drug problems in general: their misuse, abuse and methods for their control.

PE 4 LIFETIME FITNESS - 2 Units (CR/NC Option) (F/S)

Class Hours: 27 lecture/27 lab total

In keeping with the primary purpose of Wellness, this course is designed to provide insight relative to the values derived by enriching the quality of our lives. Further, it includes the mechanisms for identifying individual needs and providing the means for measurement and improvement of lifestyles to reach a higher level of well being. This course provides a personalized approach to assess and prescribe the necessary programs to improve the components of physical fitness and wellness. In addition to the health related components of physical fitness (cardiovascular, muscular strength and endurance, muscular flexibility, body composition), topics covered include nutrition and weight control, cardiovascular risk reduction, stress management, drug and alcohol abuse, AIDS, and environmental health issues.

PE 5 FITNESS USING TECHNOLOGICAL ASSESSMENT - 2 Units (CR/NC Option) (I)

Class Hours: 27 lecture/27 lab total

A lifetime fitness class which utilizes computerized equipment and programs to provide students with the means to conduct personal fitness assessments and evaluate their lifestyles continuously. Students will design and analyze programs to improve their physical, mental, and nutritional needs by using current technological systems and programs. Computerized Fitness and Wellness Profiles, personalized cardiovascular exercise prescriptions and nutrient analysis

will be provided.

PHYSICAL EDUCATION/FITNESS & CONDITIONING

PE 6 AEROBIC INSTRUCTOR TRAINING – 2 Units (CR/NC Option) (F/S)

Class Hours: 27 lecture/27 lab total

A comprehensive class covering current materials on exercise science as related to aerobic exercise instruction. Theories of aerobic training, strength and endurance development and exercise analysis are presented. Students will develop skills for creating aerobic exercises and dance choreography, low/high impact modification, formatting and cueing techniques. Written examinations and instructor critique on all materials may result in the student obtaining a certificate of completion.

PE 10 INTRODUCTION TO PHYSICAL EDUCATION (formerly HPE 8) - 2 Units (CR/NC Option) (F/S)

Class Hours: 36 lecture total

A course designed to familiarize the Physical Education major or minor with the profession. This course will introduce the student to the different teaching styles and methods of teaching physical education. Defining and understanding what physical education involves and also the student will take part in developing a program for physical education.

PE 11 FUNDAMENTAL CONDITIONING (formerly HPE 1AD) - .5-1.5 Units (CR/NC Option) (F/S)

Class Hours: 27, 54, or 81 total activity

Designed to acquaint the student with exercises, activities and use of muscles to perform specific tasks and to improve physical well-being. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 12 WEIGHT TRAINING (formerly HPE 24AD) - .5-1.5 Units (CR/NC Option) (F/S)

Class Hours: 27, 54, or 81 total activity

A course in weight training and general conditioning. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 13 BODY MECHANICS (formerly HPE 33AD) - .5-1.5 Units (CR/NC Option) (F/S)

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 strong theoretical 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. *Note: This class 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 (CR/NC Option) (F/S)

Class Hours: 27 or 54 total activity

Designed to provide the students with knowledge of personal levels of physical fitness and enable them to develop and implement a strategy to improve fitness levels through physiology of exercise, nutrition, and fundamental conditioning. *Note: This class 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 (formerly HPE 53AD) - .5-1.5 Units (CR/NC Option) (F/S)

Class Hours: 27, 54, or 81 total activity

A complete physical conditioning program designed to increase cardiovascular efficiency through choreographed dances. *Note: This class 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 (formerly HPE 63AD) - .5-1 Unit (CR/NC Option) (F/S)

Class Hours: 27 or 54 total activity

A complete physical conditioning program designed to increase cardiovascular efficiency through aerobic exercises. *Note: This class 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 consists of three instructors, two therapists, numerous student aides and incorporates the use of the pools, gymnasium, weight room, and cardio room, in an individualized activity program developed for each student. Activity can include aerobics, whirlpool, weights, massage, stairmaster, swimming, and general exercise.

PE 20 INTRODUCTION TO ADAPTED PHYSICAL EDUCATION (formerly HPE 75AD) – _2 Units (CR/NC Option) (F/S)

Class Hours: 27-108 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. *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.

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- PE 21** **EXERCISE FOR ORTHOPEDIC DISORDERS OR INJURIES (formerly HPE 73AD) - 1 Unit (CR/NC Option) (F/S)**
Class Hours: 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 disorder. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*
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- PE 22** **EXERCISE FOR CARDIOVASCULARLY IMPAIRED (formerly HPE 74AD) - 1 Unit (CR/NC Option) (F/S)**
Class Hours: 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. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*
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- PE 23** **EXERCISE FOR RESPIRATORY DISORDERS (formerly HPE 76AD) - 1 Unit (CR/NC Option) (F/S)**
Class Hours: 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. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*
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- PE 24** **CORRECTIVE & REHABILITATION PHYSICAL EDUCATION (formerly HPE 89AD) 2 Units (CR/NC Option) (F/S)**
Advisory: Concurrent enrollment in PE 25
Class Hours: 36 lecture total
 Designed to provide background lecture information for students who are interested in a career in physical education for health occupations and physical therapy. Course provides theory in therapeutic recreation, corrective therapy, special education, or any other area which involves physically limited individuals.
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- PE 25** **CORRECTIVE & REHABILITATION PHYSICAL EDUCATION LAB (formerly HPE 89AD) - 1-2 Units (CR/NC Option) (F/S)**
Advisory: Concurrent enrollment in PE 24 the first semester
Class Hours: 54-108 lab total
 Designed to provide practical experience and formal training for students who are interested in a career in physical education for health occupations and physical therapy. Course provides training in therapeutic recreation, corrective therapy or any other area which involves physically-limited individuals. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*
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- PE 26** **ADAPTED WEIGHT TRAINING - .5-2 Units (CR/NC Option)**
Class Hours: 27-108 lab total
 Strength and flexibility development through supervised progressive exercise. Includes initial assessment, exercise prescription and equipment, and technique 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.*
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- PE 27** **ADAPTED AQUATICS FOR THE PHYSICALLY LIMITED - .5-2 Units (CR/NC Option)**
Class Hours: 27-108 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. *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.*
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- AQUATICS**
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- PE 30** **SWIMMING (formerly HPE 40AD) - .5-1 Unit (CR/NC Option) (F/S)**
Class Hours: 27 or 54 total activity
 This class is designed to offer instruction in aquatic skills necessary for survival, efficiency in swimming and diving, and conditioning in the aquatic environment. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*
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- PE 31** **AQUA AEROBICS (formerly HPE 79AD) - .5-1 Unit (CR/NC Option) (F/S)**
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 class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*
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- PE 32** **WATER POLO (formerly HPE 44AB) - .5- 1 Unit (CR/NC Option) (I)**

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.
 Subject to change. Check the current class schedule.

Class Hours: 27 or 54 total activity

A course designed to acquaint students with the sport of water polo. Emphasis on rules, individual skills, team play, and game strategy. *Note: This class 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 (formerly HPE 59AB) - .5-1 Unit (CR/NC Option) (I)

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 class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 35 LIFEGUARD TRAINING (formerly HPE 43AB) - 2 Units (CR/NC Option)

Advisory: Red Cross Level VII swimming skills.

Class Hours: 27 lecture/27 lab total

A course designed to provide training and prepare student for certification in American Red Cross Lifeguard Training, Professional Rescuers CPR, and First Aid Basics. *Note: This class 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 (CR/NC 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 class 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 (CR/NC Option) (I)

Class Hours: 27 or 54 total activity

A course designed to present skills and techniques of one and three meter 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 Unit (CR/NC 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.

PE 39 BASIC SAILING – 1 Unit (CR/NC Option)

Advisory: Safe swimmer

Class Hours: 54 lab total

This course will offer instruction on the basic art of sailing. Topics will include boater safety, boat parts identification, boat set up and breakdown, boat launching, sail trim, rudder control, righting the boat in case of capsize and on-the-water right of way. *This course may be repeated once for a total of two enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

DANCE

For Dance courses, refer to DAN in the catalog

RACQUET SPORTS

PE 50 RACQUETBALL (formerly HPE 25AD) - .5-1.5 Units (CR/NC Option) (F/S)

Class Hours: 27, 54, or 81 total activity

Course teaches the fundamental skills, knowledge and social courtesies necessary to participate in the game of racquetball. This course is designed for players with skills ranging from beginning to advanced. Physical and mental strategies are emphasized to enhance critical thinking ability. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 51 TENNIS (formerly HPE 35AD) - .5-1.5 Units (CR/NC Option) (F/S)

Class Hours: 27, 54, or 81 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 class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 52 BADMINTON (formerly HPE 39AD) - .5-1.5 Units (CR/NC Option)

Class Hours: 27, 54, or 81 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 beginner to the advanced. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

INDIVIDUAL SPORTS AND TEAM SPORTS

PE 60 SELF-DEFENSE (formerly HPE 2AD) - .5-1.5 Units (CR/NC Option) (F/S)

Class Hours: 27, 54, or 81 total activity

This course will be conducted in such a manner that both the beginning and intermediate student will be able to learn and use basic to advanced skills. Self defense techniques will be introduced from basic to advanced levels. The student will acquire fundamental skills in stances, punches, blocks, kicks, and escaping techniques. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 62 GOLF (formerly HPE 32AD) - .5-1.5 Units (CR/NC Option) (F/S)

Class Hours: 27, 54, or 81 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 class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 63 ARCHERY (formerly HPE 38AD) - .5-1 Unit (CR/NC Option) (F/S)

Class Hours: 27 or 54 total activity

The archery class teaches the fundamentals skills and knowledge necessary to participate in the sport of archery; target and field. A multi-level course designed for the beginner, intermediate, or advanced archer. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 69 FOOTBALL (formerly HPE 3AD) - .5-1 Unit (CR/NC Option) (F/S)

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 class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 70 VOLLEYBALL (formerly HPE 6AD) - .5-1 Unit (CR/NC Option) (F/S)

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 students knowledge to continue this activity at a higher level. *Note: This class 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 (CR/NC Option) (F/S)

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 class 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 (CR/NC Option) (F/S)

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 class 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) - .5-1.5 Unit (CR/NC Option) (F)

Class Hours: 27, 54, or 81 total activity

An activity course designed to teach and practice fundamental skills of track and field. *Note: This class 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) - .5-1.5 Units (CR/NC Option) (F/S)

Class Hours: 27, 54, or 81 total activity

A course designed to provide instruction on the history, theory, fundamental skills, strategies, and techniques of the game of soccer. *Note: This class 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) - .5-1.5 Units (CR/NC Option) (F/S)

Class Hours: 27, 54, or 81 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 students knowledge to continue this activity at a higher level. *Note: This class 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 EDUCATION .5-2 Units (CR/NC Option) (I)

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 (CR/NC Option) (I)

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.*

SPORT CLINICS**PE 100 FOOTBALL CLINIC - .5 Unit (CR/NC Option) (I)**

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in football. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 101 VOLLEYBALL CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in volleyball. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 102 BASKETBALL CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in basketball. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 103 SOFTBALL CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in softball. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 104 BASEBALL CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in baseball. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 105 TENNIS CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in tennis. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 106 GOLF CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in golf. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 107 SOCCER CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in soccer. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 108 SWIMMING CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in swimming. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised*

repetition and practice.

PE 109 TRACK AND FIELD CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in track and field. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 110 WRESTLING CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in wrestling. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition/practice.*

PE 111 CHEERLEADING CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques in cheerleading. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 112 KARATE CLINIC - .5 Unit (CR/NC Option) (I)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques, both physical and mental, of traditional Shotokan Karate. *Note: This class may be repeated three times for a total of four enrollments since skills and proficiencies are enhanced by supervised repetition and practice.*

PE 113 BALLET CLINIC - .5 Unit (CR/NC Option)

Class Hours: 27-36 total activity

This short-term activity course will teach and build on fundamental skills and techniques, both physical and mental, of traditional ballet. *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 197 SPECIAL TOPICS IN PHYSICAL EDUCATION - .5-2 Units (CR/NC Option) (I)

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 198 SPECIAL TOPICS IN PHYSICAL EDUCATION - ACTIVITY - .5-2 Units (CR/NC Option) (I)

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 (CR/NC Option) (F/S)

Class Hours: 27-72 total activity

Modified postures for the older person 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 (CR/NC Option)

Class Hours: 27-72 total activity

Modified exercises for the developmentally disabled person 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 1 BEGINNING ATHLETIC TRAINING (formerly HPE 91) - 2 Units (CR/NC Option) (I)

Class Hours: 36 lecture total

Theory and practice in care and prevention of athletic injuries. Course will cover basic injury evaluation techniques, protective strapping and the use of therapeutic modalities in the training room.

PEAT 2 CLINICAL EXPERIENCES IN SPORTS MEDICINE (formerly HPE 91L) - 1-3 Units (CR/NC Option) (I)

Prerequisite: PEAT 1 (PEAT 1 may be taken concurrently)

Class Hours: 54-162 total activity

“F” and “S” indicate semester course is usually offered. “I” indicates course may not be offered every year.
Subject to change. Check the current class schedule.

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: Since subject matter varies each time course is taught, the course is repeatable three times for a total of four enrollments.*

PEAT 3 STRENGTH TRAINING & CONDITIONING FOR ATHLETES (formerly HPE 64AD) -5-1.5 Units (CR/NC Option) (F/S)

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.*

PEAT 4 THEORY OF COACHING (formerly HPE 85/86) 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture total

A course designed to teach the coach or aspiring coach a greater understanding of coaching philosophies, sport pedagogy, sport physiology, adolescent psychology, sport medicine, and sport rules and regulations. Also, how to deal with parental dilemmas and ethical issues.

PEAT 5 INTERCOLLEGIATE FOOTBALL (formerly HPE 14AB) - 2 Units (CR/NC Option) (F)

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

Football instruction practice and competition at the intercollegiate level. *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 6 THEORY OF FOOTBALL (formerly HPE 9AB) - 1 Unit (CR/NC Option) (F)

Class Hours: 18 lecture/18 activity total

A course designed to teach the rules, theory, and strategies of football. *Note: This course may be repeated two times for a total of three enrollments. As the athletes skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.*

PEAT 7 INTERCOLLEGIATE VOLLEYBALL (formerly HPE 61AB) - 2 Units (CR/NC Option) (F)

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

Volleyball instruction, practice and competition at the intercollegiate level. *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 8 THEORY OF VOLLEYBALL (formerly HPE 52AB) - 1 Unit (CR/NC Option) (F)

Class Hours: 18 lecture/18 activity total

This course is designed to teach the theoretical and strategic aspects of volleyball. *Note: This course may be repeated two times for a total of three enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction. (If student desires to compete in conference matches, he/she must meet conference eligibility requirements.)*

PEAT 9 INTERCOLLEGIATE CROSS COUNTRY (formerly HPE 29AB) - 2 Units (CR/NC Option) (F)

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

Cross country instruction, practice and competition at the intercollegiate level. *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 (CR/NC Option) (F)

Class Hours: 18 lecture/18 activity total

A course designed to teach the rules, theory and strategies of cross country. *Note: This course may be repeated two times for a total of three enrollments. As the athletes 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 Unit (CR/NC Option) (F/S)

Note: Tryouts may be required to determine performance capability.

Class Hours: 90 lab hours total

Basketball instruction, practice and competition at the intercollegiate level. *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 12 THEORY OF BASKETBALL (formerly HPE 13AB) - 1 Unit (CR/NC Option) (F)

Class Hours: 18 lecture/18 activity total

A course related to the teaching of rules, theory and methods in basketball. *Note: This course may be repeated two times for a total of three 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) - 2 Units (CR/NC Option) (S)

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

Softball instruction, practice and competition at the intercollegiate level. *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 (CR/NC Option) (S)

Class Hours: 18 lecture/18 activity total

A course related to the teaching of rules, theory, strategies and methods of softball. Designed to enhance the performance of prospective intercollegiate softball athletes. *Note: This course may be repeated two times for a total of three 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) - 2 Units (CR/NC Option) (S)

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

Baseball instruction, practice and competition at the intercollegiate level. *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 16 THEORY OF BASEBALL (formerly HPE 10AB) - 1 Unit (CR/NC Option) (S)

Class Hours: 18 lecture/18 activity total

A course designed to teach the rules, theory and strategies of competitive baseball. *Note: This course may be repeated two times for a total of three enrollments. As the athletes 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) - 2 Units (CR/NC Option) (S)

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

Track and field instruction, practice and competition at the intercollegiate level. *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 18 THEORY OF TRACK AND FIELD (formerly HPE 28AB) - 1 Unit (CR/NC Option) (S)

Class Hours: 18 lecture/18 activity total

A course designed to teach the rules, theory and strategies of track and field. *Note: This course may be repeated two times for a total of three enrollments. As the athletes skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.*

PEAT 19 INTERCOLLEGIATE TENNIS (formerly HPE 17AB) - 2 Units (CR/NC Option) (S)

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

Tennis instruction, practice and competition at the intercollegiate level. *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 (formerly HPE 68AB) - 1 Unit (CR/NC Option) (S)

Class Hours: 18 lecture/18 activity total

A course related to the teaching of rules, theory and methods in tennis. *Note: This course may be repeated two times for a total of three enrollments. As the athletes skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.*

PEAT 21 INTERCOLLEGIATE GOLF (formerly HPE 19AB) - 2 Units (CR/NC Option) (S)

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

Golf instruction, practice and competition at the intercollegiate level. *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 22 THEORY OF GOLF (formerly HPE 69AB) - 1 Unit (CR/NC Option) (S)

Class Hours: 18 lecture/18 activity total

A course designed to teach the rules, theory and strategies of golf. *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.*

PEAT 23 INTERCOLLEGIATE SOCCER (formerly HPE 71AB) - 2 Units (CR/NC Option) (F)

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

A course designed to provide advanced instruction on the skills, strategies, techniques and rules so that the student may play at the intercollegiate level of competition. *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 24 **THEORY OF SOCCER (formerly HPE 70AB) - 1 Unit (CR/NC Option) (F)**

Class Hours: 18 lecture/ 18 activity total

A course designed to teach the rules, theory and strategies of competitive soccer. *Note: This course may be repeated two times for a total of three enrollments. As the athlete's skills and proficiencies are enhanced, the theoretical and strategic aspects become more complex and require additional instruction.*

PEAT 25 **INTERCOLLEGIATE SWIMMING AND DIVING (formerly HPE 82AB) - 2 Units (CR/NC Option) (S)**

Note: Tryouts may be required to determine performance capability.

Class Hours: 96-180 hours total

A course designed for students interested in swimming at the competitive level. Daily practice spring semester, various field trips for competition. *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 26 **THEORY OF COMPETITIVE SWIMMING (formerly HPE 83AB) - 1 Unit (CR/NC Option) (S)**

Class Hours: 18 lecture/18 activity total

A course designed to provide information about the rules, theories, scientific basis, and condition of intercollegiate swimmers. *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 27 **INTERCOLLEGIATE WATERPOLO - 2 Units (CR/NC Option) (I)**

Note: Tryouts may be required to determine performance capability.

Class Hours: 108-180 hours total

A course designed to provide theory and practical skills required for students to compete in the sport of water polo against other college age students. *Note: This course may be repeated two times for a total of three enrollments since skills and proficiencies are developed by supervised repetition and practice. (If student desires to compete in conference matches, he/she must meet conference eligibility requirements.)*

PEAT 28 **THEORY OF WATERPOLO - 1 Unit (CR/NC Option) (CR/NC Option) (I)**

Class Hours: 18 lecture/18 lab total

A course designed to teach the rules, theory, and strategies of water polo. As the athletes skills and proficiencies are developed, the theoretical and strategic aspects of the game become more complex and require additional instruction.

Note: This course may be repeated two times for a total of three enrollments since skills and proficiencies are developed by supervised repetition and practice.

PEAT 29 **INTERCOLLEGIATE WRESTLING - 2 Units (CR/NC Option) (CR/NC Option) (F)**

Class Hours: 96-180 lab total

A course designed for students interested in wrestling at the competitive level. Daily practice fall semester, various field trips for competition. *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 30 **THEORY OF WRESTLING - 1 Unit (CR/NC Option) (CR/NC Option) (F)**

Class Hours: 9 lecture/27 lab total

This course is to provide information about the rules, theories, scientific basis, and training method of intercollegiate wrestlers. *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.*

PEAT 31 **SPORT SAFETY TRAINING - .5 Unit (CR/NC Option) (CR/NC Option) (I)**

Class Hours: 9 lecture total

A course designed to train coaches and prospective coaches in the area of sport safety and first aid. Adult and child CPR is covered. Upon successful completion of this course, the student is eligible for American Red Cross Certification in sport safety training.

PEAT 94 **WORKSITE LEARNING FOR ATHLETICS/COACHING - 1-4 Units (CR/NC Option) (F/S)**

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major or minor. All WSL classes supervised by a faculty member to ensure that the work experience is of educational value. Good work habits through actual job performance is stressed. *Note: This course may be repeated three times for a total of four enrollments since course content differs and skills are enhanced by supervised repetition and practice.*

PHYSICAL SCIENCE (PHSC)

See Also: ASTR, CHEM, ENVR, GEOL, and PHYS

PHSC 1 **PHYSICAL SCIENCE SURVEY - 4 Units (CR/NC Option) (F)**

Advisory: Basic Algebra (MATH 101) or the equivalent

Class Hours: 54 lecture/54 lab total

Lecture-discussion, demonstration and lab activities cover selected theories of physics and chemistry, emphasizing the

conceptual basis of these theories. The course is designed for non-science majors as part of their general education requirement in science. This course is not appropriate for students who have taken college level physics or chemistry

PHSC 2 GENERAL EARTH SCIENCE (formerly PHSC 2 and PHSC 3) - 4 Units (F/S)

Note: Required day 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, lecture hours will total 162)

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 a geologic evolution of the Earth, economic resources derived from the Earth, Earth materials, evolution and character of the oceans, ocean-atmosphere interactions, atmospheric processes including weather and climate, the solar system and Earth as part of the universe. The laboratory portion of this course provides hands-on activities that support and demonstrate lecture concepts.

PHSC 4 METEOROLOGY – 4 Units (S)

Class Hours: 54 lecture/54 lab total

Dynamic aspects of the atmosphere responsible for climate and weather represents the main focus of this course. Topics include atmospheric composition, solar radiation, global heat transfer, atmospheric moisture, pressure 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, storms characteristics and climate controls and climate change.

PHSC 5 OCEANOGRAPHY – 4 Units (I)

Note: Required overnight field trip.

Class Hours: 54 lecture/54 lab total

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 holistic view to the study of the oceans. Coastal processes such as waves and tides, erosion and deposition, and land forms are also considered. Laboratory activities will survey marine geology including plate tectonic and ocean basin topography, chemical oceanography, physical oceanography such as circulation, waves and tides, and biological oceanography including marine organisms, marine ecosystems and nutrient flow.

PHSC 6 COASTAL OCEANOGRAPHIC FIELD STUDIES – 2 Units (I)

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 concepts associated with estuaries, tidal flats, sandy shores, rocky shores, lagoons, and the shallow continental shelf. Lecture meetings will present basic concepts in oceanography including chemical, physical, geologic, and biologic realms, as related to the coastal zone and with an emphasis on the inter-related nature of these topics. Laboratory activities on campus will include charting and navigation, data synthesis and analysis while the coast field trip itself will represent the bulk of the lab experience. Field trip exercises will be conducted at various stops including oceanographic sampling and data collection.

PHSC 7 EARTH SYSTEM SCIENCE – 3 Units (I)

Note: Day field trips may be required.

Class Hours: 54 lecture total

Earth is a dynamic plant, changing in response to natural process within the atmospheregeosphere, hydrosphere and biosphere. 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.

PHYSICS (PHYS)

See Also: ASTR, CHEM, GEOL, and PHSC

PHYS 2A GENERAL COLLEGE PHYSICS - 4 Units (CAN# PHYS 2) (CR/NC Option) (F)

Prerequisite: MATH 102 or equivalent skill level

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 and momentum, equilibrium of rigid bodies, fluids and simple harmonic motion.

PHYS 2B GENERAL COLLEGE PHYSICS - 4 Units (CAN# PHYS 4) (CR/NC Option) (S)

Prerequisite: 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 quantum theory.

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.
Subject to change. Check the current class schedule.

PHYS 4A PHYSICS (MECHANICS) - 4 Units (CAN# PHYS 8) (S)

Prerequisite: MATH 3A

Corequisite: MATH 3B

Class Hours: 54 lecture/54 lab total

The fundamental principles of mechanics are treated within the mathematical framework of elementary differential and integral calculus. Vectors, Newton's Laws, work, energy gravitation, linear and angular momentum, rotational dynamics and motion studies are discussed.

PHYS 4B PHYSICS (ELECTRICITY AND MAGNETISM) - 4 Units (CAN# PHYS 14) (F)

Prerequisite: MATH 3B and PHYS 4A

Corequisite: MATH 4A

Class Hours: 54 lecture/54 lab total

The fundamental principles of electricity and magnetism are treated using vector integral calculus. Topics include Coulombs Law, electric fields, potentials, Gauss' Law, Ohms Law, D-C circuits, Magnetism, Biot-Savart Law, Amperes Law, Capacitance, inductance and RC circuits.

PHYS 4C PHYSICS (WAVES, MODERN PHYSICS & QUANTUM MECHANICS) - 4 Units (CAN# PHYS 12) (CR/NC Option) (S)

Prerequisite: PHYS 4B, MATH 4A

Corequisite: MATH 4B (or previous completion of MATH 4B)

Class Hours: 54 lecture/54 lab total

The third in a three-course sequence, this course covers general properties of waves, electromagnetic waves, reflection and refraction, interference and diffraction, the special theory of relativity, the quantum nature of light and the wave nature of matter, and Schrodinger's equation.

PHYS 101 TECHNICAL PHYSICS - 3 Units (CR/NC Option) (S)

Advisory: High school algebra or equivalent

Note: One mandatory field trip will be required

Class Hours: 54 lecture total

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)

See Also: AGRI, ANAT, BOT, MICR, and ZOO

PHY 1 PHYSIOLOGY - 5 Units (CR/NC Option) (F/S)

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 emphasize 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.

PHY 1L PHYSIOLOGY LAB - 1 Unit (CR/NC Option) (2003-2004 only)

Advisory: Completion of/or concurrent enrollment in PHY 1

Class Hours: 54 lab total

A laboratory course designed to complement PHY 1. A total of sixteen, individual laboratory experiments, which provide a reinforcement of the topics, covered in Physiology lecture. Selected experiments include: membrane transport, enzyme characteristics, electrophoresis, medical genetics, muscle contraction, EEG, cardiology, hemodynamics, and metabolism. Group activities, mini-lectures, and demonstration will be part of each lab session. This course should be taken concurrently or after completion of PHY 1. Physiology lab is a prerequisite for ADN and Dental Hygiene students.

PHY 5 HUMAN SEXUALITY - 3 Units (CR/NC Option) (F/S)

Note: Will not count toward fulfillment of general education transfer requirements in science. It will, however, count toward completion of Category "E" requirements for CSU system. Will meet science requirement for AA degree.

Class Hours: 36 lecture/18 discussion total

An informative course in human sexuality, including the development of the body from puberty to adulthood - from conception to birth. The anatomy and physiology of sex as well as sexual diseases, disorders, variations, myths and laws governing sexual practices will also be covered. Human Sexuality will not count toward fulfillment of general education transfer requirements in Science. It will however count toward completion of Category "E" requirements for CSU system. PHY 5 will meet science requirement for AA degree.

POLITICAL SCIENCE (POLS)

POLS 1 INTRODUCTION TO POLITICAL SCIENCE - 3 Units (CR/NC Option) (F)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

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 nature of political ideologies, the nature of the U.S. Constitution and the basic principles of a constitution. It is recommended that students majoring in political science or other social sciences take this course.

POLS 2 INTRODUCTION TO AMERICAN GOVERNMENT - 3 Units (CAN# GOVT 2) (F/S)

Advisory: ENGL 190

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. It satisfies State of California requirements in U.S. Constitution and California state and local government. This course is also offered as Distance Education but it is the same in content as that offered on campus. POLS 2 on the Internet: Students taking this course must have access to the Internet.

POLS 12 CALIFORNIA STATE AND LOCAL GOVERNMENT – 3 Units (F/S)

Advisory: ENGL 190

Class Hours: 54 lecture total

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 state constitutions.

POLS 20 POLITICS OF THIRD WORLD NATIONS - 3 Units (I)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

This course focuses on the political dynamics of selected third world 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 third world societies will also be examined.

POLS 25 GLOBAL POLITICS - 3 Units (I)

Advisory: ENGL 190 & POLS 2

Note: Students taking the Internet format of this course must have access and working knowledge of the Internet.

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 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 examined. Major events of the last two centuries and present day issues will be examined in the context of a global system of international relations.

POLS 28 ALTERNATIVE FUTURES FOR AMERICA - 3 Units (I)

Class Hours: 54 lecture total

A study of the future of America. The class will deal with a contemporary projection of our current society and alternative possible futures. The class will review both current and historical attempts to forecast future events including political, economic and social issues.

PSYCHOLOGY (PSYC)

PSYC 1A GENERAL PSYCHOLOGY - 3 Units (CAN# PSY 2) (CR/NC Option) (F/S)

Advisory: Eligibility for ENGL 1A

Note: Students taking the Internet format of this course must have access to the Internet.

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

PSYC 1A is the basic introductory course for the study of psychology as a science and as a profession. It provides both a general survey and intensive introduction to these concepts and elementary principles which are unique to psychology. Topics include perception, learning, development, motivation, personality, abnormal behavior, and biological and social bases of behavior. This course is also offered as Distance Education but is the same in content as that offered on campus.

PSYC 14 UNDERSTANDING HUMAN BEHAVIOR - 3 Units (CR/NC Option) (F/S)

Advisory: Eligibility for ENGL 190

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

This introductory level psychology course encourages an understanding and appreciation for the scientific approach to the study of human behavior and an introduction to the application of such principles. The course approach is the integration of the physiological, introspective, humanistic, and social-behavioral perspectives. Topics include effective and ineffective personality patterns; interpersonal behavior; stress; conditioning; and social groups. This course is also offered as Distance Education but is the same in content as that offered on campus.

PSYC 15 SOCIAL PSYCHOLOGY - 3 Units (CR/NC Option) (F/S)

Advisory: PSYC 1A and/or SOC 1; eligibility for ENGL 1A

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 the 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. Equipment and skills to access the Internet will be useful. This course is also taught as an Internet course.

PSYC 16 HEALTH PSYCHOLOGY - 3 Units (CR/NC Option) (I)

Advisory: PSYC 1A and ENGL 1A eligibility

Class Hours: 54 lecture total

This course examines the scientific and professional contributions made by the field of psychology in the promotion of and maintenance of health; the prevention and treatment of illness; how psychological, social, and biological factors influence one's overall state of health including both wellness and illness; understanding the roles of patients and health care providers; and to the improvement of health care systems and health policy formation. Individual characteristics such as gender, culture, lifestyle, personality, and relationships and their affects on health are explored. Students who are pursuing psychology, health care, and/or human services as their profession will find this course beneficial. Skills to access the Internet will be helpful.

PSYC 17 ABNORMAL PSYCHOLOGY - 3 Units (CR/NC Option) (I)

Advisory: ENGL 1A and PSYC 1A

Class Hours: 54 lecture total

This course provides a historical overview of the field of abnormal psychology with an emphasis on current theories and paradigms. Abnormality is defined and behaviors that are considered abnormal or maladaptive are described. Assessment, diagnostic, classification, and prevention techniques, as well as psychological and biological therapies are explored.

PSYC 20 CROSS-CULTURAL PSYCHOLOGY - 3 Units (CR/NC Option) (F/S)

Advisory: PSYC 1A and eligibility for ENGL 190

Class Hours: 54 lecture total

An introduction to theories and research findings regarding cultural influences on human behavior and cognitive processes, including but not limited to: 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 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.

PSYC 41 CULTURAL/SOCIAL CONTEXT OF CHILDHOOD - 3 Units (F/S)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

This course examines the impact of the psychological, social, and cultural context of early development. Emphasis is given to the socialization process and to the cultural influences including ethnic identity, family relations, socioeconomic strata, gender roles, cohort comparisons, faith, and communities. Significant references highlight the experiences of children and their families from at least four different historically under-represented groups.

PSYC 46 HUMAN MEMORY AND LEARNING - 3 Units (F/S)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

This course will explore how the mind/brain stores and retrieves information. Core concepts of modern research and theorizing about human memory and cognition will be reviewed. Research on the application of memory and learning principles to memory and learning improvement will be investigated. Students will learn to evaluate the role of attention, prior learning, cognitive style, personality functioning and motivation in memory encoding and retrieval. Changes in memory processes through the lifespan will be examined including recent research on topics such as Alzheimer's and amnesia.

PUBLIC SAFETY (PUBS)

PUBS 158 SCHOOL BUS DRIVER TRAINING (formerly EDUC 158) - 2 Units (CR/NC Option)

Class Hours: 36 lecture total

The purpose of this course is to acquaint students with all of the laws, regulations, and operational procedures involved in becoming a licensed school bus driver in California. This course meets a state mandated classroom training requirement which a student must complete prior to taking highway patrol tests and doing behind-the-wheel training. This course does not include individual behind-the-wheel training, but will acquaint the student with laws and procedures pertaining to the correct operation of a school bus.

PUBS 159 SCHOOL BUS DRIVER TRAINING REFRESHER (formerly EDUC 363) - .5 Unit (CR/NC Option)

Class Hours: 10 lecture total

This course is a brief over-view of all the areas of bus driver licensing, school bus operation use and regulations,

defensive driving, and student loading and unloading procedures.

REAL ESTATE (REAL)

REAL 30 REAL ESTATE PRINCIPLES - 3 Units (F)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

The fundamental real estate course covering the basic laws and principles of California Real Estate gives understanding, background, and terminology necessary for advanced study in specialized courses. Designed to assist those in preparing for the real estate salesperson license examination. Either this course or possession of a real estate license is prerequisite to most other real estate courses. Required for Real Estate majors and in the Real Estate Certificate Program.

REAL 31 REAL ESTATE PRACTICE - 3 Units (S)

Advisory: ENGL 190 eligibility; REAL 30

Class Hours: 54 lecture total

Day-to-day operations of the real estate broker and agent; 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.

REAL 32 REAL ESTATE APPRAISAL - 3 Units (CR/NC Option) (F)

Prerequisite: REAL 30 or have a real estate license

Class Hours: 54 lecture total

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 one 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.

REAL 33 LEGAL ASPECTS OF REAL ESTATE - 3 Units (I)

Prerequisite: REAL 30 or have a real estate license

Class Hours: 54 lecture total

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 - 3 Units (CR/NC Option) (S)

Prerequisite: 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.

REAL 135 REAL ESTATE ECONOMICS - 3 Units (I)

Class Hours: 54 lecture total

A study of the interrelationship between economics and real estate. The course includes a review of basic economic principles; a study of real estate markets; a look at the influences involving real estate development; and, perhaps most important, a study of the economics of real estate investment. Offered in evening program only.

REAL 136 INTRODUCTION TO ESCROW - 3 Units (I)

Advisory: ENGL 190 eligibility; Real 30

Class Hours: 54 lecture total

Case method presentation in escrow procedures including processing sale, loan, exchange and business escrows. Includes review and preparation of documents, processing and closing escrow corporations, title search, title reports and all details appurtenant to efficient escrow processing. Offered primarily as an evening course.

REAL 138 ADVANCED REAL ESTATE APPRAISAL - 3 Units (CR/NC Option) (I)

Prerequisite: REAL 32

Class Hours: 54 lecture total

This course will reinforce the basic principles of real estate appraisal and their application to the three approaches to valuation of real property. The main emphasis of this course is on the income approach to value along with the support of the market and cost approaches, as all three approaches apply to income-producing property, such as multi-family, commercial, industrial, and any other special purpose-type 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.

REGISTERED NURSING (REGN)

See Also: HEOC and VOCN

REGN 60 THEORETICAL FOUNDATIONS OF NURSING CARE – 6 Units (F/S)

Prerequisite: Enrollment into the nursing program.

Corequisite: REGN 61

Class Hours: 108 lecture total

In this first course leading to Registered Nursing licensure, the theoretical foundation is built by the student for application in the clinical area of adult and elderly adult medical-surgical nursing. The learner is studying the underlying theories and principles of fundamental nursing care, which are demonstrated in the corequisite clinical course, REGN 61 Clinical Foundations of Nursing Care. The learner expands on prerequisite course work to ensure a safe foundation for clinical practice. The student demonstrates critical thinking through application of the nursing process. Fundamental physical health assessment is emphasized and therapeutic communication is applied in patient and family interactions. Wellness is promoted through the patient education process.

REGN 61 CLINICAL FOUNDATIONS OF NURSING CARE – 6 Units (F/S)

Prerequisite: Enrollment in the Nursing Program.

Corequisite: REGN 60

Class Hours: 324 lab total

The first clinical course leading to Registered Nursing licensure finds the student building a safe foundation for nursing care with basic nursing skill demonstration in the Clinical Skills Laboratory. Successful completion of basic nursing skills as vital signs, bathing, skin care, mobility, and bowel care are then applied to patient care in the hospital setting. The Clinical Skills Laboratory is utilized continuously throughout the course for more complex fundamental skills as medication preparation and administration, urinary catheterization, nasogastric intubation and sterile technique. Application of the theory presented in the corequisite course, REGN 60 Theoretical Foundations of Nursing Care, finds the student caring for adult and elderly adult medical-surgical patients in the acute care setting. The student organizes nursing care through the nursing process; demonstrates effective communication; and maximizes opportunities for patient education.

REGN 70 THEORETICAL CONCEPTS OF MEDICAL-SURGICAL NURSING – 7 Units (F/S)

Prerequisite: REGN 60, REGN 61

Corequisite: REGN 71, REGN 72

Class Hours: 126 lecture total

REGN 70 is a required prerequisite for REGN 80 and REGN 81. REGN 70 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 60 and REGN 61, the students will expand their knowledge of medical-surgical nursing. Medical-surgical disorders are discussed in relation to etiology, pathophysiology, clinical manifestations, and diagnostic studies. Utilizing the nursing process, nursing interventions, medical interventions, and collaborative interventions will also be discussed.

REGN 71 CLINICAL CONCEPTS OF MEDICAL-SURGICAL NURSING - 4.5 Units (F/S)

Prerequisites: REGN 60, REGN 61

Corequisite: REGN 70, REGN 72

Class Hours: 243 lab total

REGN 71 is a required prerequisite for REGN 80 and REGN 81. REGN 71 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 60 and REGN 61, the students will expand the fundamental clinical nursing skills they mastered. Students will have a variety of patient assignments on the medical, surgical, oncology, neurology, and orthopedic floors with special assignments in the GI Lab, respiratory, ER, angiography, operating room, and outpatient surgery. Clinical skills will include assessments, medication administration, intravenous therapy, IV cannula insertion, blood administration, and organizing the care of increasingly complex groups of patients. Emphasis is placed on the integration of theory and the nursing process in the clinical setting by use of clinical papers and nursing care plans.

REGN 72 CONCEPTS OF MEDICAL-SURGICAL SYSTEM-BASED ASSESSMENT - .5 Units (F/S)

Prerequisites: REGN 60, REGN 61

Corequisite: REGN 70, REGN 71

Class Hours: 27 lab total

REGN 72 is a required prerequisite for REGN 80 and REGN 81 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 Association Degree Nursing program. Building upon the content of REGN 60 and REGN 61 the students will expand the basic assessment skills they mastered. Clinical Skills Lab activities focus on detailed system based assessment skills. These skills include subjective and objective assessment activities. Subjective assessment skills include taking a complete patient history and using probing questions to explore key areas in more depth. Objective assessment skills include auscultation, percussion, palpation, inspection, and the use of specialized equipment. One key focus is how to individualize assessments based upon patient diagnosis and significant patient data.

REGN 79 LVN – RN TRANSITION – 2 Units (I)

Prerequisites: Must be LVN or re-entry A.D.N. student

Class Hours: 36 lecture 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.

REGN 80 CONCEPTS OF MENTAL HEALTH AND COMMUNITY-BASED NURSING – 6 Units (F/S)

Prerequisites: REGN 70, REGN 71, REGN 72

Corequisite: REGN 81

Class Hours: 72 lecture/144 lab total

REGN 80 is a required prerequisite for REGN 90 and is a required course for the Associate Degree Nursing Program at Shasta College. The emphasis of this course is fundamentals of mental health, psychiatric, and community health nursing. The nursing process and critical thinking skills are emphasized with concurrent clinical practice in inpatient, outpatient, home care, and community agencies.

REGN 80X CONCEPTS OF MENTAL HEALTH AND COMMUNITY-BASED NURSING (NON-DEGREE) – 6 Units (F/S)

Prerequisites: California Licensed Vocational Nurse, MICR 1, PHY 1, PHY 1L

Corequisite: REGN 81X

Note: This is the course for the non-degree, 30-unit option student

Class Hours: 63 lecture/135 lab total

REGN 80X is designed for the licensed vocational nurse enrolled in the 30-unit option non-degree program. The course focuses on fundamentals of mental health, psychiatric, and community health nursing. The nursing process and critical thinking skills are emphasized with concurrent clinical practice in inpatient, outpatient, home care, and community agencies.

REGN 81 CONCEPTS OF ADVANCED MEDICAL-SURGICAL NURSING – 6 Units (F/S)

Prerequisites: REGN 70, REGN 71, REGN 72

Corequisite: REGN 80

Class Hours: 72 lecture/144 lab total

REGN 81 is a required prerequisite for REGN 90 and REGN 91. It is a required course for the Associate Degree Nursing Program at Shasta College. This course is one of two corequisite courses that comprise the third semester of the Associate Degree Nursing Program. REGN 81 provides the conceptual basis and concurrent clinical practice of nursing care for complex medical-surgical patients. Students use the nursing process and critical thinking to plan, implement, and evaluate the acute, remedial, and rehabilitative care of the complex medical-surgical patient.

REGN 81X CONCEPTS OF ADVANCED MEDICAL-SURGICAL NURSING (NON DEGREE) – 6 Units (F/S)

Prerequisites: California Licensed Vocational Nurse, MICR 1, PHY 1, PHY 1L

Corequisite: REGN 80X

Note: This is the course for the non-degree, 30-unit option student

Class Hours: 63 lecture/135 lab total

REGN 81X is designed for the licensed vocational nurse enrolled in the 30 unit option non-degree program. This course provides the conceptual basis and concurrent clinical practice of nursing care for complex medical-surgical patients. Students use the nursing process and critical thinking to plan, implement, and evaluate the acute, remedial, and rehabilitative care of the complex medical-surgical patient.

REGN 90 CONCEPTS OF FAMILY AND MATERNAL-CHILD NURSING – 6 Units (F/S)

Prerequisites: REGN 80, REGN 81

Corequisite: REGN 91

Class Hours: 54 lecture/162 lab total

REGN 90 is one of final two required courses for the Associate Degree Nursing program at Shasta College. The role of the Registered Nurse in the care of the childbearing and child-rearing family is examined. Concepts emphasized include family, communication, health promotion, teaching, cultural variety, growth and development, nursing process, critical thinking, legal-ethical issues and advocacy. The student will care for families in a variety of acute care and community-based settings.

REGN 90X CONCEPTS OF FAMILY AND MATERNAL-CHILD NURSING (NON-DEGREE) – 2 Units (F/S)

Prerequisites: REGN 80X, REGN 81X

Corequisite: REGN 91X

Note: This is the course for the non-degree, 30-unit option student.

Class Hours: 27 lecture/27 lab total

REGN 90X is designed for the Licensed Vocational Nurse enrolled in the 30-unit option non-degree program. The course emphasis is on the preventative, supportive, and teaching aspects for patients in advanced family systems. The nursing process and critical thinking skills are emphasized with concurrent clinical practice.

REGN 91 CONCEPTS OF LEADERSHIP AND MANAGEMENT IN NURSING – 6 Units (F/S)

Prerequisites: REGN 80, REGN 81

Corequisite: REGN 90

Class Hours: 54 lecture/162 lab total

REGN 91 is one of the final required courses for the Associate Degree Nursing Program at Shasta College. This course is one of two corequisite courses that make up the fourth semester of the Associate Degree Nursing Program. The course focus is leadership and management in nursing theory and clinical practice. The student will progress through several areas of inquiry focusing on leadership, management, current nursing trends, legal/ethical issues in nursing practice and successful preparation and completion of the licensing examination and personal career development.

Critical thinking skills are emphasized with concurrent clinical practice. Students will be provided with clinical experiences designed to focus on the nursing leadership and management roles in a variety of healthcare settings.

REGN 91X CONCEPTS OF LEADERSHIP AND MANAGEMENT IN NURSING (NON-DEGREE) – 6 Units

Prerequisites: REGN 80X, REGN 81X

Corequisite: REGN 90X

Note: This is the course for the non-degree, 30-unit option student

Class Hours: 54 lecture/162 lab total

REGN 91X is designed for the Licensed Vocational Nurse enrolled in the 30-unit option non-degree program. The course focus is leadership and management in nursing practice. A focus is also given to current issues and trends, and the role of the professional nurse in practice. Critical thinking skills are emphasized with concurrent clinical practice.

RUSSIAN (RUSS)

RUSS 1 ELEMENTARY RUSSIAN - 5 Units (I)

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. In the process of learning the language, the student is introduced to the culture and people of Russia, its history, literature, art, architecture, music, theater, ballet, etc.

RUSS 2 ELEMENTARY RUSSIAN - 5 Units (I)

Prerequisite: RUSS 1

Class Hours: 90 lecture total

This course is a continuation of RUSS 1. There is a continued emphasis on listening to and reading Russian (receptive skills) and on speaking and writing Russian. Students expand their language skills and vocabulary. Students also improve the ability to ask and answer questions and to discuss daily life, current events, travel, leisure time and activities, and shopping. In the process of learning the language, the student is introduced to the culture and people of Russia, its history, literature, art, architecture, music, theatre, ballet, etc.

RUSS 3 INTERMEDIATE RUSSIAN – 5 Units (I)

Prerequisite: RUSS 2

Class Hours: 90 lecture total

This course is designed for those who have had previous training in the Russian language. Review of grammar with creased emphasis upon speaking and linguistic structure of the language, reading of excerpts from works of Russian authors, study of culture of Russian speaking people, writing skills, and translations of culturally significant reading selections.

RUSS 4 INTERMEDIATE RUSSIAN – 5 Units (I)

Prerequisite: RUSS 3

Class Hours: 90 lecture total

The fourth semester of the Russian language emphasizes conversation, contemporary literature, and composition. Reading selections include Russian poetry, theatre, and journalistic expressions.

SIGN LANGUAGE (SL)

SL 50 SIGNING EXACT ENGLISH I - 3 Units (I (CR/NC Option))

Note: Does not meet foreign language requirements.

Class Hours: 45 lecture/27 lab total

The course is designed for educational interpreters, parents, teachers, instructional assistants and those involved in the lives of deaf children. Students will be introduced to SEE vocabulary, fingerspelling, and rules governing the use of Signing Exact English. Students will gain expressive and receptive sign skills to engage in dialog.

SL 51 SIGNING EXACT ENGLISH II - 3 Units (I (CR/NC Option))

Prerequisite: SL 50

Note: Does not meet foreign language requirements.

Class Hours: 45 lecture/27 lab total

The course is designed for educational interpreters, parents, teachers, instructional assistants and those involved in the lives of deaf children. Students will be exposed to intermediate level vocabulary, fingerspelling, and rules governing the use of Signing Exact English, with special emphasis on affixes. Students will increase expressive and receptive sign skills and broaden their knowledge of issues pertaining to the education of deaf and hard of hearing individuals.

SL 52 SIGNING EXACT ENGLISH III – 3 Units (F/S) (CR/NC Option)

Prerequisite: SL 51

Note: Course does not meet foreign language requirements.

Class Hours: 45 lecture/27 lab total

The course is designed for educational interpreters, parents, teachers, instructional assistants and those involved in the lives of deaf children. Students will be introduced to advanced SEE vocabulary, fingerspelling, and rules governing the use of Signing Exact English. Students will gain advanced level of expressive and receptive sign skills. Special emphasis

will be placed on technical vocabulary used in the educational settings.

SL 90 AMERICAN SIGN LANGUAGE I (formerly SPED 93A) - 4 Units (CR/NC 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 (CR/NC Option)

Corequisite: SL 90 or equivalent skill level (it is permissible for SL 90 to have been previously satisfied)

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. Approximately 75% of class time will be non-verbal interactions.

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.

SL 92 AMERICAN SIGN LANGUAGE II (formerly SPED 93B) - 4 Units (CR/NC Option)

Prerequisite: SL 90 with "C" or better grade, or equivalent

Advisory: SL 91 with "C" or better grade

Class Hours: 72 lecture total

This course is a continuation of American Sign Language I. Designed for the student desiring to increase vocabulary and fluency in performing and receiving American Sign Language information. 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 dialogue 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 (CR/NC Option)

Corequisite: SL 92 (it is permissible for SL 92 to have been previously satisfied)

Class Hours: 54 lab total

This course is designed to give students a lab environment to practice new vocabulary and structure learned in SL 92, American Sign Language II. The course will review vocabulary, sentence structure and visual, non-manual behaviors from SL 92 and will give structured class assignments to utilize signing skills and fluency at a minimum of a moderate rate which is needed 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 proficiencies are enhanced by supervised repetition and practice.*

SL 94 AMERICAN SIGN LANGUAGE III - 4 Units (CR/NC Option) (I)

Prerequisite: SL 92 with "C" or better grade, & SL 93 with "C" or better grade

Class Hours: 72 lecture 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 Code of Ethics, expectations, and simultaneous interpreting practice. Exposure to Deaf culture through class discussions and guest lecturers will be incorporated.

SL 96 AMERICAN SIGN LANGUAGE IV- 4 Units (CR/NC Option) (S)

Prerequisite: SL 94 with a "C" or better grade

Class Hours: 72 lecture 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 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 of the Deaf community.

SOCIOLOGY (SOC)

SOC 1 INTRODUCTION TO SOCIOLOGY - 3 Units (CAN# SOC 2) (CR/NC Option) (F/S)

Advisory: A grade of "C" or higher in ENGL 190 or qualifying score on the English Placement Exam

Note: Student taking the Internet format of this class, must have access to, and working knowledge of the Internet

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

This course is designed to introduce the beginning student through discussion and lectures, to the basic terminology, concepts and methods necessary for a sociological analysis of social behavior in a group or social context. The course is an introductory course, thus, it deals with breadth, not depth. The major elements of sociological analysis surveyed

"F" and "S" indicate semester course is usually offered. "I" indicates course may not be offered every year.

Subject to change. Check the current class schedule.

are culture, society, social groups, socialization, social stratification, social change, collective behavior, deviance, symbolic communication and alienation. This course is also offered as a distance education course in video/CD ROM format, video format and internet format. In the Internet format, students will attend lectures and discussions in a virtual online classroom instead of meeting with the instructor on campus. Students will participate through an Internet connection. Minimum requirements: ability to access World Wide Web addresses.

SOC 2 SOCIAL PROBLEMS - 3 Units (CAN# SOC 4) (CR/NC Option) (F/S)

Advisory: A grade of "C" or higher in ENGL 190 or qualifying score on the English Placement Exam

Note: Students taking the Internet format of this class must have access to and working knowledge of the Internet

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

The course involves the student in the formal sociological analysis of some of the major problems of life - crime, delinquency, drug addiction, race relations, etc. Each semester the course emphasizes an investigation of the expression of a problem of consequence to both the nation and local community. This course is also offered as a distance education course in video/CD ROM format, video format and Internet format. In the Internet format, students will attend lectures and discussions in a virtual online classroom instead of meeting with the instructor on campus. Students will participate through an Internet connection. Minimum requirements: ability to access World Wide Web addresses.

SOC 15 SOCIOLOGY OF MASS MEDIA - 3 Units (CR/NC Option) (F/S)

Advisory: A grade of "C" or higher in ENGL 190 or qualifying score on the English Placement Exam

Note: Students taking the Internet format of this class must have access to and working knowledge of the Internet

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

The investigation and examination of the movies, television and radio, popular music, newspapers, magazines, and popular reading which have affected our values, or which allow for search toward values. This course is also offered as a distance education course in video format and Internet format. In the Internet format, students will attend lectures and discussions in a virtual online classroom instead of meeting with the instructor on campus. Students will participate through an Internet connection. Minimum requirements: ability to access World Wide Web addresses.

SOC 22 SOCIOLOGY OF AGING - 3 Units (CR/NC Option) (I)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

This course presents social, economic, and political factors as they relate to the aged population. Topics include demographics, cross-cultural perspectives the horizon of the future, resources for the elderly, and social support systems. Adaptation to changing family and social roles will be covered in the context of societal issues.

SOC 25 SOCIOLOGY OF MINORITIES - 3 Units (CR/NC Option) (F/S)

Advisory: A grade of "C" or higher in ENGL 190 or qualifying score on the English Placement Exam

Note: Students taking the Internet format of this class must have access to and working knowledge of the Internet

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

A survey course designed to introduce the student to identification and sociological analysis of present-day racial minority groups in the United States. This course is also offered as a distance education course in video/CD ROM format, video format and Internet format. In the Internet format, students will attend lectures and discussions in a virtual online classroom instead of meeting with the instructor on campus. Students will participate through an Internet connection. Minimum requirements: ability to access World Wide Web addresses.

SOC 70 SOCIAL WELFARE - 3 Units (CR/NC Option) (F/S)

Advisory: ENGL 190 eligibility

Class Hours: 54 lecture total

This course introduces the beginning student to various fields of social welfare and social work. The class will focus on current and historical perspectives on the effects of social problems such as poverty, emotional difficulties, sexism, crime, racism, and child abuse. Through discussions, lectures and guest speakers, students will be introduced to basic terminology, methods, and concepts necessary to understand the profession of social work.

SPANISH (SPAN)

SPAN 1 ELEMENTARY SPANISH - 5 Units (CR/NC Option) (CAN # SPAN 2) (SPAN SEQ A) (F/S)

Class Hours: 90 lecture total

This introductory course is designed to give the student intense practice in speaking and listening to Spanish, and reading and writing in Spanish, 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 eating and foods. Also, students are introduced to the culture of Spanish-speaking people.

SPAN 2 ELEMENTARY SPANISH - 5 Units (CR/NC Option) (CAN # SPAN 4) (SPAN SEQ A) (F/S)

Prerequisite: SPAN 1 or 2 years of High School Spanish

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 the ability to ask and answer questions and to discuss daily life, current events, travel, leisure time and activities, and shopping. Students also receive cultural information about the Spanish-speaking countries.

SPAN 3 INTERMEDIATE SPANISH - 3 Units (CAN# SPAN 8) (SPAN SEQ B) (CR/NC Option) (F/S)

Prerequisite: SPAN 2 or 3 years of high school Spanish

Class Hours: 54 lecture total

This course is a continuation of SPAN 2. This course offers extensive conversational exercises with stress on correct pronunciation. The course also includes an extensive review of grammar and composition, as well as a brief introduction to Spanish literature. The culture of the Spanish-speaking countries is also explained and discussed.

SPAN 4 INTERMEDIATE SPANISH - 3 Units (CAN# SPAN 10) (SPAN SEQ B) (CR/NC Option) (F/S)

Prerequisite: SPAN 3 or 4 years of high school Spanish

Class Hours: 54 lecture total

This course is a continuation of SPAN 3. Extensive conversational exercises with more emphasis on the correct pronunciation. The course also includes more extensive reviews of grammar and composition, as well as general introduction to Spanish literature. The culture of the Spanish-speaking people is explained and discussed.

SPAN 20 SPANISH CONVERSATION AND PHONOLOGY - 3 Units (CR/NC Option) (I)

Prerequisite: SPAN 3 or three years of high school Spanish

Class Hours: 54 lecture total

Intense practice in the spoken language with the objective of perfecting speech patterns as well as the sound system and increasing vocabulary by giving oral presentations, conversing, and analyzing elementary Spanish phonology.

SPAN 151 INTRODUCTION TO SPANISH TERMINOLOGY - 3 Units (I)

Class Hours: 54 lecture total

This course will help those students already in or planning to enter specific professions or vocations who want to learn Spanish. Introduction to pronunciation and minimum essentials of Spanish grammar. This course is a survey of basic vocabulary, numbers (1-100), professional and vocational terminology, practice of simple phrases, intense practice in comprehending simple phrases and practice in rejoinders to simple phrases given within the context of a professional and vocational situation.

SPECIAL EDUCATION (SPED)

See ADAP

SPEECH (SPCH)

SPCH 10 INTERPERSONAL COMMUNICATION - 3 Units (CR/NC Option) (CAN # SPCH 8) (F/S)

Advisory: ENGL 1A

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

This course is an introduction to the process of human communication with emphasis on interpersonal communication. Emphasis is placed on the psychological, social, cultural, and linguistic factors which affect normal person-to-person interactions. Subjects covered are listening, verbal and nonverbal communication, self-awareness/self-concept, perception, emotions, relationships, communication climates, and conflict management. Students will increase their knowledge and skills in interpersonal communication. College level writing skills will be expected on all papers, outlines and short essays. The equivalent of this course in content and objectives also may be offered on the Internet.

SPCH 20 INTERCULTURAL COMMUNICATION - 3 Units (CR/NC Option) (F/S)

Advisory: Eligibility for ENGL 1A

Class Hours: 54 lecture total

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.

SPCH 30 ORAL INTERPRETATION - 3 Units (CR/NC Option) (F/S)

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.

SPCH 40 ARGUMENTATION AND DEBATE - 3 Units (CAN # SPCH 6) (CR/NC Option) (F/S)

Advisory: Eligibility for ENGL 1A and 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. This argumentation class also is taught by

distance learning. In these sections of SPCH 40, students will be required to attend class lecture/discussion in a virtual on-line classroom instead of physically attending in a classroom. This will require participation in virtual classroom via a text-only Internet connection. This will be done via a web page with WebCT or similar software. The distance learning course will focus on written argumentation, but audio and visual images available over the Internet will be used to supplement instruction. Minimum requirements: ability to access World Wide Web addresses and to send and receive email and file attachments. Those students using the most current versions of Internet browsers will have better access to moving images and audio. Students may access the virtual classroom through any Internet ramp, including personal computer or Web T.V. connection or any connections at work, school, or library.

SPCH 54 *SMALL GROUP COMMUNICATION - 3 Units (CR/NC Option) (CAN # SPCH 10) (F/S)*

Advisory: ENGL 190

Class Hours: 54 lecture total

This course is an introduction to the process of human communication with an emphasis on small groups. Subjects covered are preparation for discussion, participation, leadership, decision-making, interpersonal relations, managing conflict, creativity, and evaluation of group discussions. Students will be involved in group discussions and emphasis will be on practical experience. College level writing skills will be expected on all papers, outlines and short essays.

SPCH 60 *PUBLIC SPEAKING - 3 Units (CAN#SPCH 4) (CR/NC Option) (F/S)*

Advisory: ENGL 1 A Eligibility

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.

SPCH 97 *SPECIAL TOPICS IN SPEECH COMMUNICATION (formerly SPCH 91AD) - .5-2 Units (CR/NC Option)*

Class Hours: 9-36 lecture total

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 will have the opportunity to be videotaped and to use presentational technology. College level writing skills will be expected on all papers, outlines, and short essays.

STUDENT SERVICES (STU)

STU 1 *COLLEGE SUCCESS - 3 Units (F/S)*

Class Hours: 54 lecture total

This intensive course is designed to assist students in obtaining the skills and knowledge necessary to reach their educational objectives. Students will have an opportunity to examine controversial issues of value and conflict, employ effective methods of stress management, and most importantly, apply strategies for achieving academic success. Topics covered include: motivation and discipline, memory development, time management, communication skills, career and transfer planning and a wide variety of student skills and techniques for college success.

STU 10 *INTRODUCTION TO PEER TUTORING - .5 Unit (CR/NC Option) (F/S)*

Class Hours: 9 lecture total

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. The course may be offered in other formats for distance learning.

STU 42 *STUDENT LEADERSHIP (formerly STSV 42AB) - 2 Units (F)*

Note: All elected and appointed ASB officers shall enroll in or have passed STSV 42 (no exceptions or waiving)

Class Hours: 36 lecture total

Designed to develop leadership qualities in students desirous of better understanding the principles of publicity, finance, organization procedures, group dynamics and human relations, Includes research, discussion and lectures in the techniques of leadership, group planning, and parliamentary procedure.

STU 43 *STUDENT LEADERSHIP LAB - 1 Unit (formerly STSV 43AD) (F)*

Class Hours: 54 lab total

Designed to give students practical leadership in student affairs. Open to all students who currently hold or expect to hold office positions either elective or appointive, in either the student government organization or one or more of the various club organizations. *Note: This course is repeatable one time for a total of two enrollments.*

STU 50 *GETTING CONNECTED: AN ORIENTATION TO COLLEGE - .5-1 Unit (F/S)*

Class Hours: 9-18 lecture total (*when offered via the Internet as Distance Education format, hours will total 54 for one unit*)

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 longer versions of the course students will deepen 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. *Note: This course is also offered via the Internet as Distance Education, with the same content as the on-campus course, but in the one-unit format only. Students will be required to meet in person with the instructor a minimum of one (1) time at the Shasta College campus, at another designated location or through the telecommunication interactive service. Date, time, and location of the meeting will be determined by student and instructor.*

STU 90 CAREER CHOICE - 1 Unit (CR/NC Option) (F/S)

Class Hours: 18 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, aversions, 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 - 1 Unit (CR/NC Option) (F/S)

Class Hours: 18 lecture total

Designed to prepare students to be successful on the job. Students will gain insight 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.

STU 100 CAREER VALUE EXPLORATION - .5 Unit (F/S)

Class Hours: 9 lecture total

A career motivation program which helps individuals better understand themselves and their place in the career world through a series of group activities which identify each student's successes, strengths, values, interests, abilities, and personality patterns.

STU 310 GENERAL TUTORING LAB/SUPERVISED TUTORING - 0 Units (F/S)

Class Hours: TBA

This course is open to all students in all classes unless otherwise delineated. Individualized sessions are designed to assist the student in overcoming a learning barrier and/or to master a particularly difficult portion of the course.

STU 393 TARGETED JOB SEARCH - 0 Units (I)

Class Hours: 7 lecture total

Integrating into the workforce is a challenging yet rewarding endeavor. This workshop emphasizes hands-on development of strategies and techniques appropriate to job search. Students will be introduced to a focused approach to attaining employment.

THEATRE ARTS (THTR)

In general, Theatre Arts Department courses have recommended eligibility skill levels of ENGL 190 and 100-199 series mathematics. Exceptions to this general recommendation: THTR 5, THTR 20, THTR 21, THTR 42, and THTR 81. See the specific course description for these recommendations.

THTR 1 INTRODUCTION TO THEATRE - 3 Units (CAN # DRAM 18) (F/S)

Advisory: Eligibility for enrollment in ENGL 190

Class Hours: 54 lecture total

This course is a survey of theatre, including history, style, dramatic structure, plays, acting and actors. Students will develop an appreciation for the theatre arts through viewing, critiquing and/or participating in college productions. This course fulfills the Arts requirement for General Ed. Transfer and is required for theatre majors.

THTR 5 20TH CENTURY THEATRE - 3 Units (I)

Advisory: Eligibility for enrollment in ENGL 1A

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 Arts requirement for General Ed. Transfer and is required for Theatre majors.

THTR 10 LITERATURE IN PERFORMANCE - 3 Units (I)

Advisory: ENGL 1A

Class Hours: 54 lecture total

In this course students will read a selection of plays from various eras. They will learn how to interpret and transform a script into a full stage production. Topics covered include: text analysis, acting style, theme, language, dictation, set, audience, gender issues, special effects, historical context. This course is required for Theatre majors; non-majors are welcome.

THTR 12 ACTING I - 3 Units (CAN # DRAM 8) (F/S)

Class Hours: 36 lecture/36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)

This course teaches the fundamentals of what it is to be an actor. Topics covered include: 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; view and critique on-campus productions. This course is required for theatre majors; non-majors are welcome.

THTR 13 ACTING II: PHYSICAL THEATRE AND VOICE FOR THE STAGE - 3 Units (I)

Prerequisite: THTR 12 with a grade of C or better

Class Hours: 36 lecture/54 lab total

A course that provides more in-depth information about, and facility with, the physical instrument the actor must use. Students will receive basics of stage voice training, enunciation, articulation, expression and emotional content in

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Subject to change. Check the current class schedule.

relation to dramatic text, as well as exercises and training in physical articulation, mask and mime work, familiarity with Alexander and Feldenkrais techniques, and the importance of the voice and body as the interpretive and creative vehicle. Designed for the Theatre Arts Core Program, acting and directing concentration; may not be challenged, must be taken for a grade, and is transferable.

THTR 15 CHILDREN'S THEATRE - 3 Units (I)

Class Hours: 54 lecture total

A beginning course in theatre for children. This class will focus on the purposes and goals of theatre for children and its development in the Twentieth Century. It will also explore puppetry, creative dramatics, and theatre as an educational tool. Potential educators would find this class of value as well as theatre majors and those interested in child care.

THTR 20 READER'S THEATRE - 1-3 Units (I)

Class Hours: 48-144lab 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 matters 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 – 1-3 Units (I)

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 - 1-3 Units (I)

Class Hours: 54-162 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 24 MAINSTAGE PRODUCTION II - MUSIC (formerly THTR 24AD) - 1-3 Units (CR/NC Option) (I)

Class Hours: 54-162 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) - 1-3 Units (CR/NC Option) (I)

Class Hours: 54-162 lab total

A course in class or rehearsal sessions to teach basic stage movement and dance for large cast plays and music theatre. Class projects 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) - 1-3 Units (CR/NC Option) (I)

Class Hours: 54-162 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 (CR/NC Option) (I)

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, aims and conduct, rehearsal scheduling, 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 (CR/NC Option) (CAN # DRAM 12) (I)

Class Hours: 54 lecture total

This course focuses on backstage procedures and how to operate the equipment used in creating stage scenery, lighting, sound, and special effects. Students will learn the fundamentals of backstage operations. They will learn how to operate hand and power tools; construct and rig scenery; identify, handle, and control lighting equipment; and organize production crews.

THTR 31 STAGECRAFT II (formerly THTR 35) - 3 Units (CR/NC Option) (I)

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, make-up, and stage properties. They will learn the duties of the stage manager and the production coordinator.

THTR 33 STAGE MANAGEMENT (formerly THTR 22IL) - 2 Units (CR/NC Option) (I)

Class Hours: 27 lecture/27 lab total

This course will introduce the student to the functions of the stage manager including scheduling, coordinating the production team and running rehearsals. Students will participate in an actual production, developing and understanding of the process of taking a script through planning, production, rehearsal and performance. The student will demonstrate skills by creating a prompt book, keeping blocking notations and participate in calling the shows.

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- THTR 34 MAKEUP - 2 Units (CR/NC Option) (CAN # DRAM 14) (I)**
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.
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- THTR 37 THEATRE MANAGEMENT - 3 Units (I)**
Class Hours: 36 lecture/36 lab (for every 2 lab hours spent in class, one additional hour of out-of-class work is assigned)
 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. This course is required for theatre majors; non-majors are welcome.
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- THTR 41 THEATRE LABORATORY (formerly THTR 41AD) - 1-3 Units (CR/NC Option) (F/S)**
Class Hours: 54-162 lab hours total
 A laboratory course in which the student will gain work 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.*
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- THTR 42 CHILDREN'S THEATRE LABORATORY (formerly THTR 42AD) - 1-3 Units (CR/NC Option) (I)**
Class Hours: 54-162 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 the Children's Theatre Production. *Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.*
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- THTR 50 CHILDREN'S THEATRE PRODUCTION - DRAMA (formerly THTR 50AD) - 1-3 Units (CR/NC Option) (I)**
Class Hours: 54-162 lab total
 A production course designed to provide experience in creating various theatre forms for children including participation theatre, story theatre, and the formal play. *Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.*
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- THTR 51 CHILDREN'S THEATRE PRODUCTION-CHOREOGRAPHY (formerly THTR 51AD) - 1-3 Units (CR/NC Option)(I)**
Class Hours: 54-162 lab total
 A course in class or rehearsal sessions to teach basic stage movement and dance for children's plays or musicals. Class projects will include participation in choreography in the class or in theatre production. *Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.*
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- THTR 52 CHILDREN'S THEATRE PRODUCTION - MUSIC - (formerly THTR 52AD) 1-3 Units (CR/NC Option) (I)**
Class Hours: 54-162 lab total
 A course in class or rehearsal sessions to teach the use of vocal and instrumental music for children's plays or musicals. Class projects will include participation in classroom activities and/or theatre productions. *Note: Since subject matter varies each time the course is taught, it may be repeated three times for a maximum of four enrollments.*
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- THTR 60 SPECIAL PROJECTS-PRODUCTION - 1-3 Units (I)**
Class Hours: 54-162 lab total
 A course that provides specialized training in specific (advanced) 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, i.e., special vocal skills, acting methods, stage lighting techniques, scenographic projection, prosthetic-device makeup, puppetry, advanced elements of stagecraft, mime, and/or any other technique needed to satisfy and complement a successful 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.*
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- THTR 61 COSTUMING (formerly THTR 22AD) - 1-3 Units (CR/NC Option) (I)**
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.*
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- THTR 81 DRAMA: PLAY, PERFORMANCE, PERCEPTION - 2 Units (CR/NC Option)(I)**
Class Hours: 18 lecture/54 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 (CR/NC Option) (I)

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 (CR/NC Option) (I)

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 I - 1-3 Units (CR/NC Option) (I)

Class Hours: 54-162 lab total**

Designed specifically for small 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, costuming, 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 - 0 Units (I)

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 (I)

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 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.

VETERINARY TECHNICIAN (VETT)

VETT 1 VETERINARY ANATOMY, PHYSIOLOGY AND MEDICAL TERMINOLOGY - 4 Units (I)

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 full 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.

VETT 2 FUNDAMENTALS OF ANIMAL HEALTH - 4 Units (I)

Class Hours: 54 lecture/54 lab lecture total

This course is for students enrolled in the fall semester of their first year in the Veterinary Technology curriculum. This introductory lecture course defined 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.

VETT 3 HEALTH AND DISEASES OF ANIMALS - 4 Units (I)

Advisory: Completion of VETT 1 and VETT 2 with a "C" or better

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 blood, urine and feces from several species. Significance of altered value commonly encountered in clinical medicine presented. External and internal parasites, identification, life cycle and clinical importance will be discussed.

VETT 4 VETERINARY RADIOLOGY AND IMAGING – 2 Units (F)

Advisory: Completion of VETT 1 and VETT 2 with a "C" or better

Class Hours: 27 lecture/27 lab total

Acquaints the student with the use of radiography, including radiographic duties of the Veterinary Technician curriculum. 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.

VETT 5 VETERINARY ANESTHESIOLOGY, SURGICAL ASSISTING AND DENTISTRY - 4 Units (I)

Advisory: Completion of VETT 1 and VETT 2 with a "C" or better

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.

VETT 6 CARE OF EXOTIC AND LAB ANIMALS - 1 Unit (I)

Advisory: Completion of VETT 1 and VETT 2 with a "C" or better

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.

VOCATIONAL NURSING (VOCN)

See Also: HEOC and REGN

VOCN 160 FOUNDATIONS OF NURSING PRACTICE - 15 Units (F/S)

Prerequisite: Enrollment into the Vocational Nursing Program and certified as nurse aide

Class Hours: 144 lecture/378 lab 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 (F/S)

Prerequisite: Completion of VOCN 160 with a grade of "C" or better.

Class Hours: 144 lecture/288 lab 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 increasing 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 - 13 Units (F/S)

Prerequisite: Completion of VOCN 161 with a grade of "C" or better.

Class Hours: 144 lecture/288 lab 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.

WELDING TECHNOLOGY (WELD)

See Also: AUTO, CONS, DIES, and INDE

WELD 56 WELDING - 2 Units (I)

Note: Students must provide their own safety glasses, welding gloves, and suitable welding clothes.

Class Hours: 18 lecture/54 lab total

A course in general welding includes both oxyacetylene and arc welding in the four positions on ferrous and non-ferrous metals and their alloys. Repair welding, welding symbols, trade terminology, care and use of various types of welding equipment and safety procedures.

WELD 70 BEGINNING WELDING - 3 Units (F/S)

Class Hours: 36 lecture/72 lab total

A beginning course designed for the student interested in acquiring basic welding skills to be used in a trade or service occupation. Emphasis is placed on oxyacetylene and arc welding in all positions.

WELD 94 WORK SITE LEARNING FOR WELDING TECHNOLOGY - 1-4 Units (F/S)

Prerequisite: Must have taken or currently enrolled in 8 units in welding technology course work

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major area and supervised by a College Representative to ensure experience is of educational value. Stresses good work habits through actual job performance. One to four units per semester depending on hours and nature of job. One unit of work site learning credit is granted for each 75 hours paid or 60 hours non-paid on-the-job activity. Student must enroll in seven units including work site learning. *This course may be repeated three additional times since course content varies and skills are enhanced by supervised repetition practice.*

WELD 130 GENERAL WELDING/SHOP METALS - 1 Unit (CR/NC Option) (I)

Note: Students must provide necessary safety equipment and those materials which are continuing value outside of the classroom setting.

Class Hours: 54 lab total

Designed for students interested in the fundamentals of metalworking. Subject areas and activities will emphasize metal identification, proper and safe use of hand tools, power tools, bench metals, welding, and machine tool operation. Note: *This course may be repeated three times for a total of four enrollments since the course content varies and skills are enhanced by supervised repetition and practice.*

WELD 170 INTRODUCTION TO ARC WELDING - 3 Units (F/S)

Note: Students must provide safety glasses, welding gloves, and suitable working clothes before they are permitted to weld.

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, air 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. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.*

WELD 171 INTERMEDIATE ARC WELDING - 3 Units (F/S)

Note: Students must provide safety glasses, welding gloves, and suitable working clothes before they are permitted to weld.

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 advanced arc welding classes. Weld symbols, aluminum arc and cast iron welding are covered in this course. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.*

WELD 172 SHEET METAL FABRICATION (RESIDENTIAL AND COMMERCIAL) - 3 Units (I)

Class Hours: 36 lecture/72 lab total

An introductory level residential and commercial sheet metal working course. It is intended for the carpentry, welding or metal working job entry-level student who needs to be familiar with sheet metal practices. 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 173 STRUCTURAL STEEL METAL FABRICATION - 2 Units (F/S)

Corequisite: WELD 70 or WELD 170/171 or WELD 174

Note: Students must provide safety glasses, welding gloves, and suitable working clothes before they are permitted to weld.

Class Hours: 108 lab total

A beginning course in metal fabrication, blueprint reading and sketching, coupled with layout, production welding, and the use of metal fabrication equipment. The class simulates on-the-job welding situations. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. 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 174 STRUCTURAL STEEL GMAW, FCAW WELDING - 3 Units (F)

Note: Students must provide safety glasses, welding gloves, and suitable clothes before they are permitted to weld.

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 metallurgy. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.*

WELD 175 TIG WELDING - 3 Units (S)

Note: Students must provide safety glasses, welding gloves, and suitable clothes before they are permitted to weld.

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 copperwelding. 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. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.*

WELD 176 GMAW MIG WELDING (LIGHT GAUGE AND NONFERROUS METAL) - 3 Units (CR/NC Option) (F)

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 (F/S)

Note: Students must provide safety glasses, welding gloves, and suitable working clothes before they are permitted to weld.

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. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting.*

WELD 182 ADVANCED ARC WELDING - 1 Unit (F/S)

Prerequisite: WELD 174

Note: Students must provide safety glasses, welding gloves, and suitable working clothes before they are permitted to weld.

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 certificate test. Strict adherence to the testing procedures will be followed. Completion of the class does not guarantee AWS certification unless welding procedure qualification tests are passed. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. 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 (F/S)

Prerequisite: WELD 175

Note: Students must provide safety glasses, welding gloves, and suitable working clothes before they are permitted to weld.

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. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. 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 (F/S)

Prerequisite: WELD 178

Note: Students must provide safety glasses, welding gloves, and suitable working clothes before they are permitted to weld.

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. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. 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 (F/S)

Prerequisite: WELD 174

Note: Students must provide safety glasses, welding gloves, and suitable working clothes before they are permitted to weld.

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 GMAW (MIG) welder. *Student must provide those materials which are of continuing value outside of the classroom setting. This cost will be explained at the first class meeting. 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 (CR/NC Option) (I)

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.

WORK SITE LEARNING (WSL)

WSL 94 WORK SITE LEARNING - 1-3 Units (I)

Corequisite: Enrolled in a minimum of seven (7) units including the Worksite Learning course

Hours: 75 hours paid or 60 hours non-paid per unit

Employment on approved jobs in the student's major. All WSL classes supervised by a faculty member to ensure that

the work experience is of educational value. This course stresses good work habits and meeting of SCANS competencies through actual on the job performance. This course may be repeated three times for maximum of 12 units or four total enrollments since course content varies and skills are enhanced by supervised repetition and practice.

ZOOLOGY (ZOO)

See Also: AGRI, ANAT, BOT, ENVR, MICR, NHIS, NR, and PHY

ZOOL 1 GENERAL ZOOLOGY - 4 Units (CAN# BIOL 4) (BIOL SEQ A) (F/S)

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.

ZOOL 105 HERPETOLOGY OF SHASTA COUNTY - 1 Unit (CR/NC) (S)

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 of 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.

ZOOL 163 ORNITHOLOGY - 1 Unit (CR/NC Option) (I)

Class Hours: 18 lecture/16 lab (Four 4/hr. 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. Biological science majors should be aware this course is not transferable as part of their major requirements.