

CAREER AND PERSONAL DEVELOPMENT

CRER 112 CAREER ADVANTAGE

Telecourse: *Units (Credit/No Credit) 2; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None.* Description: For those who are undecided about career goals or are changing their career direction. Stresses the significance of clearly defined values and the development of strategies and goals for life work. Transfer: CSU.

CRER 137 LIFE AND CAREER PLANNING

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Personal and career inventories are evaluated. Career options are researched and job search techniques are developed. Course stresses the significance of clearly defined values and the development of strategies and goals for life. Transfer: CSU.

CRER 140 PEER COUNSELING

Units (Grade Option) 1-3; Class Hours: Minimum of 16-48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: An orientation and training course to develop personal counseling skills which emphasize the experiential process of interpersonal communication as well as the theoretical explanation of the counseling process and behavior. Selected topics involving interpersonal relationships give students an opportunity to explore and communicate feelings while learning principles of personal counseling. May be repeated for credit up to 3 units. Transfer: CSU.

CRER 300 INTRODUCTION TO SCHOLARSHIPS

Units (Grade Option) 1.5; Class Hours: Minimum of 24 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Introduces students to scholarship and financial aid opportunities at the local, state, and national levels. Learn research techniques and utilize publications, software, internet sites, and community resources. Emphasis on development of a personal organizational system to manage the process of the scholarship search. Identify scholarships that meet personal criteria. Personal statements, interview techniques, resumes, organization and time management skills are also covered. Transfer: CSU.

CRER 401 COLLEGE SUCCESS

Units (Grade Option) 0.5-1; Class Hours: Minimum of 8-16 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: In-depth information regarding college policies, procedures, educational requirements and college programs/support services. This course also assists students in assessing time management, setting goals and decision-making skills. May be repeated for credit up to 1 unit. Transfer: CSU.

CRER 410 COLLEGE AND CAREER AWARENESS

Units (Grade Option) 2; Class Hours: Minimum of 32 lecture hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): None. Description: Although the course is intended for students in special programs and emphasizes their special needs, all students are welcome to participate. The course deals more thoroughly with topics from CRER 401. Units do not apply toward AA/AS degree.

CRER 420 WELLNESS PLANNING FOR CAREER SUCCESS

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Introduction to a practical, contemporary, diversified approach to maintaining a healthy, purposeful, well-balanced life. The importance of developing effective skills for career growth is emphasized.

CRER 430 CAREER ASSESSMENT

Units (Credit/No Credit) 0.5; Class Hours: Minimum of 24 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Designed to help individuals define career alternatives. Vocational interest, skills, and values instruments are given and results interpreted. A minimum of 24 hours of "by arrangement" testing, research, and counseling are required. Transfer: CSU.

CRER 650 SPECIAL INTEREST DISCUSSION GROUPS

Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): None. Description: Any group of students with a common interest may meet under the leadership of a counselor to explore and evaluate personal values, goals, and expectations as they relate to this social and cultural environment. Units do not apply toward AA/AS degree.

CRER 812 EFFECTIVE LEARNING

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): None. Description: This course assists students to develop the study skills necessary to achieve college success. The course topics include time management; a variety of study techniques such as note taking; communication skills; outline preparation; textbook study; test preparation and test taking; effective use of college services and resources (library, computer center, etc.); and strategy development. Units do not apply toward AA/AS degree.

CRER 815 ADAPTING TO THE STUDENT ROLE

Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): None. Description: This course is designed to assist students with becoming aware of and adapting to the role of a community college student. Developing skills associated with achieving success as a community college student is emphasized. This course is designed to meet the needs of students in the Stepping Stones program. Units do not apply toward AA/AS degree.

CRER 816 DEVELOPMENT THROUGH DRAMA

Units (Grade Option) 1; Class Hours: Minimum of 16 lecture/16 lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Students learn the fundamentals of improvisation and role-play and participate in basic theatre games to foster self-expression, improve communication skills and increase the student's ability to focus and concentrate. Creating and developing characters in scenes enhances awareness of self and others. Units do not apply toward AA/AS degree.

CRER 817 REHEARSAL FOR LIFE

Units (Grade Option) 1; Class Hours: Minimum of 8 lecture/24 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This course focuses on improving the student's capacity to understand and effectively cope with life's diverse challenges; in

the home, school, workplace or community. Enhancing interpersonal skills including those of conflict resolution assertiveness and cross-cultural sensitivity is emphasized. Students rehearse their improved communication techniques through role-play and improvisation. Units do not apply toward AA/AS degree.

CRER 840 INTRODUCTION TO WORKABILITY III

Units (Grade Option) 0.5; Class Hours: Minimum of 8 lecture hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): None. **Description:** Students are introduced to the range of services offered by the WorkAbility III program. Information is presented about vocational and disability issues common to the WorkAbility III students. Students participate in discussion groups, which provide them with the opportunity to give and receive support as they begin the program. Units do not apply toward AA/AS degree.

CRER 841 VOCATIONAL EVALUATION AND ASSESSMENT

Units (Grade Option) 1; Class Hours: Minimum of 48 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** This course offers career and interest testing to assist the student with disabilities to identify values, skills and interests in relation to career and job choices. Functional abilities, challenges, accommodations and transferable skills are also explored to facilitate success in reaching vocational objectives. Units do not apply toward AA/AS degree.

CRER 845 STEPS TO EMPLOYMENT

Units (Grade Option) 0.5-2; Class Hours: Minimum of 24-96 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** This course introduces the student to the steps in obtaining employment. Students learn how to develop a resume and cover letter, improve interview skills and utilize the internet in job searches. Other areas explored include time management, assertiveness skills and disability considerations. May be repeated for credit up to 2 units. Open Entry/Open Exit. Units do not apply toward AA/AS degree.

CRER 846 JOB RETENTION STRATEGIES

Units (Grade Option) 0.5-2; Class Hours: Minimum of 24-96 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** This course provides support for the student in maintaining employment. Students learn time management skills and responsible behavior on and off the job, and how to communicate effectively and meet the challenges of interpersonal relationships in the workplace. Stress reduction and conflict resolution techniques are also offered. May be repeated for credit up to 2 units. Open Entry/Open Exit. Units do not apply toward AA/AS degree.

CHEMISTRY

CHEM 100 SURVEY OF CHEMISTRY

Telecourse: *Units 3; Class Hours: Minimum of 48 lecture hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): One semester of high school algebra or equivalent. (This course is designed for non-science majors and is not open to students who have had or are taking CHEM 210.)* **Description:** Chemistry, the study of matter, is a study of organization, chaos and wonder. This is a general survey course of the chemical concepts and phenomena you encounter everyday. Transfer: CSU, UC*.

CHEM 110 CHEMISTRY AND DAILY LIFE

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** Students are introduced to the language of chemistry, followed by investigations into the role chemistry plays in various aspects of our environment and daily life. Topics such as pollution, food additives, energy and drugs are examined from a chemical point of view. Transfer: CSU.

CHEM 111 CHEMISTRY AND DAILY LIFE LABORATORY

Units (Grade Option) 1; Class Hours: Minimum of 48 lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): Concurrent enrollment in or completion of CHEM 110. **Description:** This course is designed to accompany CHEM 110. Experiments include the investigation, properties, and synthesis of everyday substances such as food, soap, and fuels. Transfer: CSU.

CHEM 192 ELEMENTARY CHEMISTRY

Units (Grade Option) 4; Class Hours: Minimum of 48 lecture/48 lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): MATH 110 or one year of high school algebra. **Description:** In this course students are introduced to some of the theories, laws, concepts and language of chemistry with an emphasis on problem solving. The course is specifically designed to prepare students for General Chemistry, CHEM 210. Concurrent enrollment in Geometry or Intermediate Algebra strongly recommended. Transfer: CSU, UC*.

CHEM 210 GENERAL CHEMISTRY I (CAN CHEM 2) (CAN CHEM SEQ A = CHEM 210 + 220)

Units 5; Class Hours: Minimum of 48 lecture/96 lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): CHEM 192 or satisfactory completion of high school chemistry; and satisfactory completion of two years of high school algebra, or one year of high school algebra and one year of high school geometry, or MATH 120 or equivalent. **Description:** This is the first half of a one-year sequence in general college chemistry intended for students majoring in engineering, chemistry, life sciences, physical sciences, earth sciences, pre-medicine, pre-pharmacy, pre-physical therapy, molecular biology and other pre-professional and science majors. The course presents the fundamental concepts, principles and laws of chemical processes including atomic and molecular structure, stoichiometry, gas laws, thermochemistry, theories of bonding, molecular geometry, states of matter, and solutions. The application of critical thinking skills to chemical problem-solving is emphasized. Transfer: CSU, UC*.

CHEM 220 GENERAL CHEMISTRY II (CAN CHEM 4) (CAN CHEM SEQ A = CHEM 210 + 220)

Units 5; Class Hours: Minimum of 48 lecture/96 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): Completion of CHEM 210 or 224 or equivalent. **Description:** Continuation of CHEM 210. Topics presented include many types of ionic equilibria, oxidation-reduction reactions, kinetics, thermodynamics, electrochemistry, coordination chemistry, qualitative analysis, descriptive chemistry and nuclear chemistry. The application of critical thinking skills to chemical problem-solving is emphasized. Transfer: CSU, UC.

COMPUTER INFORMATION SCIENCE AND SYSTEMS

(See also Art, Engineering, Geography, and Business/Office Technology)

CIS 118 INTRODUCTION TO OBJECT-ORIENTED PROGRAM DESIGN

Units: (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420, ENGL 100, and MATH 110; Prerequisite(s): None; Co-requisite(s): CIS 119. Description: Introduction to object-oriented computer programming for computer science majors (CS0) and computer professionals. Topics include computer hardware and operating systems; problem-solving techniques; object-oriented program design; program coding, testing, and implementation; and documentation issues and techniques. Students explore algorithm development, data types, flow of control, classes, objects, methods, vectors, and event-driven programming. May be repeated once for credit. Transfer: CSU, UC.

CIS 119 OPEN COMPUTER LAB I

Units: (Credit/No Credit) 1; Class Hours: Minimum of 48 lab hours/semester; Recommended: Eligibility for READ 420, ENGL 100, and MATH 110; Prerequisite(s): None; Corequisite(s): Concurrent enrollment in CIS 118. Description: Use of microcomputers to complete lab assignments for CIS 118. May be repeated once for credit. Transfer: CSU, UC.

COMP 235 VISUAL BASIC PROGRAMMING

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 250/251 or 252/253 or COMP 103 or 162; Corequisite(s): Concurrent enrollment in COMP 699. Description: Visual Basic (VB), an object-based language suited to programming with Microsoft Windows, is useful for stand-alone applications, quick prototyping of new applications, and building graphical “front ends” for programs written in other languages. Class time focuses on unique features of Visual Basic: object-based programming, event loops, forms, components, properties and methods; programs incorporate buttons, text boxes, pictures, dialog boxes, menus, scroll bars, disk access, etc. Familiarity with Microsoft Windows and DOS is desirable. Transfer: CSU, UC.

COMP 236 JAVA PROGRAMMING LANGUAGE

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 250/251 or 252/253 or COMP 235; Corequisite(s): Concurrent enrollment in COMP 699. Description: Java can make powerful cross-platform GUI-based applications without modification or recompilation. The course discusses Java’s expressions and data structures, objects and classes, inheritance, graphics, programming, applets, exceptions, I/O, multi-threading and networking. By completion of the course students should be able to write Java applets or stand-alone applications using all basic and many advanced features of the language. Transfer: CSU, UC.

CIS 250 PROGRAMMING METHODS I: C++

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420, ENGL 100, and MATH 120 or 122; Prerequisite(s): COMP 103 or equivalent; Corequisite(s): Concurrent enrollment in CIS 251. Description: Introduction to computer science and software engineering for majors (CS1) and computer professionals. A systematic approach to the design,

implementation, and management of robust C++ computer programs. Course emphasizes object-oriented design, programming documentation, testing and debugging techniques, and computer ethics. This course conforms to the ACM CS1 standards. Transfer: CSU, UC.

CIS 251 OPEN COMPUTER LAB I: C++

Units (Credit/No Credit) 1; Class Hours: Minimum of 48 lab hours/semester; Recommended: Eligibility for READ 420, ENGL 100, and MATH 120 or 122; Prerequisite(s): None; Corequisite(s): Concurrent enrollment in CIS 250. Description: Use of microcomputers to complete lab assignments for CIS 250. Transfer: CSU, UC.

CIS 252 PROGRAMMING METHODS II: C++

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420, ENGL 100, and MATH 120 or 122; Prerequisite(s): CIS 250/251 or equivalent; Corequisite(s): Concurrent enrollment in CIS 253. Description: This course uses Object-Oriented techniques and the C++ programming language to illustrate a variety of data structures including: arrays, stacks, queues, linked lists, trees, dictionaries, sets and graphs. Also covered are sorting and searching topics, including Big O notation and hash tables. This course conforms to the ACM CS2 standards. Transfer: CSU, UC.

CIS 253 OPEN COMPUTER LAB II: C++

Units (Credit/No Credit) 1; Class Hours: Minimum of 48 lab hours/semester; Recommended: Eligibility for READ 420, ENGL 100, and MATH 120 or 122; Prerequisite(s): CIS 250/251; Corequisite(s): Concurrent enrollment in CIS 252. Description: Use of microcomputers to complete lab assignments for CIS 252. Transfer: CSU, UC.

CIS 284 PROGRAMMING METHODS I: JAVA

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 118/119 or equivalent, and MATH 120 or equivalent; Corequisite(s): Concurrent enrollment in CIS 285. Description: Introduction to computer science and software engineering for computer science majors (CS1) and computer professionals. A systematic approach to the design, construction, and management of computer programs, emphasizing object-oriented design and programming documentation, testing and debugging techniques. Focuses on designing and implementing robust, well styled, and maintainable computer programs. Course also includes introduction to basic data structures and computer ethics. This course conforms to the ACM CS1 standards. Transfer: CSU, UC.

CIS 285 OPEN COMPUTER LAB I: JAVA

Units (Credit/No Credit) 1; Class Hours: Minimum of 48 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 118/119 or equivalent, and MATH 120 or equivalent; Corequisite(s): Concurrent enrollment in CIS 284. Description: Use of microcomputers to complete lab assignments for CIS 284. Transfer: CSU, UC.

CIS 286 PROGRAMMING METHODS II: JAVA

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 284/285 or equivalent; Corequisite(s): Concurrent enrollment in CIS 287. Description: Data Structures class for computer science majors (CS2) and computer professionals. This course uses Object-Oriented techniques to illustrate a variety of data structures including: vectors, stacks, queues, linked lists, trees, dictionaries, maps,

sets and graphs. Also covered are sorting and searching topics, including Big O notation and hash tables. This course conforms to the ACM CS2 standards. Transfer: CSU, UC.

CIS 287 OPEN COMPUTER LAB II: JAVA

Units (Credit/No Credit) 1; Class Hours: Minimum of 48 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 118/119 or equivalent, and MATH 120 or equivalent; Corequisite(s): Concurrent enrollment in CIS 286. **Description:** Use of microcomputers to complete lab assignments for CIS 286. Transfer: CSU, UC.

CIS 290 COMPUTER ARCHITECTURE

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): MATH 120 or equivalent, and knowledge of a computer programming language. Corequisite(s): Concurrent enrollment in CIS 291. **Description:** Examines computer architecture, design and organization. Includes number systems, data representation, input/output, interrupts and exception handling, paging, memory management, performance, and other relevant issues. Lab assignments and exercises are completed in Assembly language. Transfer: CSU, UC.

CIS 291 OPEN COMPUTER LAB II

Units (Credit/No Credit) 1; Class Hours: Minimum of 48 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): MATH 120 or equivalent, and knowledge of a computer programming language; Corequisite(s): Concurrent enrollment in CIS 290. **Description:** Use of microcomputers to complete lab assignments for CIS 290. Transfer: CSU, UC.

COMP 311 INTRODUCTION TO THE UNIX OPERATING SYSTEM

Units (Grade Option) 1.5; Class Hours: Minimum of 16 lecture/24 lab hours/semester; Recommended: Eligibility for READ 420, ENGL 100, and MATH 120 or 122; Prerequisite(s): BUS 103 or COMP 103 or CIS 118. **Description:** This course introduces the UNIX operating system including the UNIX system architecture, file system, UNIX shell, job control, and an introduction to shell scripts. Transfer: CSU.

COMP 321 JAVASCRIPT I

Units (Grade Option) 1; Class Hours: Minimum of 16 lecture/8 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): BUS 483 or familiarity with HTML; access to the Internet. Corequisite(s): Concurrent enrollment in COMP 699. **Description:** Introduction to JavaScript Language. JavaScript is a cross-platform object-oriented scripting language developed by Netscape to be used in HTML (Hypertext Markup Language) documents to provide high levels of interactivity without needing server-based CGI (Common Gateway Interface) programs. Transfer: CSU.

COMP 322 JAVASCRIPT II

Units (Grade Option) 1; Class Hours: Minimum of 16 lecture/8 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): COMP 321; access to the Internet. Corequisite(s): Concurrent enrollment in COMP 699. **Description:** Continuation of COMP 321. Topics include creating windows, saving data to cookies, and Java applets. Transfer: CSU.

COMP 330 INTRODUCTION TO PERL

Units (Grade Option) 1; Class Hours: Minimum of 16 lecture/8 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 250/251 or 252/253 or COMP 235 or 236 or equivalent knowledge of C, C++, Visual Basic or Java programming languages. **Description:** Perl is a fundamental building block for interactive World Wide Web pages and an important programming language in the Biotech industry. This course focuses on Perl's unique data types, flow of control pattern matching and the application of these specialized features to real problems. Perl is examined as both a programming language and a scripting language. By completion of the course students should be able to write both stand alone Perl programs and World Wide Web CGI scripts that take full advantage of all the basic features of the language. Knowledge of UNIX shell scripting is desirable. Transfer: CSU.

COMP 331 INTERMEDIATE PERL

Units (Grade Option) 1; Class Hours: Minimum of 16 lecture/8 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): COMP 330. **Description:** Continuation of COMP 330. Focuses on Perl's idioms, reference-based compound data structures and object-oriented programming which is the basis for most advanced Perl library modules (including the popular CGI module for interacting with WWW pages). By completion of the course students should be able to write sophisticated object-oriented Perl programs and implement basic library modules. Transfer: CSU.

COMP 340 INTRODUCTION TO UNIX SYSTEMS ADMINISTRATION

Units (Grade Option) 1.5; Class Hours: Minimum of 16 lecture/24 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): Concurrent enrollment in or completion of COMP 311 or equivalent knowledge. **Description:** Introduction to UNIX system administration functions including managing user accounts, maintaining file systems, backing up, restoring and managing a UNIX system. Transfer: CSU.

COMP 350 INTRODUCTION TO DATABASES AND SQL

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 250/251 or 252/253 or COMP 235 or 236 or equivalent knowledge of C, C++, Visual Basic or Java programming languages. **Description:** Detailed introduction to structured query language (SQL) intended for application programmers and end users of relational databases. Includes creating tables and views, using outer joins, finding information from the catalog, using subqueries, and validating data using referential integrity. Course includes PL/SQL as extensions of SQL and the use of Oracle 7/8 as a server-based information processing tool. Transfer: CSU.

CIS 372 OBJECT-ORIENTED SOFTWARE DEVELOPMENT: ADVANCED TOPICS

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 252/253 or 286/287. Corequisite(s): Concurrent enrollment in CIS 373. **Description:** Introduction to high level object-oriented software development for computer science majors and computer professionals. Includes conceptualization, analysis, design, implementation, testing and maintenance of software, using the Unified Modeling Language (UML). Students use the above tools to build a project involving the development of a software application in cooperative groups. Transfer: CSU.

CIS 373 OPEN COMPUTER LAB

Units (Credit/No Credit) 1; Class Hours: Minimum of 48 lab hours/semester; Recommended: Eligibility for READ 420 and ENGL 100; Prerequisite(s): CIS 252/253 or 286/287. Corequisite(s): Concurrent enrollment in CIS 372. Description: Use of microcomputers to complete lab assignments for CIS 372. Transfer: CSU.

COMP 411 INTERMEDIATE UNIX

Units (Grade Option) 1.5; Class Hours: Minimum of 16 lecture/24 lab hours/semester; Recommended: Eligibility for READ 420, ENGL 100, and MATH 120 or 122; Prerequisite(s): COMP 311. Description: Continuation of COMP 311. Topics include features of UNIX shells, job control, and uses of UNIX utilities. Transfer: CSU.

COMP 422 BEGINNING INTERNET

Units (Credit/No Credit) 0.5; Class Hours: Minimum of 32 lecture/16 lab hours/semester; (Total of 4 weeks); Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This course introduces science and engineering students to the worldwide computer network, Internet. The Internet provides exciting access to a wide range of resources such as electronic mail, information servers of all types as well as international sites, and government resources. Through hands-on experience students learn the basic equipment and software requirements and develop an understanding of the Internet and how it can best be used. Topics will include navigation through the World Wide Web, E-mail, and Netscape Navigator. Transfer: CSU.

COMP 430 SURVEY OF MACINTOSH APPLICATIONS

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture/48 lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Introduction to the use of the Macintosh computer. Several applications including word processing, spreadsheet, database and desktop publishing are discussed and demonstrated. Transfer: CSU.

COMP 450 INTRODUCTION TO THE MACINTOSH

Units (Credit/No Credit) 0.5; Class Hours: Minimum of 8 lecture/8 lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Introduction to the use of the Macintosh computer including word processing and integrating applications using Microsoft Works. Transfer: CSU.

COMP 455 INTRODUCTION TO THE MACINTOSH SPREADSHEET AND DATABASE

Units (Credit/No Credit) 0.5; Class Hours: Minimum of 8 lecture/8 lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): COMP 450. Description: Introduction to the use of spreadsheets and databases using Microsoft Works on the Macintosh computer. Transfer: CSU.

COMP 460 INTRODUCTION TO THE MACINTOSH DESKTOP PUBLISHING

Units (Credit/No Credit) 0.5; Class Hours: Minimum of 8 lecture/8 lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): COMP 450 and 455. Description: Introduction to the use of desktop publishing using PageMaker on the Macintosh computer. Transfer: CSU.

COMP 480 PERSONAL UNIX SYSTEMS

Units (Credit/No Credit) 0.5; Class Hours: Minimum of 8 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and

**With limitations. Refer to pages 45-48 or see your counselor.*

ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Learn how to install Linux, a Unix clone, on your home computer system. Topics include hardware issues and where to get your own copy on the Internet. Transfer: CSU.

COOPERATIVE EDUCATION

(See courses under specific subjects in the schedule of classes)

670 COOPERATIVE EDUCATION/WORK EXPERIENCE

Units (Grade Option) 1-16 (No more than 4 per semester); Class Hours: 1-3 lecture hours/semester (75 to 300 paid job hours/ semester, 60-240 volunteer job hours/semester.); Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): Spring and Fall Semesters: Enrollment in 7 units, including Cooperative Education/Work Experience and a job or volunteer work site. Summer Session: Enrollment in 0.5 unit, plus Cooperative Education/Work Experience and a job or volunteer work site. Description: College credit may be earned by students who are employed or on volunteer assignments. The job/volunteer assignment must be related to the student's major or occupational goals. Students learn to set measurable objectives for improving their skills and job performance. May be repeated for credit up to 16 units. Course orientations are held the first three weeks of the semester and attendance at one is obligatory. Transfer: CSU.

672 COOPERATIVE EDUCATION: INTERNSHIP

Units (Grade Option) 1-16 (No more than 3 per semester); Class Hours: 1-3 lecture hours/semester (60 to 240 volunteer on the job hours/semester); Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): Enrollment in 7 units, including Cooperative Education and a minimum of 12 completed units in the occupational discipline. Description: Students may enroll in a volunteer, cooperative internship to apply skills learned from classroom instruction at a supervised work site. The internship must be supervised by a job supervisor and an instructor from the chosen occupational discipline. May be repeated for credit up to 16 units. Transfer: CSU.

DEVELOPMENTAL SKILLS**DSKL 810 DEVELOPMENTAL LEARNING SKILLS**

Units (Credit/No Credit) 0.5-2; Class Hours: Minimum of 16-48 lab hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): Verifiable learning disability. Description: Individual and small group activities designed to assist students with identified learning disabilities in the following skill areas; basic skills; memory/ organization/ concentration skills; perceptual skills (auditory/visual); language skills (receptive and expressive); conceptual skills. Units do not apply toward AA/AS degree.

DSKL 811 SPECIFIC LEARNING SKILLS ASSESSMENT

Units (Credit/No Credit) 0.5-1; Class Hours: Minimum of 8-16 lecture/4-8 lab hours per semester; Prerequisite(s): Verifiable learning disability. Description: An assessment battery is used to determine specific learning styles as well as academic skill levels in reading, writing, math, and spelling. Based upon assessment, the student with the assistance of the instructor, designs and uses individual learning strategies. Units do not apply toward AA/AS degree.

DSKL 813 DEVELOPMENTAL READING AND THINKING

Units (Credit/No-credit) 0.5-2; Class Hours: Minimum of 24 lecture/24 lab hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s):

Verifiable learning disability. **Description:** Small group classroom instruction designed to assist learners with identified learning disabilities in the development/ improvement of receptive written language and independent thinking skills. Units do not apply toward AA/AS degree.

DSKL 814 DEVELOPMENTAL WRITING AND SPELLING

Units (Credit/No-credit) 0.5-2; Class Hours: Minimum of 24 lecture/24 lab hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): Verifiable learning disability. **Description:** Small group and classroom activities designed to assist students with identified learning disabilities in spelling and writing skills. Units do not apply toward AA/AS degree.

DSKL 816 TUTORING

Units (Credit/No-credit) 0.5-2; Class Hours: Minimum of 48-64 lab hours/semester; Basic Skills Level: Open Curriculum; Prerequisite(s): DSKL 811 and Verifiable Learning Disability. **Description:** This course is designed to assist students with identified learning disabilities to achieve success in mainstream classes through instructional techniques which are appropriate to the student's specific needs identified through assessment. Units do not apply toward AA/AS degree.

DRAMA

(See Theater Arts)

EARLY CHILDHOOD EDUCATION/ CHILD DEVELOPMENT

ECE. 201 CHILD DEVELOPMENT

Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** Overview of the development in children from birth to adolescence with emphasis on the first ten years. The growth areas to be covered include physical, cognitive, language, emotional, and social. A practical application of theory integrates these developmental concepts in a "whole child" approach. Transfer: CSU.

ECE. 210 EARLY CHILDHOOD EDUCATION PRINCIPLES

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** The historical perspective, nature, and goals of early childhood education are covered in this course. Other topics include qualifications and training needed by teachers who work with children, descriptions of program models, current issues in ECE, future trends, and their social, political, and economic implications. Transfer: CSU.

ECE. 211 EARLY CHILDHOOD EDUCATION CURRICULUM

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** Development of goals and objectives to manage learning environments and their social implications for children are covered. Students identify quality learning experiences, select valuable play activities for children, and evaluate appropriate curriculum methods for optimum learning. Transfer: CSU

ECE. 212 CHILD, FAMILY, AND COMMUNITY

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** Emphasized in this course are contemporary family factors influencing middle childhood, life styles, contemporary factors influencing the community, patterns of child rearing and their social, political, and economic implications. Also covered are resources available to children and families from community agencies. Transfer: CSU.

ECE. 213 THE SCHOOL AGE CHILD

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** The focus of this course is relevant and responsible program planning for before and after school childcare. Also presented are the developmental needs of the child 6-12 years (middle childhood) and family involvement in childcare and the social and economic implications, and available community resources for childcare. Transfer: CSU.

ECE. 223 INFANT DEVELOPMENT

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** In this course major emphasis is placed on the developmental trends, abilities, and influences of behavior during the first three years of life and their social implications. Also presented is the establishment of environments which respond to infant needs. Transfer: CSU.

ECE. 225 INFANT/TODDLER ENVIRONMENTS

Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** Covers the design, maintenance and evaluation of quality environments for children during the first three years of life. The course should be of interest to caregivers, teachers, ECE/CD students and parents. Accreditation guidelines established by the National Association for the Education of Young Children for infant/toddler programs are included. Transfer: CSU.

ECE. 230 CREATIVE ACTIVITIES FOR THE YOUNG CHILD

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Basic Skills Level 1; Prerequisite(s): None. **Description:** This course is designed to provide practical skills in presenting activities to young children. Other topics include the role of creativity and creative expression through art media, music, dramatic activities, science, and games--both indoors and outdoors. Transfer: CSU.

ECE. 240 EARLY CHILDHOOD EDUCATION ADMINISTRATION: BUSINESS/LEGAL

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. **Description:** This course is an overview of the business aspects of caring for children and its social, political, and economic implications. Also included are the legal requirements for childcare settings, laws relating to childcare, and facets of business and fiscal management. 12 units of ECE recommended prior to taking this course. Transfer: CSU.

ECE. 241 EARLY CHILDHOOD EDUCATION ADMINISTRATION: HUMAN RELATIONS

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This course focuses on the human relations aspects of early childhood education as a business and the social, political, and economic implications for care providers and parents. Other topics include staffing and supervision, licenses and/or credentials for staff, assessment and evaluation, issues in ECE, and parent involvement. 12 units of ECE recommended prior to taking this course. Transfer: CSU.

ECE. 242 ADULT SUPERVISION IN ECE/CD CLASSROOMS

Units (Grade Option) 2; Class Hours: Minimum of 32 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: A study of the methods and principles of supervising student teachers, assistant teachers, parents, and volunteers in early childhood education/child development classrooms. Emphasis is on the role of classroom teachers who function as mentors to new teachers while simultaneously addressing the needs of children, parents, and other staff. This course is recommended for master teachers, site supervisors, and program directors of Child Development programs. Transfer: CSU.

ECE. 250 VIOLENCE AND ITS IMPACT ON CHILDREN AND THEIR FAMILIES

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Exploration of violence in America and its impact on adults and children who experience it. The focus of the course is to give the student a perspective on violence and what may cause it, as well as possible intervention strategies. Community resources for prevention and intervention are incorporated also. Transfer: CSU.

ECE. 252 TEACHING VIOLENCE INTERVENTION STRATEGIES TO CHILDREN AND FAMILIES

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Provides an overview of various approaches to violence intervention. The focus of the course is to provide paraprofessionals appropriate curriculum, theory and practice related to working with children and families who have experienced stress and chronic violence. Transfer: CSU.

ECE. 254 ANTI-BIAS CURRICULUM

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Designed to sensitize early childhood teachers and providers to the importance of anti-bias curriculum. Early childhood diversity issues related to culture, race, religion, gender, and special needs are examined in the context of curriculum development. Transfer: CSU.

ECE. 260 CHILDREN WITH SPECIAL NEEDS

Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Overview of the issues related to children with special needs: physical, sensory, communicative, and behavioral disabilities. Additional topics include a historical perspective, current laws and legislation, inclusion practices in ECE/CD settings, and appropriate community resources. Transfer: CSU.

ECE. 262 INTRODUCTION TO FAMILY SUPPORT: BUILDING RESPECTFUL PARTNERSHIPS (Also HMSV 262)

Units 3; Class Hours: Minimum of 48 lecture/8 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Overview of Family Support programs within Early Childhood Education. Included is a historical perspective, Family Support principles, and effective communication guides between families, childcare providers, teachers, and community agencies. This course is one of two (ECE. 264, other course) for a specialization for Master Teacher on the Child Development Permit matrix. Transfer: CSU.

ECE. 264 THE LIFE CYCLE OF THE FAMILY (Also HMSV 264)

Units 3; Class Hours: Minimum of 48 lecture/8 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: The life cycle of the family bridging individual and family development with cultural and social perspectives. The emphasis is on the diversity within contemporary families and the establishment of family support programs. This course is one of two (ECE. 262, other course) for a specialization for Master Teacher on the Child Development Permit Matrix. Transfer: CSU.

ECE. 313 HEALTH AND SAFETY FOR YOUNG CHILDREN

Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Health practices and safety regulations for licensed childcare settings. Major topics include infectious disease prevention, establishing safe environments for young children, emergency and disaster preparedness, and community resources. Transfer: CSU.

ECE. 316 FIRST AID FOR CHILDREN

Units (Grade Option) 0.5; Class Hours: Minimum of 8 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This course focuses on the techniques required for First Aid and emergency care practices for young children. First Aid certification is available upon completion.

ECE. 317 PEDIATRIC CPR

Units (Grade Option) 0.5; Class Hours: Minimum of 8 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This course focuses on the techniques required for pediatric Cardiopulmonary Resuscitation. CPR certification is available upon completion.

ECE. 331 THE TEACHING EXPERIENCE

Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Overview of the teaching profession and its implications for educating young children. Other topics include the developmental stages of the teacher, developmentally appropriate practice, professional obligations and affiliations, and career opportunities.

ECE. 333 OBSERVATIONAL SKILLS

Units (Grade Option) 1; Class Hours: Minimum of 16 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Students are introduced to general guidelines for the development of observational skills related to early childhood education teaching/care giving practices.

An overview of various methods of data gathering, interpretation guidelines, and implementation of findings is also presented.

ECE. 335 HANDLING BEHAVIOR

Units (Grade Option) 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Child guidance and discipline are covered in this course. The primary goal is to give teachers, caregivers, and parents an understanding of the complexity of children's behavior. Theories and trends concerning child guidance are covered to assist adults in developing appropriate strategies related to interacting with children and fostering pro-social behavior.

ECE. 337 CHILD-PARENT RELATIONSHIPS

Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Issues related to contemporary parenting including the stages of parenting, the diversity of the parenting experience, communication guides for more effective parenting, and community resources for family support.

ECE. 350 ISSUES IN EARLY CHILDHOOD EDUCATION

Units (Grade Option) 1-12 (No more than 6 units per semester); Class Hours: Minimum of 16 lecture hour/semester per unit; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This modular approach to issues in Early Childhood Education covers diverse content that is of particular relevance to ECE practitioners. Each module is self-contained. Specific modules are offered each semester and are announced in the current schedule of classes. A limit of six of these one-unit modules applies toward the ECE Certificate and AS Degree. Transfer: CSU.

ECE. 351 LANGUAGE ARTS IN EARLY CHILDHOOD

Units 1; Class Hours: Minimum of 16 lecture/3 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: How to develop and present an appropriate language arts program for young children. Current research is combined with the practical application of curriculum principles to foster children's emerging language and literacy skills.

ECE. 353 LITERACY IN EARLY CHILDHOOD

Units 1; Class Hours: Minimum of 16 lecture/3 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This course describes the developmental approach to the growth of listening, speaking, reading and writing skills in early childhood. Included are current issues and resources for teachers and parents.

ECE. 355 STORYTELLING IN EARLY CHILDHOOD

Units 1; Class Hours: Minimum of 16 lecture/3 by arrangement lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This course provides an appreciation of storytelling especially as it relates to an appropriate literacy program for young children. Included are the history of storytelling, the effective elements for presentations, and creative resources for both parents and teachers.

ECE. 366 PRACTICUM IN EARLY CHILDHOOD EDUCATION (Also HMSV 366)

Units 3; Class Hours: Minimum of 16 lecture/96 lab hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): 12 units of ECE. Description: A supervised field experience course that focuses on the methods and principles of teaching in early childhood classrooms. Emphasis is on the role of the teacher in a developmentally appropriate setting. This course gives students practical, verifiable experience working with children under the supervision of an experienced teacher. Transfer: CSU.

ECE. 380 FAMILY DAY CARE TRAINING

Units (Grade Option) 1-4; Class Hours: Minimum of 16-64 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: The focus of this course is the operation of a family day care home as a business. Other topics included are planning activities in the home, designing a home environment, and communicating with parents. May be repeated for credit up to 4 units.

ECE. 382 MALE INVOLVEMENT IN EARLY CHILDHOOD

Units 1; Class Hours: Minimum of 16 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Examines the importance of men in the lives of children. It reviews barriers and issues concerning male involvement in early childhood and how to positively encourage men to be involved with children. Transfer: CSU.

ECE. 384 PRINCIPLES AND POLICIES FOR HOME-BASED CHILD CARE

Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This course focuses on the principles and policies related to child care in home-based settings; it examines child care in the home as a small business. The course is designed for those already caring for children in their homes and for those considering this as an option in the child care profession. Transfer: CSU.

ECE. 386 ACTIVITY PLANNING AND CURRICULUM FOR HOME-BASED CHILD CARE

Units 3; Class Hours: Minimum of 48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: This course focuses on planning activities and curriculum for home-based child care settings. It is designed for those already caring for children in their homes and for those considering this as an option in the child care profession. Transfer: CSU.

ECE. 700 FOSTER PARENT TRAINING

Units (Grade Option) 0.5-3; Class Hours: Minimum of 8-48 lecture hours/semester; Recommended: Eligibility for READ 802 or 836, and ENGL 800 or 836 or 400; Prerequisite(s): None. Description: Focuses on the training of foster parents in San Mateo County in cooperation with the Department of Social Services. Students examine issues of concern for foster parents that include legal, child development, child abuse awareness, health, communications, and first aid. May be repeated for credit up to 3 units.