

**63 Communicating with People (.5) NDA**

Key elements in communicating within business organizations are introduced. The course includes verbal and non verbal communications, and the development of listening skills.

**64 Team Building (.5) NDA**

An understanding of how teams work, common problems teams encounter, and how to solve these problems are the focus of this course. Students will learn to recognize different team player styles, and will be introduced to team building in the workplace.

**65 Decision Making and Problem Solving (.5) NDA**

Students are introduced to a variety of problem solving techniques and decision-making processes most important for a supervisor.

**66 Customer Service (.5) NDA**

Certain key skills and attitudes are vital for meeting customers' needs. Students will be introduced to the concepts of internal and external customers, customer satisfaction, and customer retention. Communicating with customers, developing positive attitudes, handling complaints and the importance of sales skills are also emphasized.

**67 Attitude in the Workplace (.5) NDA**

This course presents key skills for maintaining a positive attitude in the workplace. Topics include the three types of attitudes, how attitudes are communicated, and how to affect one's own attitude. Primary causes of a bad attitude, turnaround strategies, and specific techniques for improving the attitudes of others are also explored.

**68 Conflict Resolution (.5) NDA**

This course presents an analysis of attitudes and behaviors which create conflict between individuals and groups within an organization.

**69 Stress Management, Job Burnout, and Counseling (.5) NDA**

Supervisors need various skills to combat job stress and burnout in the workplace. This course will enable supervisors to recognize stress and learn how to manage it, recognize job burnout and what they can do about it, and how to counsel employees in a variety of situations.

**70 Managing Organizational Change (.5) NDA**

This course addresses change, and the influence it has on an organization and its members. Understanding organizational change, theoretical models, stages of change, and how to manage change are all covered.

185 Directed Study - Business (1) CSU

285 Directed Study - Business (2) CSU

385 Directed Study - Business (3) CSU

911 Cooperative Education - Business (1) (RPT 3)

921 Cooperative Education - Business (2) (RPT 3)

931 Cooperative Education - Business (3) (RPT 3)

941 Cooperative Education - Business (4) (RPT 3)

See "Cooperative Education" section for complete details on the requirements.

# CHEMISTRY

**51 Fundamentals of Chemistry I (5) UC:CSU**

Recommended: One year of high school algebra, or Mathematics 115.

This course is a descriptive course in inorganic and organic chemistry. Topics include the metric system of measurement; chemical symbols, formulas and nomenclature systems; chemical equations; physical properties including density, solubility and states of matter; chemical properties; acids, bases, buffers and pH; basic principles of equilibrium and an introduction to radioactivity. Organic topics focus on functional group identification including hydrocarbons, organic halides, alcohols, ketones, acids, esters, amines, carbohydrates, lipids and proteins. This course is designed for Nursing and other Allied Health majors, students in environmentally hazardous materials, elementary education or liberal arts who do not intend to take Chemistry 101.

**60 Introduction to General Chemistry (5) UC:CSU**

*(Formerly Chemistry 10)*

Prerequisite: One year of high school algebra, or Mathematics 115.

This basic chemistry course presents elementary principles of general chemistry, including nomenclature and problem solving. Students whose previous chemistry background is inadequate for Chemistry 101 should take this course in preparation for Chemistry 101. Chemistry 60 is also recommended for students who have been away from high school chemistry for more than two years.

*Note: UC transfer credit limit maximum of one course from Chemistry 51 or 60. No credit for Chemistry 51 or 60 if taken after Chemistry 101.*

**101 General Chemistry I (5) UC:CSU (CAN CHEM 2)**

*(Formerly Chemistry 1)*

*Prerequisites: (1) High school chemistry or Chemistry 60 with a grade of "C" or better; (2) A minimum of two years of high school mathematics or Mathematics 125 or equivalent.*

This is a basic course emphasizing principles and theories. It includes discussions of chemical stoichiometry, atomic and molecular structure and the periodic table, gases, liquids, solids, solutions, oxidation reduction, acids and bases, and an introduction to chemical thermodynamics. The laboratory emphasizes basic laboratory skills, chemical principles, and quantitative relationships.

*Note: No UC credit for Chemistry 51 or 60 if taken after Chemistry 101. One course maximum credit for 51 or 60.*

**102 General Chemistry II (5) UC:CSU (CAN CHEM 4)**

*(Formerly Chemistry 2)*

Prerequisite: Chemistry 101 with a grade of "C" or better.

This course is a continuation of Chemistry 101, with an introduction to chemical kinetics, chemical equilibrium with emphasis on aqueous equilibria, electrochemistry, nuclear chemistry, organic chemistry, and descriptive inorganic chemistry. The laboratory includes both quantitative experiments and qualitative analysis.

*Note: No UC credit for Chemistry 51 or 60 if taken after Chemistry 101.*

**211 Organic Chemistry for Science Majors I (5) UC:CSU**

(Formerly Chemistry 14)

*Prerequisite: Chemistry 102 with a grade of "C" or better.*

The student is introduced to structure, bonding, naming, stereochemistry and functional group chemistry with emphasis on reactions and reaction mechanisms. In the laboratory, the essential skills of preparation, isolation, purification and identification of organic compounds are presented.

*Note: UC Transfer Credit Limit: A maximum of two courses from Chemistry 70, 211, 212 or 221 will be accepted for UC credit.*

**212 Organic Chemistry for Science Majors II (5) UC:CSU**

(Formerly Chemistry 18)

*Prerequisite: Chemistry 211.*

Chemistry 212 is a continuation of Chemistry 211 with additional emphasis on the remaining functional groups as well as on multi-step synthesis and reaction mechanisms in stereochemistry and modern instrumental and analytical methods. Special attention is given to reactions and organic compounds of biochemical importance. Significant laboratory time is devoted to synthesis of complex organic compounds.

*Note: UC Transfer Credit Limit: A maximum of two courses from Chemistry 70, 211, 212, or 221 will be accepted for UC credit.*

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## CHICANO STUDIES

**8 The Mexican American in the History of the United States (3) UC:CSU**

The course will introduce students to the background of the political, social, economic and cultural development of the United States from Reconstruction to the present, with particular emphasis on the contributions of the Mexican-American to the development of the modern United States. There will also be discussion of key events in the history and development of Mexico, when appropriate. Also included is a continued survey of the United States Constitution.

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## CHILD DEVELOPMENT

**1 Child Growth and Development (3) UC:CSU**

*Recommended: It is recommended that all child Development students take the Math and English assessment placement test before or concurrently with this course.*

*Note: This course is a prerequisite for Child Development 3, 4, 22, and 23. Required for Teaching Permit.*

This is an introductory child Development course covering the theoretical concepts of human development, focusing on growth and development from conception through adolescence. The physical, cognitive, and psychosocial domains of development as well as the ways in which nature and environment influence growth will be studied within cultural and family context.

**2 Early Childhood: Principles and Practices (3) CSU**

*Prerequisite: Verification of an annual tuberculosis test. Note: This course is a prerequisite for Child Development 3, 4, 22, and 23. Required for Teaching Permit.*

The student becomes aware of various types of educational programs available to children 0-8 years of age. The student will be exposed to career opportunities, the role and responsibilities of a teacher, and age appropriate curriculum in Early Childhood programs. The student will study the field from a historical and cultural perspective. The student will study the curriculum components and teaching modalities that are critical in an early learning program.

**3 Creative Experiences for Children I (3) CSU**

*Prerequisite: Child Development 1 and 2.*

*Note: This course is a prerequisite for Child Development 22 and 23. Required for Teaching Permit.*

Many types of creative experiences for young children are explored including painting, clay modeling, music, drama, art materials and language development. The student has an opportunity to learn to set up, control and evaluate children's experiences in a classroom setting.

**4 Creative Experiences for Children II (3) CSU**

*Prerequisite: Child Development 1 and 2.*

*Note: This course is a prerequisite for Child Development 22 and 23. Required for Teaching Permit.*

Many types of creative experiences for young children are explored including sensory motor development, language development, literacy development, math, science, perceptual motor development, social studies. Anti-bias training, multi-cultural, language arts, age appropriate curriculum, pre-kindergarten guidelines, dramatic play and group time activities are also covered. The student has an opportunity to learn how to set up, control and evaluate children's experiences in a classroom setting. The student will design and implement lesson plans that reflect the content of the curriculum components in this area of the curriculum of an early learning program.

**10 Child Health (3) CSU**

*Recommended: Child Development 1 and 2. Required for Teaching Permit.*

This course includes information on the nutritional needs and physical and mental well being of children from birth to adolescence. Information dealing with special problems/disabilities is included. Habits and attitudes toward health are discussed. Community resources which are available to assist in the physical and mental well-being of the child are explored.

**11 Home, School and Community Relations (3) CSU**

*Recommended: Child Development 1 and 2.*

A study is made on the effect of children's homes, schools and communities on children's development. Special emphasis is placed on the dynamics of human relations in the multicultural urban setting. Emphasis is placed on familiarizing students with techniques used in parent-teacher conferences to enable them to relate better to the families of the children in their classrooms. Students are taught to perceive parents as partners in their child's educational experience.

**22 Practicum in Child Development I (4) CSU**

*Prerequisites: Child Development 1, 2, 3, and 4 with a grade of "C" or better. Corequisite: Child Development 48.*

*Verification of an annual tuberculosis test. Live scan fingerprinting is not required for Practicum, but some institutions might request it. Practicum students are exempt by the State.*

Practicum students Work with nursery school children is conducted under the direction of a nursery school staff member and is supplemented by the supervision of the course instructor. Emphasis is placed on developing, implementing and evaluating classroom experiences for young children.

**23 Practicum in Child Development II (4) CSU**

*Recommended: Child Development 1, 2, 3, 4, and 22 with a grade of "C" or better. Corequisite: Child Development 42. A tuberculosis test and fingerprinting is required.*

This is the second semester of practicum teaching experience in a different setting and under the supervision of a master teacher and college instructor. This course provides the practical application of theories covered in recommended courses.

**30 Infant and Toddler Studies I (3) CSU**

*Recommended: Child Development 1.*

This course will include a study of infant and toddler development from birth through toddler-hood. The birth process, attachment, temperament and development physically, cognitively, socially and emotionally will be included. Care giving and environments that support development will be covered. Assessments and observations will be implemented by students in a fieldwork format.

**31 Infant and Toddler Studies II (3) CSU**

The principles of inclusive, respectful care giving for infants and toddlers within a variety of program designs will be studied and analyzed. Skills for designing appropriate curriculum and environments will be included in the content of the course. Health, safety and licensing requirements will be examined. Modalities for communicating with parents and providing resources for support will be discussed as part of this course.

**34 Observing and Recording Children's Behavior (3) CSU**

This course includes observing, recording and interpreting children's behavior in a variety of settings. Diaries, anecdotes and other forms of written and oral records are explored and used.

**35 Fostering Literacy Development in Young Children (3)**

This course examines early literacy as the beginning stages of learning to read and write. The course surveys ways to promote early literacy through curriculum, assessment, talking, playing, reading, writing, and learning the code. The use of developmentally appropriate approaches in promoting and reinforcing early literacy are implemented in hands-on projects. Students are exposed to recognizing the alphabet as a code for the sounds of language.

**38 Administration and Supervision of Early Childhood Programs I (3) CSU**

*Recommended: Child Development 1, 2 and 11.*

The principles and practices of nursery school organization and administration covered include organizational structure, budgeting, personnel policies and practices, records, statistics, reporting and relationship with community resources.

**39 Administration and Supervision of Early Childhood Programs II (3) CSU**

*Recommended: Child Development 38.*

An in-depth study of budget and staffing, including the use of computers. The course will include proposal writing, advocacy, staff relations, in-service training, working with parents, dealing with supervising agencies or boards, professional activities and current research in the field, as well as changes in the laws.

**42 The Child in a Diverse Society (3) CSU**

*Corequisite: Child Development 23.*

This course presents the philosophy and methods related to working with young children and families within a diverse society, including race, language, culture, gender, age, social class and children with special needs. Curriculum development and environmental designs will be studied from an inclusive perspective.

**44 Programs for Children with Special Needs I (3) CSU**

This course focuses on accommodating and adapting the physical environment, instructional strategies and curriculum to meet the needs of differently-abled children and their families. Legal mandates and the impact of laws and legislation will be examined in respect to the impact on children and their families. Understanding the process of assessment and developing an Individual Family Service Plan will be analyzed and discussed.

**45 Programs for Children with Special Needs II (3) CSU**

This course identifies the political and social implications that affect special education, and it identifies the different categories of disabilities. The Individual Education Plan is discussed and evaluated. Students are exposed to techniques for identifying and implementing goals and objectives for children with special needs. Teaching techniques and curriculum activities are discussed, designed and implemented in the class projects.

**46 School Age Programs I (3) CSU**

The student will be introduced to school age programs. It is designed for those planning to work in before- and after-school childcare. Topics to be covered will include growth and development, creative experiences, and developmentally appropriate practices and environments. Techniques for guiding children's behavior and communication will be discussed.

**47 School Age Programs II (3) CSU**

Students will be introduced to the different types of school age childcare programs. Topics to be covered will include the child in context to the family, community and society. The physical environment and the modalities for facilitating learning will be discussed and analyzed. Opportunities to develop and implement age- and content appropriate activities for school age children will be executed in classroom projects.

**48 Positive Guidance in Early Childhood Settings (3) CSU**

*Corequisite: Child Development 22.*

This course will explore developmentally appropriate management techniques or children in early childhood settings. Emphasis will be placed on developing culturally sensitive individualized plans for behavior management of traditional and special needs children.

**60 Introduction to Family Child Care I (1)**

This course is designed for family childcare providers and persons entering the profession. Focus is placed on business and environmental considerations, age appropriate activities for multi-ages. The importance of maintaining accurate business records will be discussed. Identifying and maintaining a quality program will be discussed in terms of such aspects as: health, safety, nutrition, physical environment, and communication with parents and children.

**61 Introduction to Family Child Care II (1)**

This course is designed for students who are interested in family day care. It will focus on business management, business law, insurance, budget, contracts and record keeping, taxes and marketing. Students will explore marketing techniques and design advertising materials and contracts.

**62 Developmental Profiles: Pre-Birth Through Age Eight (2)**

This course defines concise profiles of physical, emotional, social and intellectual development from pre-birth through age eight. It reviews commonly used terms and concepts of child development. Students will examine observation and assessment techniques to enable them to evaluate children.

**63 Creative Curriculum in a Family Child Care Setting (2)**

This course has an emphasis on play and creative experiences for children in the home setting. Demonstrations and participation in dramatic play, manipulatives, music, math, science, art, crafts, and language will be covered, with emphasis placed on promoting an environment and techniques that will foster creativity and individuality in children.

**65 Adult Supervision and Early Childhood Mentoring (2)**

This course is a study of the modalities and principles of supervising teachers, staff and student teachers in an early childhood program. Emphasis is placed on the roles of the director, teacher, staff and student teacher. The course will review leadership styles, methods and principles of supervising student teachers in early childhood programs. The course emphasizes the role of classroom teachers who function as mentors to new teachers while simultaneously addressing the needs of children, parents, and staff. This course identifies and examines the roles of supervisors, teachers, support staff, and the child and the family. Different styles of supervising are discussed and evaluated.

**185 Directed Study - Child Development (1) CSU**

**285 Directed Study - Child Development (2) CSU**

**385 Directed Study - Child Development (3) CSU**

These courses allow the student to pursue Directed Study in Child Development on a contract basis under the direction of a supervising instructor.

*Note: A maximum of 6 units in Directed Study may be taken for credit.*

**911 Cooperative Education - Child Development (1)**

**921 Cooperative Education - Child Development (2)**

**931 Cooperative Education - Child Development (3)**

**941 Cooperative Education - Child Development (4)**

(See the "Cooperative Education" Section for guidelines.)

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## CHINESE

**1 Elementary Chinese I (5) UC:CSU**

This course stresses the fundamentals of pronunciation, grammar, practical vocabulary, useful phrases, and the ability to understand, speak, read and write basic Mandarin Chinese. It includes an introduction to Chinese civilization and culture.

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## CINEMA

(Also See Theater)

**1 Introduction to Motion Picture Production (3) UC:CSU**

*(Same as Theater 501)*

A comprehensive introduction to film video production techniques and equipment. Proper procedures are explained for the use of cameras, lenses, filters, film stocks, lights, microphones, audio recorders, and other motion editing picture equipment. Attention is also given to production planning and post-production as well.

**3 History of Motion Pictures (3) UC:CSU**

*(Same as Theater 505)*

History of the development of motion pictures, with examples, from their beginnings to the present day. Emphasis is placed on the American feature film.

**4 History of the Documentary Film (3) CSU**

The development of films dealing with the truth. Films types seen and discussed include: historical, animated, propaganda, educational, commercial, cinema verite and direct cinema. Students will develop critical standards for judging documentary films.

**5 Introduction to Screenwriting (3) UC:CSU (RPT 1)**

Course work consists of writing screenplays based on the Hollywood technique known as 'The Heroes Journey.' Students will pitch their script to a studio and/or network executive.

**6 Motion Picture Photography (3) CSU**

*(Prerequisite: Cinema 1 and 3 with satisfactory grades or better.)*

Introduction to cinematography, including optics, photo emulsions, camera operation, laboratory procedures, terminology and aesthetics. Students will do individual and group projects using 16mm or digital video camera equipment.

**10 Introduction to Film Directing (3) CSU**

*(Prerequisite: Cinema 1 and 3 with satisfactory grades or better.)*

Introduction to the crafts of acting and directing for the film medium; with emphasis on the visualization of the screen play, the junction of the actor in interpreting the script, and the role of the director in handling actors in the production of a film.

**18 Main Currents in Motion Pictures (3) UC:CSU**

In this course, students will explore the major categories of movies, including comedy, science fiction, suspense, the western, horror, and the musical. Most weeks feature in-class screenings of significant feature films.

**20 Business Aspects of Motion Picture Production (3) CSU**

*(Prerequisite: Cinema 1 and 3 with satisfactory grades or better.)*

Survey of business practices including financing, production and distribution.

**107 Understanding Motion Pictures (3) UC:CSU**

This course analyzes the elements that make film an art form, including visual composition, color, music, acting, editing, lighting, story, and sound. This course also includes regular screenings of classic and contemporary motion pictures.

**111 Cinema: Developing Content for Movies (3) CSU**

This survey course presents an overview of the art and business of the film industry, and explains the cultural function and aesthetic significance of the medium. It analyzes how movies are made today, discusses how a project evolves from concept, through script, to production.

**112 Script Analysis (3) CSU**

*Prerequisite: English 101 with a satisfactory grade or better.*

This course will train students to write a professional evaluation ("coverage") identifying strengths and weaknesses of literary material submitted to the producers of film and television. The students' written analysis of scripts will become part of their professional portfolio.

**125 Film Production Workshop I (3) CSU (RPT 3)**

*Prerequisite: Cinema 1*

Introduction to 16 mm film making focuses on all technical and creative aspects of the medium. This hands-on course includes developing the script, filming, and post-production culminating in a finished film.

**931 Cooperative Education - Cinema (3) CSU (RPT 3)**

## COMPUTER APPLICATIONS AND OFFICE TECHNOLOGIES

(Formerly Office Administration)

**1 Computer Keyboarding I (3) CSU**

Mastery of the keyboard and the operations of computers are developed. Emphasis is placed on formatting and producing letters and tables using a popular word processing program. The student should achieve a minimum keyboarding speed of 30 words per minute.

*Note: Students with the ability to type 35 words per minute and to create basic documents in Microsoft Word should enroll in Computer Applications and Office Technologies (CAOT) 2. MODULARIZED A, B, C.*

**2 Computer Keyboarding II (3) CSU**

**Prerequisite: CAOT 1, or the ability to type 35 words per minute and create specialized documents in Microsoft Word.**

Skills developed in this course include correct techniques in producing specialized documents using a popular word processing program. The student should achieve a minimum keyboarding speed of 40 words per minute. MODULARIZED A, B, C.

**3 Computer Keyboarding III (3) CSU**

**Prerequisite: CAOT 2, or the ability to type 40 words per minute and create specialized documents in Microsoft Word.**

Skills developed in this course include correct techniques for developing speed and accuracy in typing business letters and memorandums, special business forms, rough drafts, and statistical and business reports. The student should achieve a minimum typing speed of 40 words per minute.

**9 Computer Keyboarding Improvement (1) CSU (RPT 1)**

**Prerequisite: Completion of a beginning keyboarding course with a grade of "C" or better, or the ability to type 25 words per minute.**

Speed and accuracy are improved through timed keyboarding and corrective drills. Students may enroll for two semesters. This course may be taken in addition to CAOT 2 or CAOT 3 if the student needs additional speed and/or accuracy building. Students use computers.

**23A Legal Secretarial Procedures IA (1)****23B Legal Secretarial Procedures IB (1)****23C Legal Secretarial Procedures IC (1)**

This sequence of courses prepares individuals with the knowledge and skills to perform secretarial duties and assume specific responsibilities in a legal office.

**39 Word Processing: Keyboarding and Operations (3) CSU (RPT 2)**

*Recommended: The ability to type 35 words per minute.*

This course teaches word processing skills, such as inputting, formatting, editing, and printing using WordPerfect. Students must arrange for additional lab time each week.

**44 Medical Terminology (3) CSU**

*(Same as Allied Health 33)*

This course is designed for students interested in learning more about medical terminology and basic anatomy, and applying this knowledge to a variety of allied health professions. Students will develop a comprehensive medical vocabulary applicable to all specialties of medicine through the study of Greek and Latin prefixes, suffixes, and root words. Students will also develop a basic understanding of anatomy and the function of major body systems. MODULARIZED A, B, C.

**75 Word Processing: Equipment Operation (2) CSU**

*Recommended: The ability to type 25 words per minute.*

This class presents word processing skills on the microcomputer, including keyboarding, editing, and printing various types of documents. It is designed for all students, including non-business majors.

**75A Word Processing: Equipment Operation A (1) CSU****75B Word Processing: Equipment Operation B (1) CSU**

**79 Word Processing Applications (3) CSU**

This course teaches advanced word processing skills such as mail merge, advanced formatting, tables and graphics using Microsoft Word or Word Perfect.

**84 Microcomputer Office Applications: Word Processing (3) (RPT 2)**

*Prerequisite: The ability to type 35 words per minute.*

This course teaches word processing skills, including inputting, editing, formatting and printing documents using Microsoft Word. (Replaces CAOT 35 in Paralegal and CAOT programs.) Students must arrange for additional lab time each week.

**93 Legal Document Production (2)**

Selection and preparation of formatted documents specific to law offices.

**101 Hands-On Internet (1)**

This course introduces students to the Internet and e-mail for personal and business applications. Students will develop competency in performing Internet research for personal, consumer, legal, and business applications.

**117 Computers in Health Occupations (1)**

This course includes a survey of currently available software for medical and dental offices and hospitals, with a focus on evaluation and selection. It also provides hands-on experience for students with no prior computer experience. Medical records, reports, and computer ergonomics will also be discussed.

**119 Medical and Dental Office Procedures (2)**

This course will cover the operation of a medical and dental office in detail. Topics will include opening and closing the office, answering the telephone, scheduling appointments, ordering supplies, and managing patient flow.

**185 Directed Study - CAOT (1) CSU**

**285 Directed Study - CAOT (2) CSU**

**385 Directed Study - CAOT (3) CSU**

*Prerequisites: CAOT 2, 39, or 79, and the ability to type 50 words per minute.*

Students will work on independent projects as discussed with and approved by the instructor.

**911 Cooperative Education - CAOT (1)**

**921 Cooperative Education - CAOT (2)**

**931 Cooperative Education - CAOT (3)**

**941 Cooperative Education - CAOT (4)**

(See "Cooperative Education" for requirements.)

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# COMPUTER SCIENCE INFORMATION TECHNOLOGY

For all Computer Science Information Technology courses, a maximum of six courses - regardless of department - is acceptable for transfer to UC campuses.

**901 Introduction to Computers and Their Use (3) UC:CSU (RPT 3)**

This course introduces students to fundamental computer "literacy" concepts. Students will learn to use Windows Vista/XP on PC-compatible computers, as well as a word processing program (Word), spreadsheet program (Excel) a presentation tool (PowerPoint), a database management program (Access), and other applications.

**902 Introduction to Computer Science (3) CSU (RPT 3)**

This course is designed to take the student through the various aspects of writing algorithms to be used in computer programming. It introduces students to C++, computer architecture, assembly language programming, and number systems. It covers functions, arrays, and other basic data types. Note: Students who have completed CSIT 901 may also take this course.

**904 Internet Security Awareness (1) (RPT 3)**

This course presents a basic introduction to practical computer security for all users, from students to home users to business professionals. Topics include Privacy and Property in Cyberspace, E-mail Vulnerabilities, Web-browsing Vulnerabilities and other Cyber Vulnerabilities and Landmines. This course provides Cyber Advice to reduce the risk of internet attacks and clearly explains how to work defensively to safeguard a computer system, how to keep alert, how to prepare for attacks, and what to do when attacks occur.

**911 Cooperative Education - CSIT (1) CSU (RPT 3)**

See "Cooperative Education" section.

**917 Beginning Micro Assembly Language (3) UC:CSU (RPT 3)**

*Prerequisite: CSIT 902, or equivalent experience.*

This course will teach the student how to design/develop/implement assembly language programs for PCs. Topics to be covered include hardware architecture and software concepts, program design and debugging, and use of operating system calls.

**921 Cooperative Education - CSIT (2) CSU (RPT 3)**

See "Cooperative Education" section.

**930 Microsoft Advanced Business Application (4) CSU (RPT 3)**

*Prerequisite: CSIT 901, or CSIT 902, or equivalent experience and knowledge of business arithmetic.*

This course teaches the student how to use intermediate and advanced features of the Microsoft Office suite of programs to solve typical business problems. Complex documents will be formatted and printed with Word. Students will learn how to write Excel formulas to deal with business and accounting analysis. Students will learn how to use PowerPoint to enhance their presentation skills. Concepts of relational database management will be taught with Access. Integration of multiple applications to produce a single document will be emphasized. This class will prepare students to pass the Microsoft Office Users certification tests at the proficient level.

**931 Cooperative Education - CSIT (3) CSU (RPT 3)**

See "Cooperative Education" section.

**933 Database Design and Programming (2) CSU (RPT 3)**

*Prerequisite: CSIT 901, or CSIT 902, or equivalent experience with DOS and microcomputer database programs.*

This course explains the concept of a relational database management system. It illustrates how the Microsoft Access database management system may be used in common business applications such as report and screen design, database design, and computer-aided decision making. This course covers advanced Access features including SQL programming.

**934 Operating Systems (2) (RPT 3) CSU**

*Prerequisite: CSIT 901, or CSIT 902, or equivalent experience.*

This course covers operating system topics in the A+ certification exam and provides students with the technical foundation in current Microsoft operating systems, including PC hardware architecture, operating system installation, configuration, administration, and troubleshooting. This course has a particular focus on Microsoft operating system command-line commands, batch file programming, and Windows scripting. This course is appropriate for computer science majors and/or users who require skills to perform operating system support tasks.

*Note: This course is a prerequisite to enter the Microsoft Certified Systems Engineer (MCSE) or the Cisco Certified Network Associate (CCNA) training program.*

**935 Introduction to Linux+ (3) (RPT 3) CSU**

This course gives students a solid foundation in the fundamentals of the Linux operating system which plays a crucial role in academic and corporate computing. In fact, Unix/Linux powers more Internet server and corporate networks than Microsoft. The topics include Linux Overview and Architecture, The Kernel and Shell, File System, Users and Groups Management, Permission and Ownership Management, Services and Processes Management. Students gain system-level experience through problem-solving hands-on lab exercises at the command line and in the graphical user interface.

**936 Introduction to Data Structures (3) UC:CSU (RPT 3)**

*Prerequisite: CSIT 939, or equivalent experience with the C++ programming language.*

This course covers data structures and advanced programming techniques utilizing JAVA programming language. Data structures will include multi-dimensional arrays, stacks, queues, dynamically allocated linked lists and trees.

**937 E-Commerce Essentials (3) CSU (RPT3)**

This course provides complete coverage of the key business and technology elements of electronic commerce. It introduces students to both the theory and practice of conducting business over the Internet and World Wide Web. Topics include Technology Infrastructure, Selling & Marketing on the Web, Business-to-Business Strategies, Virtual Communities & Web portals, Web Server Hardware and software, Electronic Commerce Software and Electronic Commerce Security.

**938 Visual Basic Programming Using VB.net (3) CSU (RPT3)**

*Prerequisites: CSIT 902 and familiarity with Windows.*

This course explains how to use the Visual Basic programming language in order to develop Windows applications. Graphic User Interface design skills are emphasized, and advanced skills such as accessing information in a database and using object linking and embedding are taught.

**939 Programming in C (3) UC:CSU (RPT 3)**

*Prerequisite: CSIT 902, or equivalent experience.*

This course teaches the student to write programs in the C++ language, and introduces the object-oriented programming paradigm. After reviewing basic statement types, students learn to write functions utilizing pass-by values and pass-by references. Structures, classes, and objects are introduced, and students learn to use objects effectively in writing programs. Operator overloading and inheritance also facilitates the use of objects. Pointers, memory management techniques, friend and virtual functions are described. Finally, students examine streams and files as examples of the application of complex object-oriented programming in C++.

**941 Cooperative Education - CSIT (4) CSU (RPT 3)**

See "Cooperative Education" section.

**948 Advanced Spreadsheet EXCEL for Business Analysis (3) CSU (RPT3)**

This course focuses on learning how to solve problems using Microsoft office Excel 2007, although the concepts and tasks presented could apply to a variety of computer applications and programming languages. Excel is widely used in business as a tool for solving problems and supporting decision making. Excel is a powerful tool for the manipulation and analysis of data. Data are usually analyzed to provide support for whether or not to take some course of action- a decision. Using a spreadsheet allows the organization to quickly change various inputs and see what happens to the outputs. The ability to model the potential impacts of decisions before they are made is very valuable in today's complex business environment. Many organizations spend hundreds of hours building models in spreadsheets. The course engages students who have mastered basic computer and applications skills by challenging them to think critically and find effective solutions to realistic business problems.

**952 Web Design using FLASH (3) (RPT 3)**

This course covers Macromedia's Flash; a state-of-the-art Web information software for creating highly-compact, vector-based content for transmission over the Internet. Topics include Introduction to ActionScript, Event Handlers, objects and Dynamic Data.

### 953 Database Management using Oracle (3) (RPT 3)

This course provides a rich environment for illustrating multi-user and client/server database concepts using Oracle, such as managing concurrent users and sharing database resources, and allows users to develop database applications in a production environment using the database developer utilities. This course addressed database development activities including using SQL commands to create tables and insert, update, delete, and view data values.

### 957 Introduction to Web Page Design (3) (RPT 3)

This course will take the student through the various technical phases of web site development. Students will learn everything from basic skills such as creating web pages, tables and forms, to more advanced skills such as integrating a database with a web site, and publishing the site on the internet. Note: This will be the first course in a series of courses in web site development and e-commerce.

### 958 Web Page Development Using HTML (3) (RPT 3)

This course teaches students to build web pages using HTML (Hyper Text Markup Language). It will give students hands-on experience in building web pages from scratch. The topics covered include building web pages with tables, image maps, frames, and forms. This course also covers pop-up windows, validating forms, integrating HTML with JavaScript, one of the popular web programming script languages, and provides an introduction to creating and using XML documents.

Note: Register in CSIT 99CC.

### 962 Web Programming Using JavaScript (4) (RPT 3)

*Prerequisite: CSIT 958, or equivalent experience.*

This course teaches students to create dynamic Web pages using the popular Web scripting language, JavaScript. This is the course for beginning web programmers with prior knowledge of HTML. JavaScript, a popular scripting language, adds interactive functions to HTML pages and is widely supported in Web browsers and other Web tools. This course also discusses the Document Object Model (DOM) specification published by the World Wide Web Consortium (W3C). This course features hands-on projects, a step-by-step methodology, as well as additional exercises.

### 963 Web Application using Active Server Pages (ASP.net) (RPT 3)

This is the next generation of Active Server Pages! Revolutionizing the way Web applications are developed, ASP.NET is built on Microsoft's .NET framework. Microsoft has added new functionality to ASP to make Web application development easier and tool friendly. This comprehensive course will not only tackle beginning Web Programming and how to create and maintain interactive and dynamic Web applications, it will also explore the Internet as an essential business tool. This course guides the student from beginning Web applications, to object-oriented programming, to using advanced Web form server controls.

### 965 Introduction to Computer Networks (3) (RPT 3) CSU

*Prerequisite: CS 934 or equivalent experience.*

This course covers network topics in CompTIA Network+ certification exam. It serves as a general introduction for students who need a foundation in computer networking technology, local area networks (LANs) and wide area networks (WANs). It covers network media, topology, network architecture, wired and wireless network standards and protocols. This course is a required prerequisite to enter WLAC's Microsoft Certified System Engineer (MCSE) or Computer Security training program.

### 967 Linux, Apache, MySQL, PHP (3) (RPT 3)

*Prerequisite: CS935 or equivalent experience.*

This course teaches students the skills and knowledge on Linux, Apache, MySQL and PHP, commonly known as L.A.M.P. LAMP is an open source Web development platform based on Linux, referring to the Operating System, Apache, the Web Server, MySQL, the Database Server and PHP, a programming language.

### 972 Introduction to Cisco Network Fundamentals (3) (RPT 3)

*Prerequisite: CO SCI 965 or equivalent experience.*

This course covers topics including networking, network terminology and protocols, network standards, LAN, WAN, the layers of the OSI reference model, cabling, and cabling tools. In addition, this course provides students with their first exposure to Cisco routers, router programming, and routing protocols. Students will be introduced to router startup and setup configuration, the Cisco Internetworking Operating System (IOS), routing protocols, and network management issues. The course utilizes hands-on lab exercises and demonstrations to reinforce network concepts and theories.

*Note: This course is equivalent to Cisco's Semester I & II of the Cisco Network Academy.*

### 974 Introduction to Cisco Routers (3) (RPT 3)

*Prerequisite: CSIT 972.*

This course covers advanced networking topics including LAN switching, VLANs, LAN design, routing protocols, access control lists, and WAN design. In addition, students will learn more advanced Cisco router configuration techniques. The course utilizes hands-on lab exercises and demonstrations to reinforce routing concepts and router configuration.

Note: This course is the final course (equivalence to Cisco's Semester III & IV) in a series of four courses preparing students to pursue the Cisco Certified Network Associate (CCNA) certification.

### 980 Introduction to Computer and Information Security I (3) CSU (RPT 3)

*Prerequisite: CSIT 965, or equivalent experience.*

This course introduces the basic concepts of computer security. Students will learn a full range of security concepts and techniques, and apply them to the most popular operating systems and applications used today. Topics include network vulnerabilities, access control, cryptography and public key infrastructure, auditing and intrusion detection, and network and communication security. Lab simulation involves security settings on the Windows Vista/XP/Server 2003.

*Note: This course, combined with CSIT 985, is designed to help candidates prepare to complete the CompTIA Security+ certification exam that applies to the Microsoft Certified Systems Engineer (MCSE) security specialization exam. It is also one of the courses leading to a degree/certificate in Network & Security Management.*

**981 Administering Computer Networks and Security (3) (RPT 3)**

*Prerequisites: CS 934 and CS 965 or equivalent experience.*

This course covers network operating system topics in Network+ and MCSE/MCP exam. This course is intended for those who administer Windows XP/Vista/Server under Microsoft Domain environment. It provides students with the knowledge and skills necessary to perform post-installation, day-to-day administration and security tasks. These skills include installation & configuration, domain user accounts & network resources management, network & internet protocols and security settings, auditing, monitoring, troubleshooting and optimization. It also provides students with the knowledge and skills to enter CS982 and advanced network courses.

**982 Introduction to Microsoft Server Operating System (3) (RPT 3)**

*Prerequisites: CSIT 965, CSIT 981, or equivalent experience.*

This course is intended for those who administer Microsoft Windows 2003 Server, and for those preparing for the Microsoft Certified Systems Engineer (MCSE) Windows 2003 certification examination 70-290. The course provides the core foundation for supporting Microsoft Windows 2003 Server. In addition, it provides support professionals with the skills necessary to install, configure, customize, optimize, network integrate and troubleshoot Windows 2003 Server.

*Note: This course is one of the required core courses for the WLAC Microsoft Certified Systems Engineer (MCSE) training program.*

**983 Introduction to Microsoft Network Infrastructure (3) (RPT 3)**

*Prerequisites: CSIT 981, CSIT 982, or equivalent experience.*

This course will teach students how to plan a network around features supported by Windows 2003. Students will learn how to configure and support the TCP/IP protocol and network services such as IPSec, DHCP, and DNS, and prepare for certification exam 70-291. In addition, it is appropriate for those interested in web server administration and network security.

*Note: This course is one of the required core courses for the WLAC Microsoft Certified Systems Engineer (MCSE) training program.*

**984 Introduction to Windows Active Directory Services (3) (RPT 3)**

*Prerequisites: CSIT 981, CSIT 982, CSIT 983, or equivalent experience.*

This course introduces students to Windows 2003 Server Active Directory Services concepts and prepares students to plan, configure, and administer an Active Directory infrastructure. Students will learn to configure Domain Name System to manage name resolution, schema, and replication. In addition, students will also learn to use Active Directory to centrally manage users, groups, shared folders, and network resources.

*Note: This course is one of the required core courses for the WLAC Microsoft Certified Systems Engineer (MCSE) training program.*

**985 Introduction to Computer and Information Security II (3) (RPT 3)**

*Prerequisite: CSIT 980, or Server OS or equivalent experience.*

This course introduces the basic concepts of information assurance. Topics include security baselines, network and application hardening, remote communication security, web and internet security, mail and database security, security policies and procedures, organization and operational security, and computer forensics. Lab simulation involves security settings on the Windows Vista/XP/Server 2003.

*Note: This course, combined with CSIT 980, is designed to help candidates prepare to complete the CompTIA Security+ exam, the Microsoft Certified Systems Engineer (MCSE) security specialization exam, and the Certified Information System Security Professional (CISSP) exam. It is one of the courses leading to a degree/certificate in Network & Security Management.*

**988 Installing, Configuring, and Administering Microsoft SQL (3) (RPT 3)**

*Prerequisite: CSIT 982 or equivalent experience*

This course provides students with the knowledge and skills required to install, configure, administer, and troubleshoot the client-server database management system of Microsoft Structured Query Language (SQL) Server. This course is also extremely appropriate for web site developers and database support personnel. This course is one of the required elective courses for the WLAC Microsoft Certified Systems Engineer (MCSE) training program.

**989 Implementing/Managing Microsoft Exchange Server (3) (RPT 3)**

*Prerequisite: CSIT 982 and CSIT 983 or equivalent experience*

This course provides students with the knowledge and skills that are needed to update and support a reliable, secure messaging infrastructure. This infrastructure is used for creating, storing, and sharing information by using Microsoft Exchange Server in a medium-sized to large-sized (250 to 5,000 users) messaging environment.

**990 Object-Oriented Programming in Java (4) CSU (RPT 3)**

*Prerequisite: CSIT 939.*

This course is designed to take the student through the various phases of Java programming, from applications and applets to database programming using JDBC. The course will cover Java Foundation Classes (JFC), detailed exposure to Util and Lang packages, and some networking/animation.

**991 Networking Laboratory (1) (RPT 3) (P/NP)**

*Prerequisite: CS972 or equivalent experience.*

This is an intermediate to advanced Cisco networking lab that provides hands-on opportunities for students to work with Cisco hardware and software. Students will work with various Cisco routers and Cisco 2900 series switches. Students will have access to lab resources to review and prepare for their Cisco certification exams. Cisco hardware will be accessible 24/7 over the Internet via NDG Remote Lab software.

### 992 Computer A+ Hardware Laboratory (1) (RPT 3) (P/NP)

The rapid expansion of the computer industry has generated a growing need for highly skilled workers to repair, network, and support these increasingly complex computer systems. Employment of computer specialists is expected to increase much faster than average as technology becomes more sophisticated and organizations continue to adopt and integrate these technologies. Computer Repair and Networking offers hands-on training in state-of-the-art computer hardware and software systems. This field requires the specialist to continually learn new skills to keep pace with the rapidly changing industry.

This class will explore basic electronics concepts needed to troubleshoot and repair all aspects of personal computers. In this class we will develop skills such as installation of hard drives, CD drive, interface cards, network cards, monitors, keyboards, peripherals, etc. Operating systems will be installed to insure system operation.

## COOPERATIVE WORK EXPERIENCE EDUCATION

Cooperative Work Experience Education (CWEE) combines on-the-job experience with regular classroom instruction. It is designed to expand skills and knowledge and to improve self-understanding by integrating classroom study with planned, supervised work experience. CWEE is based on the principle that well-educated individuals develop most effectively by incorporating related education and work experience. These structured experiences in business, industry, government and human services bring enrichment to college studies and enhance the student's total development. It is called CWEE because the educational objectives are carefully planned and coordinated with the student's employer to provide realistic employment experience.

The objectives are to:

- Provide opportunity for the student to secure employment on a part-time or full-time basis.
- Gain realistic work experience that is meaningfully related to the student's college study program.
- Provide the student opportunity to acquire knowledge, skills, and attitudes essential for successful employment.

### BENEFITS OF COOPERATIVE WORK EXPERIENCE EDUCATION

The Student:

- Has the opportunity to learn or improve employment skills under actual working conditions.
- Gains perspective on career goals through application of classroom theory to "real life experience."
- Builds self esteem and confidence as a worker through individual attention given by instructor or coordinators and employers.
- Has an opportunity to test personal abilities in work environments.

- Has a more realistic approach to the job market.
- Will gain a better understanding of human relations.
- Will learn to apply Management By Objective (MBO).
- May refer to work experience education on future job applications.
- Benefits financially while learning.
- Can begin a career earlier.

### Student Qualifications:

- Be pursuing a planned program based on measurable learning objectives agreed on with a CWEE instructor or coordinator.
- Be enrolled in no less than seven units (including CWEE units).
- Be enrolled in at least one other class in addition to CWEE during the summer session.

## CORRECTIONS

(See Administration of Justice for additional course offerings)

### 2 Correctional Institutions (3) CSU

(Same as Administration of Justice 75)

The student will become aware of cultural diversity during the presentation of the various course topics, such as community relations, race relations and cultural awareness.

### 3 Field Work I (3) CSU

*Prerequisites: Corrections 1 and 2. (Administration of Justice 1 can substitute for Corrections 1.)*

Under supervision, students will participate in a correctional facility such as a probation/parole field office, jail, detention center, juvenile camp, juvenile institution, or a similar agency. Students must meet the minimum entry-level requirements of the participating agency and will be fingerprinted, take an oath and a TB test. The class meets once a week, and the student will have a volunteer assignment for a minimum of six hours per week with a sponsoring agency.

### 4 Field Work II (3) CSU

*Prerequisites: Corrections 1, 2, and 3. (Administration of Justice 1 can substitute for Corrections 1.)*

Under supervision, students will participate in a correctional facility such as a probation/parole field office, jail, detention center, juvenile camp, juvenile institution, or similar agency. Students must meet the minimum entry-level requirements of the participating agency and will be fingerprinted, take an oath and a TB test. The class meets once a week, and the student will have a volunteer assignment for a minimum of six hours per week with a sponsoring agency.

### 5 Legal Aspects of Corrections (3) CSU

This course provides students with an awareness of the historical framework, concepts, and precedents that guide correctional practices. Course material will broaden the individual's perspective of the corrections environment, the civil rights of prisoners, and the responsibilities and liability of correctional employees.

310 FIELD WORK I (3) (Same as Corrections 3)

311 FIELD WORK II (3) (Same as Corrections 4)