

CMUN 8 Interpersonal Communication**Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU, UC; CSU-GE:A1, IGETC:1C; GAV-GE:A1, F

This course studies the communication process in an interpersonal (dyadic) setting. This class will explore the ways in which we can improve our communication with others. Verbal and nonverbal messages, self-concept, cultural differences, gender differences, perception, listening and conflict management will be explored. (C-ID: COMM 130)

CMUN 10 Small Group Communication**Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU, UC; CSU-GE:A1, IGETC:1C; GAV-GE:A1; CAN:SPCH10

An introductory course that develops basic individual reasoning skills, insights and experiences in information-sharing, interacting, decision-making, problem-solving, resolution of disputes and other issues central to group processes. (C-ID: COMM 140) ADVISORY: Eligible for English 250 and English 260.

CMUN 11 Business Communication**Units:** 3.0 **Hours:** 3.0 Lecture**Transferable:** CSU

This course will explore business communication contexts by examining organizational cultures, strategic vision and goal setting, leadership managerial roles, and team building communication. Emphasis is placed on analytical and organizational skills, listening, nonverbal and verbal communication, public speaking communication methodology, and domestic and international relations through use of hybrid online and classroom environment for lecture and application. PREREQUISITE: English 250. ADVISORY: Communication 1A or English 1A.

CMUN 129 Presentation Graphics - MS PowerPoint**Units:** 1.0 **Hours:** 1.0 Lecture**Transferable:** CSU

This introductory course in presentation graphics will use Microsoft Office's *PowerPoint* software to create a computerized presentation with text and objects. This course has the option of a letter grade or pass/no pass. This course is also listed as CSIS 129. ADVISORY: CSIS 126 or word processing skills in the Windows environment.

Computer Art: also see CSIS or Digital Media

COMPUTER GRAPHICS AND DESIGN

CGD 2 2D/3D Technical Computer Graphics I**Units:** 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory**Transferable:** CSU

Introduction to graphic and design competencies architects, engineers, game/simulation developers, industrial designers and other careers professional designers use when producing and marketing real and/or virtual consumer products. Prepares students to create consumer products, buildings and other designed objects by developing freehand sketches, creating SolidWorks models and/or other graphics while applying theory and knowledge of elements and principles of visual design, creative problem solving, typography, professional ethics and research skills. This course has the option of a letter grade or pass/no pass. ADVISORY: LIB 3 and MATH 404G.

CGD 4 2D/3D Technical Computer Graphics II**Units:** 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory**Transferable:** CSU

Intermediate computer graphics design course expands skills and concepts introduced in CGD 2. Develops technical design and graphic skills required to create explain, analyze, model, render, and animate products using a problem solving process and applying knowledge of 2D and 3D technical drafting standards used in manufacturing and engineering. Other topics include ergonomics, materials, design/typography/color principles and theories. Projects assigned integrate technology with design and focus upon proposing, producing and marketing useful products by developing and visually communicating ideas that are necessary for succeeding in desired design career(s). ADVISORY: Completion of CGD 2 with a grade of C or better.

CGD 6 Advanced Computer Graphics**Units:** 4.0 **Hours:** 2.0 Lecture and 6.0 Laboratory**Transferable:** CSU

Technical skills for using computer design for precision manufacturing, including ANSI/ASME Y14.5 2009 geometric dimensioning and tolerancing (GD&T). Prepares students for careers as designers, engineers; CAD/CAM/CAE specialist; drafter, inspectors, machinists, technical sales, and other jobs that interpret engineering drawings. Students may concurrently enroll in CGD 110. ADVISORY: Eligible for English 250, 260 and Mathematics 233. Computer lab work can be done both in lab and off-site.

CGD 8 Advanced Computer Graphics for Design Application I**Units:** 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory**Transferable:** CSU

Advanced course in applied computer graphics and associated interdisciplinary design proficiencies required by careers that design, engineer, manufacture and/or market products. Applies theories, principles and skills covered in CGD 4 and integrates business, sustainable design, and hybrid products. Design solutions reflect technical understanding, aesthetic principles and addresses societal needs in a cost effective manner. Presentations include animating and rendering models of real and/or virtual products that address human factors/ergonomics, usability, life cycle analysis and sustainability. Portfolios support advancement in student-selected career pathways by communicating competence in computer graphics and design. ADVISORY: Eligible for English 250, 260 and Mathematics 233.

CGD 9 Advanced Computer Graphics for Design Application II**Units:** 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory**Transferable:** CSU

Advanced computer graphics and design course that combines technical computer graphic skills with interdisciplinary design proficiencies including creating computer imagery, transformations, and rendering to create 3D model using geometric primitives, projections for computer animation and data visualization. Includes structural analysis and emphasis on developing products that include ergonomic features and sustainable materials. Work within electronic portfolio demonstrates skills and knowledge of technical graphic design to visualize, develop and present products to meet societal needs. ADVISORY: Satisfactory score on the English placement exam or a grade C or better in English 250, completion of Mathematics 233 or satisfactory Mathematics placement. Completion of CGD 2 and CGD 8 with a grade of C or better. Computer lab work can be done both in lab and off-site.

CGD 30 Introduction to Environmental Design**Units:** 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory**Transferable:** CSU

Develops skills and building information modeling (BIM) computer aided design (CAD) skills necessary for designing and producing a set of plans for an array of environmental projects, such as residential remodels, landscape projects, interior design and other small construction projects. Includes use of Revit and/or other technical design tools, introduction to building codes, sustainable design concepts, specifications and other architectural construction document basics necessary for getting permits and entering environmental design careers. ADVISORY: Eligible for English 250, 260 and Mathematics 233. Computer lab work can be done both in lab and off-site.

CGD 110 Computer Graphics Lab**Units:** 1.0 TO 4.0 **Hours:** 3.0 TO 12.0 Laboratory**Transferable:** CSU

Complements computer graphics and art courses by providing additional competence in software applications, libraries, and graphical user interfaces to support computer graphics and design projects by providing supervised practice and individualized computer assisted learning on software and techniques commonly found in the computer graphic design field. This is an open entry/exit class. This course has the option of a letter grade or pass/no pass. ADVISORY: Concurrent enrollment in corresponding computer graphic and design classes. Computer lab work can be done both in lab and off-site.

CGD 160 Technical Desktop Publishing / Graphics

Units: 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory
Transferable: CSU

Create multimedia presentations to effectively communicate ideas and market designs. Applies concepts, theories and principles of typography, color and design to create digitally based portfolios for application to four year colleges or for entry level employment. ADVISORY: Eligible for English 250, 260 and Mathematics 233. Familiarity with word processing, keyboarding, and DOS file management. Computer lab work can be done both in lab and off-site.

CGD 190 Occupational Work Experience / Computer Graphics & Design

Units: 1.0 TO 4.0 **Hours:** 5.0 TO 20.0 Laboratory
Transferable: CSU

Occupational work experience for students who have a job related to their major. A training plan is developed cooperatively between the employer, college and student. (P/NP grading) 75 hours per semester paid work = 1 unit. 60 hours non-paid (volunteer) work per semester = 1 unit. May be taken for a maximum total of 16 units. Minimum 2.00 GPA. REQUIRED: Declared vocational major.

COMPUTER SCIENCE & INFORMATION SYSTEMS**CSIS 1 Computer Literacy - MS Office**

Units: 2.0 **Hours:** 2.0 Lecture
Transferable: CSU, UC; GAV-GE:E2; CAN:CSCI2

An introduction to terminology, design, operation for the novice user. Student will gain experience using the Internet for searches and email. They will complete projects using various software including word processing, spreadsheets, database, presentation graphics, and integration. This course has the option of a letter grade or pass/no pass. ADVISORY: Eligible for English 250 and English 260; completion of CSIS 122.

CSIS 2 Computers in Business

Units: 4.0 **Hours:** 3.0 Lecture and 3.0 Laboratory
Transferable: CSU; GAV-GE:E2; CAN:BUS6

Introduction to business information management systems. Topics include database management systems, computer hardware and software, networking, ethics, data security, ecommerce; includes hands-on experience applying these concepts to solve practical business problems using word processing software, spreadsheets, database management systems, presentation graphics and Internet applications. Students cannot receive credit for both CSIS 2 and CSIS 2L. Please see a counselor about degree, certificate, and transfer requirements. This course has the option of a letter grade or pass/no pass. (C-ID: BUS 140) ADVISORY: Eligible for Mathematics 233, English 260 and English 250, and CSIS 122

CSIS 2L Computers in Business Lab

Units: 1.0 **Hours:** 3.0 Laboratory
Transferable: CSU

Hands-on experience solving practical business problems using word processing software, spreadsheets, database management systems, presentation graphics and Internet applications. Students cannot receive credit for both CSIS 2 and CSIS 2L. Please see a counselor about degree, certificate, and transfer requirements. This course has the option of a letter grade or pass/no pass.

CSIS 3 Research Skills

Units: 2.0 **Hours:** 2.0 Lecture
Transferable: CSU

Research and evaluation skills using the Internet and other electronic resources, as well as traditional printed materials. Also listed as LIB 3. This course has the option of a letter grade or pass/no pass. ADVISORY: Eligible for English 250 and 260.

CSIS 5 C++ Scientific Programming

Units: 3.0 **Hours:** 2.0 Lecture and 3.0 Laboratory
Transferable: CSU, UC; CAN:CSCI4

An introduction to computer problem solving and programming using the C++ language for science and engineering majors. Students will write programs for a variety of scientific and mathematical applications. This course has the option of a letter grade or pass/no pass. PREREQUISITE: Mathematics 1A ADVISORY: Completion of CSIS 10.

CSIS 6 Web Page Authoring I

Units: 2.0 **Hours:** 2.0 Lecture
Transferable: CSU; GAV-GE:E2

An introduction to using Hypertext Mark-Up Language (HTML) and Extensible HTML (XHTML) to create web pages which can be uploaded and displayed on the World Wide Web. Students will use HTML/XHTML to create web pages with text in various sizes and colors, links to other sites, background color or patterns, graphics, tables and mailto links. Principles of design and color as they apply to screen presentations will be included. This course has the option of a letter grade or pass/no pass. Also listed as LIB 6 and DM 6. ADVISORY: CSIS 1 or CSIS 2 or CSIS 3/LIB 3 advised.

CSIS 7 Web Page Authoring II

Units: 2.0 **Hours:** 2.0 Lecture
Transferable: CSU

This course is a continuation of CSIS 6, Web Page Authoring I. Topics that will be covered include XHTML, frames, advanced tables, forms, scripting languages, image maps, Cascading Style Sheets (CSS), and new trends in web page technology. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 7. ADVISORY: CSIS 6

CSIS 8 Introduction to the Internet

Units: 1.0 **Hours:** 1.0 Lecture
Transferable: CSU; GAV-GE:E2

Topics include networking fundamentals, webpages and HTML, online security basics, and business email etiquette. Students will learn techniques to search efficiently for information and evaluate its credibility. This is a pass/no pass course. ADVISORY: CSIS 124

CSIS 9 Computer Education for Teachers

Units: 3.0 **Hours:** 3.0 Lecture
Transferable: CSU

The history, uses and development of computers in education. Basic computer skills and terminology will be taught in context of teacher education. Students who successfully complete this course will understand general and specific skills and knowledge required to meet the Technology Standard for Multiple and Single Subject Credential Candidates. This course has the option of a letter grade or pass/no pass. This course is also listed as CD 12. ADVISORY: CSIS 122 Computer Keyboarding, or equivalent; English 250 with a grade of C or better.

CSIS 10 BASIC Programming

Units: 2.0 **Hours:** 2.0 Lecture
Transferable: CSU, UC

This course is an introduction to programming using BASIC. No previous programming background is assumed. This is a good class for those new to programming and recommended for non-programmers that want to take other programming classes. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 1 or CSIS 2 or equivalent experience.

CSIS 12 Assembly Language Programming

Units: 3.0 **Hours:** 3.0 Lecture
Transferable: CSU, UC

Fundamentals of assembly language programming concepts and techniques. Topics include internal representation of data, arithmetic operations, logic statements, and general assembly language commands. Introduce low level language architecture including assemblers, linkage editors, and loaders. This course has the option of a letter grade or pass/no pass. COREQUISITE: CSIS 12L Assembly Language Programming Lab ADVISORY: CSIS 45 (C++ Programming) or programming experience. Math 233 (Intermediate Algebra)