CHN 1B   Elementary Mandarin

Units: 5.0   **Hours:** 5.0 Lecture
Transferable: CSU-GE:C2, IGETC:6A, GAV-GE:C2

A continuation of Chinese 1A, an introduction to elementary Mandarin as a foreign language, this is a second level of elementary Mandarin. Equal emphasis is on listening, speaking, reading and writing. Students will acquire an active vocabulary of no less than 1000 Chinese words, and 200 phrases and idiomatic expressions in rich cultural context. Mandarin will be the primary medium of instruction. This course has the option of a letter grade or pass/no pass. PREREQUISITE: CHN 1A or equivalent.

COMMUNICATION STUDIES

CMUN 1A   Introduction to Public Speaking

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: CSU-GE:A1, IGETC:1C, GAV-GE:A1

Basic principles of effective human communication and their function in contemporary public settings; emphasis is on the speeches to inform and persuade, with special consideration given to fundamental communication skills, including organization, reasoning, explanation, rhetoric and listening. (C-ID: COMM 110) ADVISORY: Eligible for English 250 and English 260.

CMUN 2   Oral Interpretation

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: CSU-GE:C1, GAV-GE:C1

An introduction to the analysis, preparation and dramatic presentation of literature, including classical and contemporary prose, poetry and drama. Students will prepare, analyze, interpret and present great works of theatre and literature for an audience. This course is also listed as THEA 4. (C-ID: COMM 170) ADVISORY: Eligible for English 250 and English 260.

CMUN 4   Intercultural Communication

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: CSU-GE:D, IGETC:4G, GAV-GE:D2, GAV-GE:F

This course will explore the dynamics of communication as it applies to people from different cultures. Course content focuses on the application of theory and research to intercultural communication contexts. Increasing the awareness and understanding of diversity, the perception process, culture, verbal and non-verbal communication and the obstacles that prevent one from becoming a competent intercultural communicator will be examined. (C-ID: COMM 150)

CMUN 5   Fundamentals of Communication Studies

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: CSU-GE:A1, IGETC:1C, GAV-GE:A1

This course provides an overview of the history of the communication studies field and areas of specialization with the field as well as communication research methods. Instruction and application of theory and practice in various communication contexts including the self concept, interpersonal, interviewing skills, small group dynamics, and public speaking. Emphasis is placed on analytical and organizational skills, listening, nonverbal and verbal communication, and public speaking communication methodology. (C-ID: COMM 180) ADVISORY: English 250 and English 260.

CMUN 6   Introduction to Conflict Resolution

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: CSU-GE:D, GAV-GE:D2

Introduction to Conflict Resolution introduces students to non-violent communication skills, conflict resolution, and mediation models. Integrating non-violent theory and practice, students will apply core concepts about the causes of conflict; choose, practice and evaluate communication skills in a variety of settings on campus and in the community; and formulate appropriate conflict resolution strategies based on analysis of varying conflict situations with sensitivity to ethnicity, class, sexuality, and gender influences. They will also develop and practice basic co-mediation skills in formal and informal settings. This course has the option of a letter grade or pass/no pass. This course is also listed as PSYC 6 and POLS 6 ADVISORY: English 250 and English 260.

CMUN 8   Interpersonal Communication

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: CSU-GE:A1, IGETC:1C, GAV-GE:A1, GAV-GE: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-GE:A1, IGETC:1C, GAV-GE:A1

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

CMUN 12   Business Communication

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

Applies business communication concepts where students create effective documents and visual aids using current technology, present individual and team oral presentations, assess interpersonal and intercultural environments and evaluate common controversial issues within the workplace. ADVISORY: Eligible for ENGL 250.

CMUN 129   Presentation Graphics - MS PowerPoint

Units: 1.0   **Hours:** 1.0 Lecture

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 SCIENCE & INFO SYSTEMS

CSIS 1   Computer Literacy - MS Office

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

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 2L   Computers in Business Lab

Units: 1.0   **Hours:** 3.0 Laboratory

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 2   Computers in Business

Units: 4.0   **Hours:** 3.0 Lecture and 3.0 Laboratory
Transferable: GAV-GE:E2

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 3   Research Skills

Units: 2.0   **Hours:** 2.0 Lecture

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

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. (C-ID: COMP 122) PREREQUISITE: Mathematics 1A ADVISORY: Completion of CSIS 10.

CSIS 6   Webpage Authoring

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: GAV-GE:E2

An introduction to using Hypertext Mark-Up Language (HTML) to create web pages which can be uploaded and displayed on the World Wide Web. Students will use HTML to create web pages with text in various sizes and colors, links to other sites, lists, background color or patterns, graphics, tables and email links. Interactive forms, scripting languages (jQuery for simple animation) and css media queries to make a web page responsive to multiple device sizes will also be covered. This course has the option of a letter grade or pass/no pass. Also listed as 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

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: 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   Technology Education for Teachers

Units: 3.0   **Hours:** 3.0 Lecture

The uses of technology in education. Computer skills and terminology as well as other classroom technology will be taught in context of teacher education. Students who successfully complete this course will gain 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   Introduction to Programming using BASIC

Units: 3.0   **Hours:** 3.0 Lecture

This course is an introduction to programming using BASIC. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 1 or CSIS 2 or equivalent experience.

CSIS 12L   Assembly Language Programming Lab

Units: 1.0   **Hours:** 3.0 Laboratory

Supplemental practice in coursework associated with this course is provided. Concurrent enrollment in CSIS 12 is required. This is a pass/no pass course. COREQUISITE: CSIS 12 Assembly Language Programming

CSIS 12   Assembly Language Programming

Units: 3.0   **Hours:** 3.0 Lecture

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)

CSIS 24   Java Programming I

Units: 3.0   **Hours:** 3.0 Lecture

Introduction to Java programming. Includes programming fundamentals, program design, and core computer concepts. Covers the basics of object-oriented programming in the Java environment. (C-ID: COMP 122) ADVISORY: CSIS 10 or CSIS 42.

CSIS 26   Discrete Structures

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: GAV-GE:B4

Topics covered include set theory, logic, relations and functions, mathematical induction and recursion, combinatorics, discrete probability, trees and graphs, analysis of algorithms, algebraic structures. Emphasis on topics of interest to computer science majors. This course has the option of a letter grade or pass/no pass. (C-ID: COMP 152) PREREQUISITE: CSIS 5 or CSIS 45 or CSIS 46 with a grade of 'C' or better AND MATH 235 or MATH 240 or MATH 242 or the equivalent with a grade of 'C' or better.

CSIS 27   Java Programming II

Units: 3.0   **Hours:** 3.0 Lecture

This course is a continuation of Java Programming I, intended for students majoring in programming and/or planning to transfer to a 4-year college or university. This course will cover topics discussed in Java Programming I in more detail. Emphasis will be placed on implementation and analysis of algorithms and abstract data types: lists, queues, stacks, arrays, trees, priority queues, heaps, tables, hashing, balanced trees, graphs, searching and sorting, and recursion. (C-ID: COMP 132) PREREQUISITE: CSIS 24 Java Programming I or equivalent experience.

CSIS 28   Computer Architecture and Organization

Units: 3.0   **Hours:** 3.0 Lecture

Introduction to the organization and architecture of computer systems. Mapping of statements and constructs in a high-level language onto sequences of machine instructions is studied, as well as the internal representation of simple data types and structures. Numerical computation is examined with an eye toward possible data representation errors and procedural errors. Throughout the course, students will write short assembly language programs that utilize the concepts being studied. (C-ID: COMP 142) ADVISORY: Some programming experience or programming coursework.

CSIS 42   Python Programming

Units: 4.0   **Hours:** 4.0 Lecture

This course is for those new to programming and is the recommended first course to take before taking other programming classes.   No previous programming background is assumed.   The course introduces students to the fundamental concepts of computer programming using Python. Students will learn the procedural and object- oriented programming design methodology. Topics covered include: output, input, variables, selection, repetition, functions, recursion, lists, strings, file manipulation, internet scripting, regular expressions, data mining and GUI. This course has the option of a letter grade or pass/no pass. (C-ID: COMP 112)

CSIS 43   C Programming

Units: 4.0   **Hours:** 3.0 Lecture and 3.0 Laboratory

This course introduces computer programming using the C programming language. Topics include variable and constant declarations, arithmetic operations, selection, input/output operations, repetition, functions and recursion, arrays, pointers, and other related topics. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 10 BASIC Programming, or other programming experience.

CSIS 45   C++ Programming I

Units: 3.0   **Hours:** 2.0 Lecture and 3.0 Laboratory
Transferable: GAV-GE:E2

An introduction to the concepts and methods of computer programming using C++. Students will be introduced to procedural and object-oriented programming design methodology. Topics covered include variable and constant declarations, selection statements, repetition, functions and recursion, arrays, strings, pointers, and an introduction to classes and objects. This course will prepare students for the Programming II class. This course has the option of a letter grade or pass/no pass. (C-ID: COMP 122) ADVISORY: CSIS 42

CSIS 46   C++ Programming II

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

This course is a continuation of CSIS 45, intended for students majoring in programming and/or planning to transfer to a 4-year college or university Computer Science program. The course will cover topics discussed in CSIS 45 in more detail. In addition the course will cover more advanced C techniques such as pointers, recursion, and linked lists. Special emphasis will be placed on C++ features such as classes, objects, templates and operator overloading. This course has the option of a letter grade or pass/no pass. (C-ID: COMP 132) PREREQUISITE: CSIS 45 or CSIS 5 or equivalent.

CSIS 48   UNIX, Linux Operating System

Units: 4.0   **Hours:** 3.0 Lecture and 3.0 Laboratory

This course will provide the basics of the UNIX/Linux operating system, including the history and the use of UNIX/Linux with hands-on experience using commands and files. Topics to be covered include basic UNIX/Linux commands, text editing, files and directories, electronic mail, pipes and filters, and shell programming. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 1 or CSIS 2 or equivalent computer experience.

CSIS 49   UNIX, Linux Shell Programming

Units: 4.0   **Hours:** 3.0 Lecture and 3.0 Laboratory

A beginning course in UNIX/Linux shell programming using different commands including awk, sed, and Perl. The course will cover theory and concepts including interpretation of different quote characters, shell variables, decision-making commands, and looping mechanism. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 48

CSIS 51   Visual Basic Programming

Units: 4.0   **Hours:** 3.0 Lecture and 3.0 Laboratory
Transferable: GAV-GE:E2

An introduction to the GUI software applications using Microsoft Visual Basic. This course will give students the opportunity to learn how to create applications using Visual Basic. This course will show the students how to use forms, boxes, buttons, labels, menus, scroll bars, and drawing objects. Students will develop professional looking and deployable Visual Basic applications. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 10 or equivalent.

CSIS 52   Linux, UNIX System Administration

Units: 3.0   **Hours:** 3.0 Lecture

This course introduces students to the fundamentals of Linux/UNIX system administration: the setup, configuration and maintenance of Linux/UNIX servers. Topics include managing file systems, devices and user accounts, maintaining system backups and system logs, and basic system security. Students will configure a web-server, install programs, configure networking, and implement basic system security protocols. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 48

CSIS 54L   Perl Programming Lab

Units: 1.0   **Hours:** 3.0 Laboratory

Supplemental practice in coursework associated with this course is provided. Concurrent enrollment in CSIS 54 is required. COREQUISITE: CSIS 54 Perl Programming

CSIS 54   Perl Programming

Units: 3.0   **Hours:** 3.0 Lecture

Introduction to the interpreted language called PERL, the Practical Extraction and Report Language. Writing of programs that perform various tasks, including text, file and process manipulation. Semantics and syntax of the Perl language, including discussion of the practical kinds of problems that Perl can solve and provides examples. This course has the option of a letter grade or pass/no pass. Concurrent enrollment in CSIS 54L is required. COREQUISITE: CSIS 54L Perl Programming Lab ADVISORY: CSIS 45 C++ Programming or equivalent programming experience.

CSIS 74   Advanced PhotoShop

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: GAV-GE:C1

This is an intermediate level course in mastering Adobe's Photoshop software. Students will learn advanced strategies in professional digital editing. Students will apply creative techniques for print, video, animation and the web. Students will develop skills in luminance, color and exposure to optimize images with adjustment layers and masks, and cutting-edge selection techniques. There will be a focus in post processing for landscape, portrait and panoramic imaging suited for the artist, photographer and design student. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 74. ADVISORY: DM/ART/CSIS 75 PhotoShop I

CSIS 75   Photoshop I - Adobe Photoshop

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: GAV-GE:C1

This is an entry level course in mastering Adobe's Photoshop software. Students will learn creative and fundamental processes in professional digital image editing. Hands on lessons provide students with skills to manage today's image libraries. Students will be introduced to Photoshop's Bridge and Camera Raw utilities while crafting state of the art compositions for print, video, animation and the web. There is a focus on basic tonal and color adaptations, digital painting, black and white conversion, special effects, and correction and restoration techniques. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 75. ADVISORY: CSIS 124 (Windows Fundamentals), CSIS 2L

CSIS 76   Digital Illustration

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: GAV-GE:C1

Illustration techniques using computer Bezier curve-based illustration software tools to do diagrams and graphics for use in art, desktop publishing, web graphics, animation, multimedia and computer presentations. This basic Illustrator course is focused on the technical and historical aspects of digital design and illustration as well as the development of personal artistic expression and visual perception through the use of the digital illustration medium. This course will include lectures and discussions about color, composition and content, computer and illustration program use, printing and presentation techniques. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 76. ADVISORY: CSIS 1 or CSIS 2 or equivalent computer experience.

CSIS 77   Introduction to Digital Media and its Tools

Units: 3.0   **Hours:** 2.0 Lecture and 3.0 Laboratory
Transferable: GAV-GE:C1

An introduction to the field of digital media, including history, social impact, concepts, career options and industry trends. Applying learned visual and aural design principles, students will explore the use of computer-based tools in the design and production of digital media by creating and editing digital images, sounds, video, animation, and text. A comprehensive term project for publication on the web or CD ROM will be required. This course is also listed as DM 77. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 124, CSIS 1, CSIS 2/2L, CSIS 3, or familiarity using the Macintosh or Windows operating system.

CSIS 78   Web Sites with SQL and PHP

Units: 4.0   **Hours:** 3.0 Lecture and 3.0 Laboratory

Covers the programming of database-driven, web-based applications (such as an eCommerce web site) using PHP and MySQL. PHP is a powerful language for writing server-side Web applications. MySQL is the world's most popular open source database. Together these two technologies provide a powerful platform for building database-driven Web applications. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 128 Database - Access, or equivalent database experience.

CSIS 79   Portfolio Development

Units: 1.0   **Hours:** 1.0 Lecture
Transferable: GAV-GE:C1

The planning and production of personal portfolios and self- promotion materials, including online, print, slides, and e-media (CD ROM, DVD) portfolios; cover letters, and resumes. Focuses on self-promotion for jobs, self-employment, or advanced education in the fields of Art, Computer Graphic Design and Digital Media. Students will leave the class with one or more portfolios representing their work. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 79. No college credit for those who have passed ART 79.

CSIS 80   Digital Photography

Units: 3.0   **Hours:** 2.0 Lecture and 4.0 Laboratory
Transferable: GAV-GE:C1

The study of digital photography from digital camera to the computer-based printer or digital media. Artistic, theoretical, and technical aspects will be considered. Topics include information about types and purchasing of digital cameras; theory, mechanics, and art of digital imagery; digital darkroom; eccentricities of digital photo taking; stitching photos for virtual reality; and preparing digital images for print, World Wide Web and other digital media. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 80. ADVISORY: CSIS 1 or CSIS 2/2L or ART 8A or equivalent computer experience.

CSIS 84   JavaScript Programming

Units: 2.0   **Hours:** 2.0 Lecture

Fundamentals of JavaScript client-side programming for Web pages requiring data collection or other user interaction. Students will create Web pages that execute on the client (personal system) using JavaScript. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 6

CSIS 85   Web Development and Design

Units: 3.0   **Hours:** 3.0 Lecture
Transferable: GAV-GE:C1

Basic and intermediate principles of developing and designing web pages using html editor, content management systems, and/or CSS. Emphasis will be on concept development, interface and navigation design, layout principles and the use of a html editor and CSS to execute, develop and maintain professional Web sites. Topics will include enhanced text formatting, styles and forms. This course also includes the integration of multimedia components such as graphics, sound, animation and video. This course is also listed as DM 85. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 6 or knowledge of HTML/CSS.

CSIS 107   Digital Media Design

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

Design for visual, time-based, and interactive media and print documents. Concentrates on graphic/visual design, but also includes basic storytelling, information architecture, and human experience design. Applicable to the design and development of business presentations and print products, interactive media, educational multimedia, animation, web sites, video games, and film/video. This course has the option of a letter grade or pass/no pass. Also listed as CSIS 107. ADVISORY: CSIS 1 or CSIS 2/2L or equivalent computer experience.

CSIS 108   Digital Media Lab

Units: .5 TO 3.0   **Hours:** 1.5 TO 9.0 Laboratory
Transferable: GAV-GE:C1

Supervised practice and individualized computer assisted learning of software applications and techniques commonly found in the design and production of digital media (e.g., digital art and imaging, digital photography, digital print, digital audio/video, web design/authoring, DVD/CD ROMs, animation). Supplements lecture courses. Open entry/exit, so may be added at anytime during the semester. This is a pass/no pass course. Also listed as DM 108. ADVISORY: CSIS 1 or CSIS 2/2L or equivalent computer experience.

CSIS 110   Interactive Animation: Flash

Units: 3.0   **Hours:** 2.0 Lecture and 3.0 Laboratory
Transferable: GAV-GE:C1

The production of vector graphics, animation, and interactive multimedia in Shockwave-Flash format for web pages and other digital media. Design of highly interactive web site interfaces and animated games using Flash actions (scripting). Useful for web designers/developers, animators, and multimedia authors. This course has the option of a letter grade or pass/no pass. Also listed as DM 110. ADVISORY: CSIS 1, CSIS 2/2L, CSIS 124 or basic computer knowledge.

CSIS 112   Keyboard Speed Building

Units: .5 TO 1.0   **Hours:** 1.5 TO 3.0 Laboratory

This self-paced course is designed for students who know the alphabetic keyboard by touch and who want to develop their keyboarding speed. Students will use a microcomputer to keyboard a series of straight-copy timings, which will enable them to achieve a high level of skill. This is a pass/no pass course. ADVISORY: CSIS 122 or knowledge of keyboard with keyboarding speed of at least 25 wpm.

CSIS 114   Digital Media Production

Units: 2.0   **Hours:** 2.0 Lecture

A team oriented practicum that focuses on the application of learned skills to the production of digital media and digital print projects, such as web sites, CD ROM, and DVDs. Project development will be accomplished according to team derived master schedules. Lectures will be on project management, work coordination and production techniques, client-team interface, asset management and integration, budget estimates, testing, and copyright infringement. Please note that this is very much a team oriented class. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 114. ADVISORY: At least one of the following: ART 75, CGE 2, JOUR 18A, MUS 21, CSIS 7, CSIS 71, OR CSIS 77. or possess equivalent skills from any one of the following areas: digital media, computer graphics, digital print, film, TV/video, journalism (publishing), drawing or illustration, web design/ development, business/marketing, or programming.

CSIS 117   Visual Effects-Motion Graphics

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

Study of the design of visual effects and motion graphics used in digital video, film, web, multimedia, and interactive games. Includes video/graphics compositing techniques, 2D animation, basic 3D animation, and effects commonly done in digital post-production. Software such as Adobe After Effects and Apple's Motion and Shake will be used. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 117. ADVISORY: DM/ART/CSIS 113 or DM/ART/CSIS 140 or DM/ART/CSIS 77 or THEA 17A or basic knowledge of digital video/film editing.

CSIS 121   Spreadsheet - MS Excel

Units: 2.0   **Hours:** 2.0 Lecture

Introduction to the computer spreadsheet software. A hands-on approach to learning terms, commands, and applications of a spreadsheet program. This course has the option of a letter grade or pass/no pass. Also listed as ACCT 121. ADVISORY: CSIS 1 or CSIS 2 or equivalent computer experience.

CSIS 122   Computer Keyboarding

Units: .5 TO 2.0   **Hours:** 1.5 TO 6.0 Laboratory

A self-paced course for students who wish to master the alphabetic and numeric keyboard on the computer. This course is designed for students who do not know the alphabetic keyboard by "touch" and for those who want to improve their ability to type straight copy with increased speed and accuracy. The course provides "hands-on" instruction to help students reach optimum computer keyboarding skills within a limited time. This is a pass/no pass course. Course may be repeated until 2 units are accrued.

CSIS 124   Windows Fundamentals

Units: 1.0   **Hours:** 1.0 Lecture

This course provides fundamental information on the Windows environment for the computer. Introductory Windows operations and file management are covered. This is a pass/no pass course. ADVISORY: Basic keyboarding skill.

CSIS 126   Word Processing - MS Word

Units: 2.0   **Hours:** 2.0 Lecture

This introductory course for word processing with Windows is designed for business and non-business majors. Students will develop word processing skills to create a document, select and edit text, move and copy text, use the spelling, grammar, and thesaurus features, format text, and create headers and footnotes for a research paper. This course has the option of a letter grade or pass/no pass. ADVISORY: Eligible for English 260 and basic keyboarding skills.

CSIS 128   Database - MS Access

Units: 2.0   **Hours:** 2.0 Lecture

Introduction to Microsoft Access, a relational database management software tool. Students will learn to create and manage a database. This course will help prepare students for taking the Access MOUS (Microsoft Office User Specialist) exams. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 1 or CSIS 2 or equivalent knowledge.

CSIS 129   Presentation Graphics - MS PowerPoint

Units: 1.0   **Hours:** 1.0 Lecture

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

CSIS 132   Intermediate Word Processing - MS Word

Units: 2.0   **Hours:** 2.0 Lecture

This course covers formatting with macros and styles, mail merge techniques, sorting data in tables, preparing and protecting forms. These techniques will be applied to a variety of different documents: contracts, reports, surveys, manuscripts, and various types of letters. Other topics include working with shared documents in a workgroup, integrating applications and creating hyperlinks for workgroup settings using Microsoft Word. This course has the option of a letter grade or pass/no pass. PREREQUISITE: CSIS 126, Word Processing - MS Word

CSIS 134   Intermediate Excel

Units: 2.0   **Hours:** 2.0 Lecture

This course continues on where CSIS 121 Spreadsheet - MS Excel left off. Intermediate level training in spreadsheets using the Microsoft Excel program. The course includes graphing, formatting, database features, macros, and financial business calculations for decision making. This course has the option of a letter grade or pass/no pass. PREREQUISITE: ACCT/CSIS 121, Spreadsheet - MS Excel

CSIS 140   Basic Digital Film, Video Production

Units: 1.0   **Hours:** 1.0 Lecture

Transferable: GAV-GE:C1

An on-line self-paced course covering the basics of film/video production and post production (editing) using "easy to use" computer software such as Apple's iMovie. Beneficial for students who are producing a video/film project as a requirement for another college course, extra skills development, or for self interest. Completion of the associated class or personal project in DVD format using either personal video equipment or the equipment in the Digital Media Studio is required. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 140.

CSIS 151   Introduction to XML Authoring

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

This course provides an introduction and overview of eXtensible Markup Language (XML) and XML related technologies used to develop content and manipulate data for commercial web sites. XML is a revolutionary language which is rapidly becoming a Web development standard for business-to-business transactions, and for database manipulation and searching. The class will cover well-formed and valid XML documents, namespaces, schemas, cascading style sheets (CSS), and XSLT. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 6

CSIS 160　　Game Design
Units: 3.0　　**Hours:** 3.0 Lecture

Intended for students who want to explore game design and computational media. Compelling successful games are created by developers who have absorbed the fundamental principles of good game design. Students will analyze existing games for their educational and entertainment value, and create their own games using freely available software and game development environments. Key concepts such as game math, textures and materials, geometry and topology, lighting, sound and special effects will be explored. No previous programming experience is necessary. This course has the option of a letter grade or pass/no pass. This course is also listed as DM 160.

CSIS 162　　Introduction to Database Systems
Units: 3.0　　**Hours:** 3.0 Lecture

An introduction to database systems, including the design, use and administration of databases. This course has the option of a standard letter grade or pass/no pass. PREREQUISITE: CSIS 45, CSIS 5, or CSIS 24.

CSIS 178　　Applied Networking
Units: 4.0　　**Hours:** 3.0 Lecture and 3.0 Laboratory

This course covers fundamental networking concepts and develops the skills and knowledge to set up and maintain small business/home networks. The course is not hardware or vendor specific. It helps students prepare for the "Network +" certification exam, an industry- wide, vendor-neutral certification program developed and sponsored by the Computing Technology Industry Association (CompTIA). This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 124

CSIS 179　　Introduction to Information Security
Units: 4.0　　**Hours:** 4.0 Lecture

This course introduces students to network security concepts and prepares them for computer systems and network management duties. This course covers security concepts, communications and infrastructure security, basic cryptography, and operational and organizational security. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 178.

CSIS 181　　PC Hardware
Units: 4.0　　**Hours:** 4.0 Lecture

This course examines computing hardware, operating systems, and software applications from a technical side to enable students to select, install, maintain and optimize a computer system. This course will help prepare students to pursue the A+ Hardware Certification. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 124, CSIS 1 OR CSIS 2, or equivalent computer experience.

CSIS 182　　Operating Systems
Units: 4.0　　**Hours:** 4.0 Lecture

This course will survey current computer operating systems. Topics include file system management, systems requirements, network systems integration, security, and regular maintenance procedures. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 1 or CSIS 2 or equivalent computer experience

CSIS 183　　Introduction to Microsoft Servers
Units: 4.0　　**Hours:** 3.0 Lecture and 3.0 Laboratory

This course introduces students to the fundamentals of Microsoft Server setup and administration. Topics include managing file systems (including Active Directories), devices, user accounts, backups, and basic security. This course has the option of a letter grade or pass/no pass. ADVISORY: CSIS 182.

All courses listed here are part of Gavilan College's approved curriculum. All courses are not offered every semester. Check the Class Schedule for current offerings.

CSIS 184　　Computer Forensics
Units: 3.0　　**Hours:** 3.0 Lecture

Introduction to computer crime investigation processes. The student is introduced to the hardware, software, networks and devices found in typical home and business settings. Techniques and equipment used to collect evidence, ensure integrity, locate and prepare data for forensic investigation. Covers chain of custody requirements for admissible evidence, data formats for a variety of modern equipment, and recovery of deleted or encrypted information. This course has the option of a letter grade or pass/no pass. This course is also listed as AJ 184.

CSIS 190　　Occupational Work Experience, Computer Science
Units: 1.0 TO 4.0　　**Hours:** 3.3 TO 16.7 Laboratory

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. Student repetition is allowed per Title 5 Section 55253. Minimum 2.00 GPA. REQUIRED: Declared vocational major.

CSIS 220　　Computerized Accounting - Quickbooks
Units: 3.0　　**Hours:** 3.0 Lecture

An introduction to computer assisted accounting. Hands-on use of a microcomputer menu-driven accounting package to do general ledger, sales journal, cash receipts journal, cash payments journal, purchases journal, payroll, receivables, payables and related financial reports. This course has the option of a letter grade or pass/no pass. This course is also listed as ACCT 220. ADVISORY: CSIS 1 or CSIS 2 or the equivalent computer experience. ACCT 20 or ACCT 101 or ACCT 103 or ACCT 105 or the equivalent accounting experience. This course was previously listed as CSIS 120.

CSIS 570A　　Computer Access Evaluation - Level 1
Units: .5　　**Hours:** 1.5 Laboratory

This course is intended to provide an in-depth computer access evaluation in order to determine an appropriate access environment for a student with a disability or multiple disabilities. This is a pass/no pass course. May repeated as necessary based on measurable progress as documented in the Student Educational Contract. This is an open entry, open exit course. ADVISORY: This course is intended for students with a verified disability who show a need for assistive computer technologies and/or adaptive equipment or demonstrated academic deficit.

CSIS 570B　　Computer Access Evaluation - Level 2
Units: .5　　**Hours:** 1.5 Laboratory

This course is to provide additional assistive computer evaluation and training to students with disabilities. Once the appropriate computer access technology has been determined, specialized training will be provided. This is a pass/no pass course. May be repeated as necessary based on measurable progress as documented in the Student Educational Contract. This is an open entry, open exit course. PREREQUISITE: CSIS 570A ADVISORY: This course is intended for students with a verified disability who show a need for assistive computer technologies and/or adaptive equipment or demonstrated academic deficit.

CSIS 571A　　Introduction to Assistive Computer Instruction Lab
Units: .5 TO 2.0　　**Hours:** 1.7 TO 6.8 Laboratory

The Assistive Computer Instruction Lab (Intro) is designed for students who are eligible for Disability Services. The course is designed to improve basic academic skills and/or cognitive processes through the use of appropriate software or to learn adaptive devices designed to make computers accessible. Course content is individualized for each student. This is as pass/no pass course. May be repeated as necessary based on measurable progress as documented in the Academic Accommodations Plan. This is an open entry, open exit course. ADVISORY: This course is intended for students with a verified disability or demonstrated academic deficit who show a need for the use of assistive computer programs and/or adaptive equipment.

CSIS 571B   Intermediate Assistive Computer Instruction Lab
Units: .5 TO 2.0   **Hours:** 1.7 TO 6.8 Laboratory

The Assistive Computer Instruction Lab (Intermediate) is designed for students who are eligible for Disability Services. The course is designed to improve basic academic skills and/or cognitive processes through the use of appropriate software or to learn adaptive devices to make computers accessible. Course content is based on Academic Accommodations Plans which are developed for each student. This is a pass/no pass course. May be repeated as necessary based on measurable progress as documented in the Academic Accommodations Plan. This is an open entry, open exit course. ADVISORY: This course is intended for students with a verified disability or demonstrated academic deficit who show a need for the use of assistive computer programs and/or adaptive equipment.

CSIS 571C   Advanced Assistive Computer Instruction Lab
Units: .5 TO 2.0   **Hours:** 1.7 TO 6.8 Laboratory

The Assistive Computer Instruction Lab (Advanced) is designed for students who are eligible for Disability Services. The course is designed to improve basic academic skills and/or cognitive processes through the use of appropriate software or to learn adaptive devices designed to make computers accessible. Course content is based on Academic Accommodation Plans which are developed for each student. This is a pass/no pass course. May be repeated as necessary based on measurable progress as documented in the Academic Accommodation Plan. This is an open entry, open exit course. ADVISORY: This course is intended for students with a verified disability who show a need for the use of assistive computer programs and/or equipment or demonstrated academic deficit.

CSIS 572   Adaptive Computer Basics
Units: 1.0   **Hours:** 3.0 Laboratory

This course will include an introduction to the basic concept of how computers work, using the computer keyboard, word processing, beginning Internet and presentation graphics. This course will be self-paced and adjusted so that students with disabilities can learn a number of adaptive devices designed to make computers accessible. This is a pass/no pass course. May be repeated as necessary based on measurable progress as documented in the Student Educational Contract. ADVISORY: This course is intended for students with a verified disability who show a need for the use of adaptive computer programs and/or equipment or demonstrated academic deficit.

CSIS 573   Assistive Computer Technology for Reading
Units: .5 OR 1.0   **Hours:** .5 OR 1.0 Lecture

This course provides instruction in effective use of assistive computer technology for reading assistance. Students with disabilities will learn how to use software programs such as text-to-speech for improving reading skills. Special emphasis will be placed on reading comprehension, reading fluency, reading vocabulary and study skills. ADVISORY: Completion of Guidance 557 or demonstrated deficit in reading or written language achievement.

CSIS 574   Assistive Computer Technology for Writing
Units: .5 OR 1.0   **Hours:** .5 OR 1.0 Lecture

This course provides instruction in effective use of assistive computer technology for writing assistance. Students with disabilities will learn how to use text-to-speech and word prediction programs for improved writing skills. Special emphasis will be placed in vocabulary development, prewriting and editing for correct spelling, word usage and research facilitation. ADVISORY: Completion of Guidance 557 or demonstrated deficit in reading or written language achievement.

CSIS 575 Assistive Computer Technology for Reading and Writing
Units: 1.0   **Hours:** 1.0 Lecture

This course provides instruction in effective use of assistive computer technology for reading and writing assistance. Students with disabilities will learn how to use text-to-speech and word prediction programs for improved reading, writing and study skills. Special emphasis will be placed on reading comprehension, vocabulary development, prewriting and editing for correct usage and research facilitation. This course is pass/no pass.

COOPERATIVE WORK EXPERIENCE

CWE 190   Occupational Work Experience
Units: 1.0 TO 4.0   **Hours:** 3.3 TO 16.7 Laboratory

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. Student repetition is allowed per Title 5 Section 55253. Minimum 2.00 GPA. REQUIRED: Declared vocational major.

CWE 192   General Work Experience Education
Units: 1.0 TO 4.0   **Hours:** 3.3 TO 16.7 Laboratory

General work experience for students who have a job unrelated to their major. General work experience is supervised employment which is intended to assist students in acquiring desirable work habits, attitudes and career awareness. 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. Student repetition is allowed per Title 5 Section 55253. Minimum 2.0 GPA.

CWE 290   Occupational Work Experience
Units: 1.0 TO 4.0   **Hours:** 3.3 TO 16.7 Laboratory

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. Student repetition is allowed per Title 5 Section 55253. Minimum 2.00 GPA. REQUIRED: Declared vocational major.

COSMETOLOGY

COS 200   Beginning Cosmetology
Units: 12.0   **Hours:** 5.0 Lecture and 20.0 Laboratory

Fundamental principles of the science/art of beauty culture including hair design, chemical services and cosmetic therapy. ADVISORY: Eligible for English 250, 260 and Mathematics 205.

COS 201   Intermediate Cosmetology
Units: 12.0   **Hours:** 5.0 Lecture and 20.0 Laboratory

Extended studies and techniques in tinting, bleaching, permanent waving, soft perming, chemical straightening, pedicuring, waxing, and shaping and styling. PREREQUISITE: Successful completion of Cosmetology 200 with a grade of 'C' of better. ADVISORY: Eligible for English 250, 260 and Mathematics 205.

COS 202   Advanced Cosmetology
Units: 12.0   **Hours:** 5.0 Lecture and 20.0 Laboratory

Advanced techniques in tinting, lightening, hair design and cosmetic chemistry. PREREQUISITE: Completion of COS 200 & 201. ADVISORY: Eligible for English 250, 260 and Mathematics 205.

COS 203   Practicum
Units: .5 TO 12.0   **Hours:** .0 TO 5.0 Lecture,   .0 TO 20.0 Laboratory

Advanced techniques in tinting, lightening, hair and design and cosmetic chemistry. PREREQUISITE: Completion of COS 200, 201 and 202. ADVISORY: Eligible for English 250, 260 and Mathematics 205.