Computer Applications

Keyboarding skills of 25 words per minute or enrollment in OFTECH 1A or 9 are recommended for computer applications classes.

CIS 1, Computer Concepts with Applications 3 units
Transfer: UC*, CSU
• Prerequisite: None.
  *No UC credit for CIS 1 or 4 if taken after CS 3.

This beginning course covers the broad use of personal computers. Topics include a description of microcomputer components, input and output devices, networking, and micro-processing concepts. Beginning word processing, spreadsheet, database, Internet, Windows, and programming concepts are introduced. Hands-on experience is provided in a microcomputer lab. Note: Programming, computer science or engineering students should enroll in Computer Science 3.
  *No UC credit will be granted if taken after CS 3. This course uses Microsoft Word 2010 and Windows 7.

CIS 4, Introduction to Computers, Business Applications 3 units
Transfer: *UC, CSU
• Prerequisite: None.
  This is not a beginning computing course. It is recommended that students take CIS 1 prior to CIS 4. Ability to keyboard 25 words per minute is recommended. *No UC credit for CIS 1 or 4 if taken after CS 3.

This course covers the broad use of microcomputers in business. Designed to familiarize students with the Microsoft Office Suite, it includes the study of word processing using Word, spreadsheet software using Excel, database software using Access, and presentation software using PowerPoint, as well as Windows and integration concepts.
CIS 9A, Technology Project Management I 3 units
Transfer: CSU
• Prerequisite: CS 3 or CIS 1.

This course covers the fundamentals of Project Management theory, implementation, and best practices. It is aimed at students who work mostly in the Technology sectors covering software and website development, and other areas of computer science or information systems. Students will learn the theory, as well as the use of Project Management software to plan, track and manage project resources. Topics covered include project life cycles, tasks, schedules, resources, and costs. 
CIS 9A is the same course as CS 9A. Credit may be earned for one, not both.

CIS 9B, Technology Project Management II 3 units
Transfer: CSU
• Prerequisite: CIS 9A or CS 9A.

This course covers advanced topics of Project Management theory and practice. Students will learn how to manage projects with changing tasks and schedules, and to adjust their resources and budgets. Also covered are leadership and communication skills. Students will complement the theory with case studies and the use of Project Management software.
CIS 9B is the same course as CS 9A. Credit may be earned for one, not both.

CIS 19, Geographic Information Systems for Business 3 units
Transfer: CSU
• Prerequisite: None.

A working knowledge of Windows and the Internet or concurrent enrollment in CIS 20 or Geography 20 is recommended.

This introductory course focuses on understanding and utilizing Geographic Information Systems solutions in business and is not a substitute for the basic GIS course. Students will apply the use of ArcView GIS to identify and display retail markets, evaluate the suitability of sites for establishing or relocating a business or to expand sales territories. Emphasis will be on the marketing, insurance, retail, real estate, and transportation industries.
CIS 19 is the same course as GIS 19 and Geography 19. Students may earn credit for one.

CIS 20, Introduction to Geographic Information Systems 3 units
Transfer: UIC, CSU
• Prerequisite: None.

GIS are computer-based systems used to collect, store and analyze geographic information. This course will present the concepts and applications of Geographic Information Systems (GIS). Other related technologies, such as map reading, remote sensing and basic cartographic skills will also be explored.
CIS 20 is the same course as Geography 20 and GIS 20. Students may receive credit for one course only.

CIS 21, Geographic Information Systems for Law Enforcement 3 units
Transfer: CSU
• Prerequisite: None.

This introductory course will focus on understanding and utilizing GIS for law enforcement. Students will utilize ArcView GIS software in a hands-on computer setting to identify and display crime data, evaluate Part I and II crime activity, gang activity, etc., on maps. Emphasis will be on GPS locations of crime incidents, clustering of thefts, burglaries, rapes, bank robberies, and plot victim locational and demographic characteristics. Students will track and evaluate patrol assignments and fleet unit routing to create more effective utilization patterns. US Census, DOJ CRS and local governmental data shall be utilized in creating crime maps.
CIS 21 is the same course as GIS 21. Students may earn credit for only one course.

CIS 23, Intermediate Geographic Information Systems 3 units
Transfer: CSU
• Prerequisite: CIS 20.

This course emphasizes GIS principles and methodology used in both the private and public sectors. Hands-on applications using both raster and vector data and technology will expose students to more advanced understanding of GIS. Students will learn various methods of data acquisition, including Global Positioning Systems (GPS) as well as the World Wide Web. The add-on modules extend the analytical capabilities of ArcView and allow input of map features and conversion of feature themes from raster to vector. This course will also provide an introduction to several of ArcView’s extension including Spatial Analyst and 3D Analyst. Students will complete a “Model Builder” to be used in siting new solar sites. Spatial Analysis will include slope and aspect maps, neighborhood and zone analysis. The course will present single and multi-layer statistical operations including classification, coordination, and modeling analysis.
CIS 23 is the same course as Geog 23 and GIS 23. Students may receive credit for one.

CIS 27, Introduction to e-Commerce 3 units
Transfer: CSU
• Prerequisite: None.
• Skills Advisory: A working knowledge of Windows and the Internet.

Students will learn the technological and strategic aspects of electronic commerce essential to succeeding in today’s internet-based economy. No background in e-commerce is necessary. This is a lecture and theoretical course which covers the key technologies used in e-Commerce, the history of internet and web technologies infrastructure, and the economic forces behind e-Commerce. Business goals and constraints, technology and process tools, business strategies and tactics, and underlying economic theories relating to successful e-Commerce will be discussed.
CIS 27 is the same course as Business 27. Students may receive credit for one, but not both.
CIS 30, Microsoft Excel  
3 units  
Transfer: CSU  
• Prerequisite: CIS 4.
This course includes a detailed study of business applications using Microsoft Excel spreadsheet package. Topics include the commands, formats, and functions of Excel with emphasis on its use as a problem solving and financial analysis tool. Students will also learn to create macros, customize toolbars and menus, and integrate Excel with other applications and the World Wide Web. Students will also have an introduction to writing Visual Basic code.  
CIS 30 has replaced CIS 31 in all CSIS degree and certificate programs. This course uses Microsoft Excel 2010 Professional.

CIS 32, Microsoft Access  
3 units  
Transfer: CSU  
• Prerequisite: CIS 4.
This course presents an introduction to relational database management systems using Microsoft Access. It is designed to familiarize the student with Microsoft Access and its application in the business world. Topics include: designing, maintaining and querying a database; creating forms, reports, and macros; and an introduction to writing Visual Basic code. This course uses Microsoft Access 2010 and software is included in the course material.

CIS 34, Advanced Excel with Visual Basic for Applications  
3 units  
Transfer: CSU  
• Prerequisite: CIS 30.
This course provides Excel users with the knowledge, skills and techniques needed to write macros using Visual Basic for Applications (VBA) within the Excel environment. The course helps users to automate repetitive tasks, customize Excel menus, buttons and screens, and create user friendly interface for input and output. The course covers basic programming techniques used in Visual Basic and VBA. This course uses Microsoft Excel 2007.

CIS 35, QuickBooks  
3 units  
Transfer: CSU  
• Prerequisite: CIS 1 or 4 and Accounting 1 or 21.
This course provides the student with a realistic approach to computerized, integrated accounting principles using QuickBooks Pro software package. Students will work with the various components of an accounting system in an ongoing business, as well as set up an accounting system for a new company. Topics include the creation of a QuickBooks company, and the analysis of financial statements, reports and graphs. Students will gain experience in the creation and use of invoices, purchase orders, inventory, bank accounts, and payroll. In addition, students will be able to complete the entire accounting cycle including recording adjusting entries and making corrections on the transactions as needed. Hands-on experience is provided in a microcomputer lab.  
CIS 35 is the same class as Accounting 35. Student may earn credit for one, but not for both. This class uses QuickBooks Premier Accountant Edition 2011.

CIS 36C, Spreadsheet – Short Course  
1 unit  
Transfer: CSU  
• Prerequisite: None.
This short introductory course in Excel spreadsheet software acquaints the student with basic features of the software including creating, editing, formatting, and printing of electronic worksheets. It is offered as a brief overview of the software.

CIS 36F, Introduction to Windows – Short Course  
1 unit  
Transfer: CSU  
• Prerequisite: None.
This hands-on course covers the basic to intermediate features of the Microsoft Windows operating system - from personalizing your Windows environment to finding files and data. Students will learn how to organize files and search for information using Windows Explorer.

CIS 36G, Introduction to Internet – Short Course  
1 unit  
Transfer: CSU  
• Prerequisite: None.
This hands-on course on the Internet provides students with the opportunity to learn basic and advanced features of the Internet. Topics include browsing, navigating, proper use of Favorites, effective searching for information, creating web pages and using e-mail. Students will learn about the development of the Internet, proper netiquette and social and ethical issues. Additional topics include finding and downloading graphics, freeware and shareware programs from the Internet.

CIS 36H, Microsoft Access – Short Course 1 unit  
Transfer: CSU  
• Prerequisite: None.  
• Skills Advisory: Working knowledge of Windows.
This short introductory course in Access software acquaints the student with basic features of the software, including creating, retrieving, and printing electronic databases. It is offered as a brief overview of the software.

CIS 36J, Word Processing – Short Course 1 unit  
Transfer: CSU  
• Prerequisite: None.  
• Skills Advisory: Working knowledge of Windows.
This short introductory course in word processing (Microsoft Word) acquaints the student with basic features of the software including creating, revising, storing, and printing documents. It is offered as a brief overview of the software.

CIS 36P, Microsoft PowerPoint  
1 unit  
Transfer: CSU  
• Prerequisite: None.  
• Skills Advisory: Working knowledge of Windows.
This hands-on short course on presentation software teaches the use of Microsoft PowerPoint for business applications. Presentations, handouts, and speaker notes are designed, created, and formatted, using PowerPoint. Students will use graphics, templates, and objects to enhance presentations. Hands-on experience is provided in a microcomputer lab.
CIS 36R, Microsoft Office Publisher  1 unit
Transfer: CSU
• Prerequisite: None.

This course introduces students to Microsoft Office Publisher, a popular desktop publishing software program. Students learn to create a wide variety of marketing and communication publications for desktop and commercial printing, e-mail distribution, and viewing on the Web. Publications include catalogues, brochures, newsletters, flyers, invitations, menus, certificates, labels, and web pages.

CIS 36T, Introduction to Turbo Tax  1 unit
Transfer: CSU
• Prerequisite: Accounting 15 or prior tax preparation experience.
• Skills Advisory: Eligibility for English 1.

This course will teach students how to prepare Federal income tax returns and California individual income tax returns using Turbo Tax software.

CIS 37A, Microsoft Word I  3 units
Transfer: CSU
• Prerequisite: CIS 1.
• Skills Advisory: Eligibility for English 1.

Ability to keyboard 25 words per minute is recommended.

Through the use of Microsoft Word software, skills are developed in creating, revising, formatting, storing, and printing a variety of business documents. Skills are developed from basic functions through utilizing features such as AutoText, columns, custom tab settings, mail merge, envelopes, labels, templates, headers/footers, footnotes, and editing tools. Emphasis is placed on office-quality production of documents.

This course uses Microsoft Word 2010.

CIS 37B, Microsoft Word II  3 units
Transfer: CSU
• Prerequisite: CIS 37A.

Using Microsoft Word, with an emphasis on the production of professional quality business copy, students learn to increase productivity through the use of automated features and multiple windows. Students develop problem solving skills through the repetitive use of document revisions and troubleshooting assignments. Additionally, students develop advanced skills in areas of interest ranging from legal applications to graphics and brochures or newsletters.

This course uses Microsoft Word 2010.

CIS 38, Microsoft PowerPoint  3 units
Transfer: CSU
• Prerequisite: CIS 1.

Through the use of PowerPoint software, skills are developed in planning, creating, formatting, enhancing and delivering presentations for business applications. Topics include audience analysis, selection of presentation media, and the creation and presentation of slides, transparencies, and posters. The use of animation, sound and other special effects, as well as Web publishing techniques, will be covered.

This course uses Microsoft PowerPoint 2007.

CIS 39, MS Outlook – Comprehensive Course  3 units
Transfer: CSU
• Prerequisite: CIS 1.

Microsoft Outlook has become a primary means of office communication and task management. In this course the student will learn to effectively use all features of Outlook e-mail, calendar, contacts, tasks, and notes; create and manage Outlook folders; collaborate with others for scheduling meetings and resources; configure and customize Outlook; integrate Outlook with Microsoft Word Mail Merge and Collaboration features; and convert e-mail attachments to Adobe Acrobat format.

This course uses Microsoft Outlook 2007.

CIS 40, InDesign  3 units
Transfer: CSU
• Prerequisite: CIS 4.
• Skills Advisory: English 1 or Business 31.

Desktop publishers design and produce everything from newsletters and brochures to books and magazines for their clients and employers. In this class, students will develop the skills to integrate text and graphics to design high-quality business publication documents and layouts. Students will create and edit graphics, scan text and images and prepare projects for print or for the Web. This class covers the objectives necessary for the Adobe InDesign certification.

This course uses Adobe InDesign CS 5.

CIS 50, Internet, HTML, and Web Design  3 units
Transfer: CSU
• Prerequisite: CIS 1.

This hands-on course provides all the skills necessary to navigate, create and manage content on the World Wide Web. Students will become familiar with the Internet and its underlying technology and security. The course also covers the principles of Web page design, the use of graphics and other media files, and the creation of linked documents. Students will use both HTML and a Web authoring program to create and edit Web pages and will have the opportunity to put their Web sites online by publishing to a Web server.

CIS 51, XHTML, CSS, and Accessibility  3 units
Transfer: CSU
• Prerequisite: CIS 50.
• Skills Advisory: Students should have a working knowledge of Windows.

XHTML is the next generation of HTML, a rewrite of HTML which adheres to XML standards. This hands-on course will explore the differences between HTML and XHTML, validating pages to current Web standards and using Cascading Style Sheets (CSS) exclusively to control the look and feel of a site. Students will create and enhance Web pages with links, graphics, tables, frames, and forms. Proper use of XHTML and CSS can provide true separation of content, structure, and presentation in Web pages, making them structurally sound, easier to maintain, and more consistent with legal requirements for accessibility.
CIS 53, Microsoft Expression Web 3 units  
Transfer: CSU  
- Prerequisite: CIS 50.

Microsoft Expression Web is a professional design tool used to build attractive, high-quality websites using HTML, DHTML, CSS, and XHTML. This hands-on course provides a complete coverage of Expression Web features—from the basic to the advanced—needed to tackle Web projects with confidence. Topics include Web site creation, management, and optimization. Students will learn how to build the most accessible, standards-conformant websites possible. Upon completing this course, students will be ready to plan, build, and maintain a professional website including selecting a Web host and uploading the site to a Web server.

This course uses Expression Web 2 and software is included in the course materials.

CIS 54, Web Page Development and Scripting I 3 units  
Transfer: CSU  
- Prerequisite: CIS 51 or CIS 59A, or Graphic Design 66.

This course is for Web site designers who need to extend their skills beyond HTML in the development of Web sites through the use of scripting. The course covers both client and server side scripting. Topics include creating animated Web pages, client-side forms validation, browser detection, pop-up windows, processing forms data, and generating dynamically updated Web pages.

CIS 54 is the same course as Entertainment Technology 33. Students may receive credit for one, but not both.

CIS 55, Advanced Web Page Development and Scripting 3 units  
Transfer: CSU  
- Prerequisite: CIS 54.

This course is for web designers who want to expand their knowledge of creating script-based Web pages. Students will learn the more advanced techniques used in today’s websites. This course assumes a good foundational knowledge of HTML 4, JavaScript and a server-side scripting language such as ASP, PHP, CFM, or ASP.NET. Students will learn how to extend JavaScript to create interactive, dynamic Web pages using Dynamic HTML, incorporating cookies, hidden fields, create animations, write search functions, and interface with databases. MySQL or Microsoft Access will be used to create data driven applications, such as a shopping cart, or a mailing list. At the completion of this course, students will be proficient in designing and developing interactive Web sites.

CIS 56, Web Media Production 3 units  
Transfer: CSU  
- Prerequisite: CIS 59A and CIS 60A.

Web media is a woven combination of text, graphics, sound, animation, and video elements. The course is designed to provide students who are familiar with creating Web experiences, the skills to add the dimensions of time, sound, motion, and interactivity to their experience designs, including Internet and mobile technologies, via a variety of authoring tools. Through lectures, demonstrations, and projects, students will complete solid portfolio Web experiences.

CIS 57, Website Planning and Production 3 units  
Transfer: CSU  
- Prerequisite: CIS 51 or CIS 59A.

This course provides the knowledge, skills, and hands-on experience needed to deliver successful commercial websites. Students will learn the many pitfalls of website planning and production and how to overcome them. This includes understanding what is wanted, and learning how to create the website in a speedy and efficient manner. Students will learn how to manage the project and the client, and perfect techniques in design. Learning how to design for the intended audience, obtain content, select a proper navigation, incorporate various media (graphics, database, animations, etc.), deploy and maintain the website are the key elements covered. This is a hands-on course and the students will utilize newly learned skills to build a website for a client which can be added to their portfolio.

CIS 58, Designing Accessible Websites 3 units  
Transfer: CSU  
- Prerequisite: CIS 51.

Web accessibility benefits everyone—those with and those without disabilities, through increased usability and interoperability of Web-based materials. The law requires government Web sites to be accessible, and several states have adopted the standards (California included). The requirement will expand exponentially as the law continues to be defined. This class will prepare the developer to deliver legal and accessible Web sites. Topics will include Section 508 guidelines, assistive technologies, and universal design principles. This class is structured to allow learners to explore the area of Web accessibility using a hands-on, project-based approach.

CIS 59A, Dreamweaver I 3 units  
Transfer: CSU  
- Prerequisite: CIS 50.

This is an introductory course in learning Web page design with Dreamweaver. Students will learn techniques for designing Web pages and expand their knowledge of HTML, Dynamic HTML, and JavaScript. Students will learn to integrate images, sound, and other multimedia using Dreamweaver. This course covers Web site creation and management features including Web file management, navigation bars, formatting text styles, Cascading Style Sheets, and content management. Upon completing this course, students will be ready to plan, build, upload, and maintain a professional Web site.

This course uses Adobe Dreamweaver CS 5.

CIS 59B, Dreamweaver II 3 units  
Transfer: CSU  
- Prerequisite: CIS 59A.

This course examines advanced Web development techniques and concepts utilizing the Dreamweaver toolset. Topics covered include site architecture, Web project management, integration with dynamic Web development tools, code management and site enhancements. Students will learn to enhance the development of Dreamweaver Web pages utilizing server-side includes, dynamic XHTML & XML, and intelligent use of graphics and color schemes. Additional topics will include the CSS toolset, site management utilizing cascading templates & libraries, including cutting edge technologies (RSS, podcasting).
and dynamic content design with XML and Dreamweaver's database connection tools. Dreamweaver extension manager and use of extensions will also be covered.

This course uses Adobe Dreamweaver CS 5.

**CIS 60A, Photoshop I**  
3 units  
Transfer: CSU  
• Prerequisite: CIS 1.

This course is for the non-design student interested in learning Photoshop using Personal Computers (PCs). Students will learn image creation and editing using Adobe Photoshop. Students learn to create, repair and modify images, scan photos, plan composite images and create special effects for use in a variety of applications.

This class uses Adobe Photoshop CS 5.

**CIS 60B, Photoshop II**  
3 units  
Transfer: CSU  
• Prerequisite: CIS 60A.

This course is for non-design students who are experienced Photoshop users interested in learning the advanced techniques and new features in Photoshop using personal computers (PCs). Students will learn to apply advanced image creation and editing techniques using real-world assignments. Students will be able to create and modify images and photographs; create text using different filters and colors adjustments tools; create special effects by applying production tricks and techniques to Photoshop documents; create various components for the WEB as well as a variety of other applications.

This class uses Adobe Photoshop CS 5.

**CIS 61, Fireworks**  
3 units  
Transfer: CSU  
• Prerequisite: CIS 50.

This hands-on course provides in-depth coverage of Fireworks features. Students will learn to create and understand graphics projects, Web Vector Objects. Topics include working with Web page objects using Vector Tools, importing, modifying and creating graphics, skinning Flex components, building Web and RIA prototypes, and extending Fireworks. Students will learn how to modify pixels on a Bitmap and manipulate images. This course covers masks, color, interactivity, creating animation, and creating sophisticated Web page navigation. Upon completion of this course, students will be ready to plan, build, modify, and optimize graphics designed for Web and AIR deployment.

This course uses Fireworks CS 4.

**CIS 62A, Flash I**  
3 units  
Transfer: CSU  
• Prerequisite: CIS 50.

In this course students who are not design majors will learn to use Flash. Topics will include the creation of graphic elements using Flash's unique drawing tools, turning graphic elements into animation, and introduction to ActionScripting techniques for the creation of interactive movies.

This course uses Adobe Flash CS 5.

**CIS 62B, Flash II**  
3 units  
Transfer: CSU  
• Prerequisite: CIS 62A.

In this course, students who are non-design majors will learn to take their Flash skills to the next level by taking advantage of its scripting language, ActionScript, which offers a more robust programming model and better object-oriented programming support. Topics will include learning how ActionScript can control graphic, sounds, and text. To create user-interface elements, and learn how Flash communicates with outside applications such as Web browsers.  

This course uses Adobe Flash CS 5.

**CIS 64, Illustrator**  
3 units  
Transfer: CSU  
• Prerequisite: CIS 60A.

This course is for the non-design students interested in learning Adobe Illustrator using Personal Computers for Windows. Students will develop the skills and use a variety of tools to create sophisticated illustrations, logos, advertisements, and other business media graphics for the Web. This class covers the objectives necessary for the Adobe Illustrator certification.

This course uses Adobe Illustrator CS 5.

**CIS 65, Flash Catalyst**  
3 units  
Transfer: CSU  
• Prerequisite: CIS 51 and one of the following-- CIS 60A, CIS 64, or CIS 61.

This hands-on course provides students with the skills to create expressive interfaces using Adobe Flash Catalyst. Students will learn how to convert static artwork into interactive components, such as sliders, scroll panels, buttons, and input boxes. They will graphically edit and create animated transitions between pages or states of components. Other learning objectives include rapid prototyping, testing interactivity, choreographing motion, creating accessible SWF files, blending objects, creating widgets, and handling dynamic data, touch screen and mouse events.

**CIS 66, FLEX**  
3 units  
Transfer: CSU  
• Prerequisite: CIS 53 or CIS 59A.

This hands-on course is an introduction to building expressive Web applications (Rich Internet Applications) written in FLEX using FlexBuilder. Students will learn how to create user interfaces that incorporate skins, controls for interactivity and graphical effects, smart components that resize based on available space. They will also learn to apply behaviors, transitions, and filters. Students will learn the basics of scripting using MXML and learn how to store data using various data transport techniques. Other learning objectives include creating popups, embedding fonts, implementing a customized look-and-feel and designing mouse-aware components.

**CIS 88A, Independent Studies in CIS**  
1 unit  
Transfer: CSU  
Please see “Independent Studies” section.

**CIS 88B, Independent Studies in CIS**  
2 units  
Transfer: CSU  
Please see “Independent Studies” section.
CIS 88C, Independent Studies in CIS  
3 units
Transfer: CSU
Please see “Independent Studies” section.

CIS 90A, Internship in Computer Applications  
1 unit
Transfer: CSU
• Prerequisite: None.
Students must arrange an approved internship prior to enrolling in this class. F-1 students must see the Immigration Coordinator at the International Education Center before enrolling.

The Internship Program is designed to provide the student with the opportunity of on-site work experience in a computer lab. Students spend time weekly in a supervised computer facility.

CIS 90B, Internship in Computer Applications  
2 units
Transfer: CSU
• Prerequisite: None.
Students must arrange an approved internship prior to enrolling in this class. F-1 students must see the Immigration Coordinator at the International Education Center before enrolling.

The Internship Program is designed to provide the student with the opportunity of on-site work experience in a computer lab. Students spend time weekly in a supervised computer facility.