

Computer Information Systems / 6612

Time Frame	SOL Objective/ Competency	Essential Understandings/Questions	Essential Knowledge/Skills
1st Quarter (First 4½ Wks)	<ul style="list-style-type: none"> • 34-41 • 58-67 	<ul style="list-style-type: none"> • Explore Computer Concepts • Explore Ethical Issues Related to Computers and Computer Systems • Produce Word Processing Documents 	034 Explain the functions of computer system components. 035 Describe the information processing cycle. 036 Trace the development of computers and their impact on society. 037 Describe various computer input devices. 038 Describe wireless and mobile devices. 039 Describe various computer output devices. 040 Describe various auxiliary storage devices. 041 Identify basic networking components. 042 Identify security issues related to computer hardware, software, and data. 043 Identify concepts related to copyright, public domain, copy protection, intellectual property, and licensing agreements. 044 Identify concepts of security, honesty, courtesy, and confidentiality related to information and e-mail systems and social networking (e.g., spam, viruses, e-mail etiquette). 045 Investigate physical and logical security issues related to technology (e.g., viruses, firewalls, spam, system backup, passwords). 046 Investigate Internet privacy issues and computer crimes, including identity theft. 058 Compare features of a word processing program to determine the best tools to use for a given task. 059 Compose a variety of documents (e.g., letters, memoranda, reports, and tables). 060 Use word processing programs to perform desktop publishing functions (e.g., to create brochures, pamphlets, flyers, business cards, newsletters, programs). 061 Proofread and edit documents. 062 Enhance layout of documents by using a variety of formatting features. 063 Import graphics, using a variety of tools (e.g., from file, scanner, digital camera) and sources. 064 Analyze and use writing tools (e.g., speller, thesaurus, grammar check, readability test, comparison tools). 065 Utilize advanced word processing operations (e.g., merge, macros, template wizards). 066 Integrate databases, graphics, and spreadsheets into a word-processed document. 067 Save word-processed documents in a variety of formats (e.g., .pdf, .html).

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2nd Quarter (Second 4½ Weeks)	<ul style="list-style-type: none"> • 34-41 • 68-77 	<ul style="list-style-type: none"> • Explore Computer Concepts • Develop Electronic Spreadsheets 	041 Identify basic networking components. 068 Compare features of various spreadsheet programs to determine the best software for an individual's or organization's needs. 069 Create and edit a spreadsheet. 070 Enhance a spreadsheet by using formatting features and graphics. 071 Construct arithmetic formulas to solve typical business-oriented problems. 072 Apply basic function commands (e.g., AVG, MIN, MAX, SUM). 073 Apply intermediate functions. 074 Analyze and interpret data. 075 Create graphs and charts (embedded or stand-alone) to represent data visually. 076 Integrate word processing and database information. 077 Format graph features (e.g., chart titles, labels, colors).

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3rd Quarter (Third 4½ Weeks)	<ul style="list-style-type: none"> • 78-86 • 97-105 	<ul style="list-style-type: none"> • Develop and Manage Databases • Communicate through Technology 	078 Determine when it is appropriate to use a database and identify the benefits derived. 079 Compare features of various database programs to determine the best software for an individual's or organization's needs. 080 Plan, design, and create a database file. 081 Edit a database file. 082 Sort, index, and filter databases. 083 Create and run queries to access information. 084 Generate reports and forms. 085 Enhance reports using formatting features and graphics. 086 Integrate database information into word processing and spreadsheet applications by creating links. 097 Identify various new and emerging devices, methods, and channels for communicating electronically. 098 Describe networking features and concepts. 099 Describe how the Internet works (e.g., network structures, devices and components, protocols, ISPs, online services). 100 Explore uses of the Internet in business applications. 101 Incorporate information from the World Wide Web into a business project. 102 Create a Web site using Web page design software. 103 Describe Internet services (e.g., e-mail, FTP, instant messaging, newsgroups, file storage). 104 Describe the uses of electronic commerce (e-commerce). 105 Explore trends in emerging communications technology and information processing.

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4th Quarter (Last 4½ Weeks)	<ul style="list-style-type: none"> • 87-96 • 106-109 • 110-119 	<ul style="list-style-type: none"> • Develop Multimedia Presentations • Prepare for Industry Certification • Develop Employability Skills 	087 Identify the components of an effective presentation. 088 Describe various output options from presentation software (e.g., slide show, transparencies, slide handout, streaming, and smart boards). 089 Research and organize information for a multimedia presentation. 090 Plan and build a multimedia presentation. 091 Proofread and edit a multimedia presentation. 092 Utilize options for creating, inserting, and editing objects (e.g., styles, shapes, fills, borders). 093 Enhance a multimedia presentation with specialized features (e.g., color, transitions, animations, timings, backgrounds, graphics, charts, graphs). 094 Integrate a variety of software applications into a multimedia presentation. 095 Deliver a multimedia presentation according to the principles of effective communication. 096 Critique the clarity and effectiveness of multimedia presentations. 106 Describe the process and requirements for obtaining industry certifications related to the Computer Information Systems course. 107 Identify testing skills/strategies for certification examination. 108 Demonstrate ability to successfully complete selected practice examinations (e.g., practice questions similar to those on certification exams). 109 Successfully complete an industry certification examination representative of skills learned in this course (e.g., MCAS, MOS, IC3, NOCTI). 110 Research career opportunities in Computer Information Systems. 111 Develop/update a résumé. 112 Compose a letter of application. 113 Complete manual and electronic application forms. 114 Create and maintain a portfolio. 115 Participate in a mock interview. 116 Compose an interview follow-up letter. 117 Identify criteria for evaluating self-performance. 118 Identify the steps to follow in resigning from a position. 119 Identify potential employment barriers for nontraditional groups and ways to overcome the barriers.

The following competencies will be taught throughout the semester.

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All Semester	<ul style="list-style-type: none"> • 1-7 • 8-17 • 18-21 • 22-29 • 30-33 • 47-57 	<ul style="list-style-type: none"> • Demonstrate Workplace Readiness Skills: Personal Qualities and People Skills • Demonstrate Workplace Readiness Skills: Professional Knowledge and Skills • Demonstrate Workplace Readiness Skills: Technology Knowledge and Skills • Examine All Aspects of Industry • Address Elements of Student Life • Manage Computer Systems
Essential Knowledge/Skills	<ul style="list-style-type: none"> • 001 Demonstrate positive work ethic. • 002 Demonstrate integrity. • 003 Demonstrate teamwork skills. • 004 Demonstrate self-representation skills. • 005 Demonstrate diversity awareness. • 006 Demonstrate conflict-resolution skills. • 007 Demonstrate creativity and resourcefulness • 008 Demonstrate effective speaking and listening skills. • 009 Demonstrate effective reading and writing skills. • 010 Demonstrate critical-thinking and problem-solving skills. • 011 Demonstrate healthy behaviors and safety skills. • 012 Demonstrate an understanding of workplace organizations, systems, and climates. • 013 Demonstrate lifelong-learning skills. • 014 Demonstrate job-acquisition and advancement skills. • 015 Demonstrate time-, task-, and resource-management skills. • 016 Demonstrate job-specific mathematics skills. • 017 Demonstrate customer-service skills. • 018 Demonstrate proficiency with technologies common to a specific occupation. • 019 Demonstrate information technology skills. • 020 Demonstrate an understanding of Internet use and security issues. • 021 Demonstrate telecommunications skills. • 022 Examine aspects of planning within an industry/organization. • 023 Examine aspects of management within an industry/organization. • 024 Examine aspects of financial responsibility within an industry/organization. • 025 Examine technical and production skills required of workers within an industry/organization. • 026 Examine principles of technology that underlie an industry/organization. • 027 Examine labor issues related to an industry/organization. • 028 Examine community issues related to an industry/organization. • 029 Examine health, safety, and environmental issues related to an industry/organization. • 030 Identify the purposes and goals of the student organization. • 031 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as 	

an adult.

- 032 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.
- 033 Identify Internet safety issues and procedures for complying with acceptable use standards.
- 047 Maintain workstation, equipment, software, and supplies.
- 048 Obtain assistance via electronic and hard-copy references and documentation.
- 049 Troubleshoot hardware problems (e.g., power supply, network and peripheral connections, printer malfunctions).
- 050 Identify components of the user interface (e.g., menus, toolbars, ribbons, icons).
- 051 Manage the desktop environment (e.g., creating shortcuts/aliases).
- 052 Manage files and folders/directories (in networked and stand-alone environments).
- 053 Backup/restore programs and data files.
- 054 Scan storage devices and equipment for viruses and spyware, and disinfect as needed.
- 055 Describe the steps to install and remove software.
- 056 Operate peripherals (e.g., flash drive, scanner, digital camera, fax machine, modem, CD/DVD burner, USB devices, LCD projector).
- 057 Identify safety precautions and devices (e.g., surge protectors, anti-static mats and pads, power plugs, and UPS systems) associated with computer use.