

Business and Finance Technology Education Frameworks
Computer Information Systems

Content Standard 1 – Impact on Society			
Develop a mastery of technology tools required to enhance academic, business and personal performance for success.			
The student will be able to:	Beginning	Intermediate	Advanced
Assess the impact of information technology in a global society.	<p>Learner Expectation</p> <p>Identify uses of information technology that meets human needs and affects quality of life in the home, school and work.</p> <p>Use information technology skills for lifelong learning.</p>	<p>Learner Expectation</p> <p>*Describe the impact of technology on the knowledge and skills needed for success in the workplace.</p> <p>Evaluate how information technology transforms business processes and relationships.</p>	<p>Learner Expectation</p> <p>Analyze how developments in information technology affect the supply/demand characteristics of the global job market.</p> <p>Illustrate how information technology changes organization structures.</p>

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Content Standard 2 – Devices and Components			
Describe current and emerging hardware; configure, install and upgrade; diagnose; and repair.			
The student will be able to:	Beginning	Intermediate	Advanced
Identify devices and components appropriate for specific tasks.	<p>Learner Expectation</p> <p>*Identify the purpose, operations and care of all types of devices and components.</p> <p>*Identify examples of emerging hardware technologies.</p>	<p>Learner Expectation</p> <p>Troubleshoot and diagnose applications and devices using appropriate resources (e. g., help desks, online help and manuals).</p> <p>Evaluate devices and features to make sound consumer decisions.</p> <p>Compare and contrast various storage options (e.g., local, removable, remote, cloud).</p> <p>Describe interrelationships between device components and supportive applications.</p> <p>Obtain hardware certification(s) needed for a chosen career path.</p>	<p>Learner Expectation</p> <p>Evaluate and recommend devices to solve specific problems.</p> <p>Analyze cost benefit and life cycle of devices.</p>

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Content Standard 3 – Operating Systems and Utilities			
Identify and evaluate various types of operating systems and utilities.			
The student will be able to:	Beginning	Intermediate	Advanced
Describe various types of operating systems and utilities.	<p>Learner Expectation</p> <p>Navigate the basic operating system.</p> <p>*Manage files and folders.</p> <p>Identify and use appropriate help resources (e.g., help desks, online help, and manuals) to install, configure, upgrade, diagnose and repair operating systems and utilities.</p>	<p>Learner Expectation</p> <p>Compare and contrast the functions, features and limitations of different operating systems and utilities (e.g., open source, mobile and proprietary operating systems)</p> <p>Install and customize operating systems and utilities.</p> <p>Select operating systems and utilities appropriate for specific hardware, software and tasks.</p>	<p>Learner Expectation</p> <p>Install and customize operating systems, utilities and security.</p> <p>Diagnose and repair installation and operational problems of operating systems and utilities.</p> <p>Obtain operating system certifications(s) needed for chosen career path.</p>

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Content Standard 4 - Input Technologies Develop proper input techniques.			
The student will be able to:	Beginning	Intermediate	Advanced
Use various input technologies to enter and manipulate information appropriately.	<p>Learner Expectation</p> <p>Use input technology skills to enter and manipulate text and data.</p>	<p>Learner Expectation</p> <p>*Develop proper input techniques (e.g., keyboarding, scanning, digital cameras, virtual keypad, and recognition of developing technologies, the use of a multi-touch screen, mouse/pad or stylus, speech recognition, student response systems, digital inking and any new emerging technology).</p> <p>*Apply a variety of input technologies to maximize productivity.</p> <p>Create media using a variety of input technologies.</p>	<p>Learner Expectation</p> <p>Explore translation and digital language input tools and resources for effective global communication.</p> <p>Use a variety of input technologies to optimize academic and workplace performance.</p>

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Content Standard 5 - Applications			
Use emerging applications appropriate for specific tasks.			
The student will be able to:	Beginning	Intermediate	Advanced
Identify, evaluate, select, install, use, upgrade, troubleshoot and customize applications.	<p>Learner Expectation</p> <p>Produce projects that include a variety of media (e.g., images, text, video, web-based tools and audio).</p> <p>Use collaborative applications tools to support learning.</p>	<p>Learner Expectation</p> <p>*Evaluate and select the appropriate applications to productively complete tasks.</p> <p>Use help features and reference materials to learn applications and solve problems.</p> <p>Identify and use resources to solve problems using application software.</p> <p>Explore social media applications.</p>	<p>Learner Expectation</p> <p>Use the collaborative features of applications to accomplish organizational tasks.</p> <p>Demonstrate the transferability of skills between applications.</p> <p>Obtain software industry certification(s) needed for a chosen career path.</p> <p>Analyze cost benefit and life cycle of applications.</p> <p>Create training materials for applications.</p>

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Content Standard 6 – Digital Media Use and Create Digital Media.			
The student will be able to:	Beginning	Intermediate	Advanced
<p>Use and create digital media.</p> <p>Design, develop, test, implement, update and evaluate web solutions.</p>	<p>Learner Expectation</p> <p>Explore current and emerging digital media.</p> <p>Create digital media projects collaboratively.</p>	<p>Learner Expectation</p> <p>*Identify and select appropriate delivery methods and tools for digital media projects.</p> <p>Create digital media to enhance academic achievement across the curriculum.</p> <p>*Use elements of digital and visual literacy appropriately.</p>	<p>Learner Expectation</p> <p>Select, analyze, and integrate digital media appropriate for various platforms.</p>

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Content Standard 7 – Web Development and Design Design and develop web solutions.			
The student will be able to:	Beginning	Intermediate	Advanced
Design, develop, test, implement, update and evaluate web solutions.	<p>Learner Expectation</p> <p>Identify and utilize various types of resources for web development.</p> <p>*Identify and apply appropriate design concepts and create web pages.</p>	<p>Learner Expectation</p> <p>*Identify client and target audience needs.</p> <p>Research and apply accessibility guidelines and laws affecting Web site design.</p> <p>Research and analyze hosting and domain name solutions.</p> <p>Test, implement and evaluate the Web site.</p>	<p>Learner Expectation</p> <p>Create a comprehensive Web site using industry design standards.</p> <p>Build dynamic web elements utilizing scripting, coding and database integration.</p> <p>Build Web sites to support mobile platforms.</p> <p>Obtain web development and design industry certification(s).</p>

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Content Standard 8 - Programming and application development			
Demonstrate the ability to code.			
The student will be able to:	Beginning	Intermediate	Advanced
Design, develop, test and implement programs and applications.	<p>Learner Expectation</p> <p>*Identify and define object-oriented programming terminology.</p> <p>*Identify and explain programming structures.</p>	<p>Learner Expectation</p> <p>Choose the appropriate language or application development tool for specific tasks.</p> <p>Apply design principles to programming tasks.</p> <p>Test, debug and document code.</p> <p>Design 3D and gaming environments in relationship to the development of applications.</p>	<p>Learner Expectation</p> <p>Maintain and reengineer existing code.</p> <p>Develop programs and applications for a variety of platforms.</p> <p>Obtain programming industry certification(s) needed for chosen career path.</p>

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Content Standard 9 - Networking Infrastructure and Security Develop skills for networking and security.			
The student will be able to:	Beginning	Intermediate	Advanced
<p>Strand 1 Develop skills to design, deploy and administer networks and telecommunication systems.</p>	<p>Learner Expectation</p> <p>*Identify basic network connectivity concepts.</p> <p>Identify and use basic networking resources.</p>	<p>Learner Expectation</p> <p>Identify network devices, including connectivity hardware and related software.</p> <p>Identify and distinguish network protocols, standards and theoretical models in actual implementations (e.g., peer-to-peer, client server, thin client, n-tier, Internetworks, intranets, extranets).</p> <p>Install and configure network servers, routers, clients, and related hardware and software.</p> <p>Configure and manage network operating systems in multi-vendor environments.</p>	<p>Learner Expectation</p> <p>Design and develop network infrastructure.</p> <p>Implement hardware and software security solutions.</p> <p>Monitor and manage computer networks.</p> <p>Obtain telecommunications and networking industry certification(s).</p>
<p>Strand 2 Design and implement security procedures for IT.</p>	<p>Learner Expectation</p> <p>*Identify and discuss privacy issues within an organization.</p> <p>Discuss organizational policies and procedures for security and privacy.</p>	<p>Learner Expectation</p> <p>Implement the procedures used to recover information from failures and security breaches.</p> <p>Implement controls to prevent loss of integrity of data and other information resources.</p> <p>Identify potential risks to enterprise systems from physical or cyber threats.</p>	<p>Learner Expectation</p> <p>Design and implement a comprehensive security plan for an information system.</p> <p>Develop and implement disaster prevention and recovery policies and procedures.</p>

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