| WEB PAGE DEVELOPMENT, 15.1200.5 | |
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| **STANDARD 1.0 – APPLY PROBLEM-SOLVING AND CRITICAL THINKING SKILLS TO INFORMATION TECHNOLOGY** | |
| 1.1 | Describe methods of establishing priorities |
| 1.2 | Prepare a plan of work and schedule information technology tasks |
| 1.3 | Apply problem-solving processes |
| 1.4 | Explain the purpose, types, and content of documentation |
| **STANDARD 2.0 – MAINTAIN A SAFE GREEN INFORMATION TECHNOLOGY WORK ENVIRONMENT** | |
| 2.1 | Demonstrate personal responsibility for developing and maintaining a safe and healthy information technology work environment |
| 2.2 | Use tools, materials, and equipment commonly utilized in the field of information technology safely |
| 2.3 | Identify ergonomics and repetitive strain injuries common to information technology occupations |
| 2.4 | Determine safe working practices to avoid or eliminate physical and electrical hazards |
| 2.5 | Describe techniques used to reduce power consumption in the computer environment |
| 2.6 | Identify methods for making the computer environment more environmentally friendly |
| 2.7 | Explain environmental considerations when disposing of computer/networking components |
| **STANDARD 3.0 – RECOGNIZED SECURITY ISSUES RELATED TO INFORMATION TECHNOLOGY** | |
| 3.1 | Explain procedures to maintain data integrity and security |
| 3.2 | Identify security issues related to the network, computer hardware, software, and data |
| 3.3 | Describe computer threats and methods to protect a computer, i.e., viruses, phishing, e-mail, social engineering, spoofing, identify theft, and spamming |
| 3.4 | Explain concepts such as denial of service, hacking/cracking, intrusion, detection, and prevention |
| **STANDARD 4.0 – EXPLORE LEGAL AND ETHICAL ISSUES RELATED TO INFORMATION TECHNOLOGY** | |
| 4.1 | Explore issues regarding intellectual property rights including software licensing and software duplication |
| 4.2 | Understand the difference between open source and proprietary systems in relation to legal and ethical issues |
| 4.3 | Identify issues and trends affecting computers and information privacy |
| 4.4 | Differentiate between ethical and legal uses of information technology, i.e., data pricing, use of public and private networks, social networking, industry-related data, and data piracy |

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| **STANDARD 5.0 – DEMONSTRATE BASIC COMPUTER MATHEMATICS REQUIRED FOR INFORMATION TECHNOLOGY** | |
| 5.1 | Explain the function of general mathematics as it relates to computer hardware |
| 5.2 | Perform binary to decimal, decimal to hexadecimal, hexadecimal to decimal, binary to hexadecimal, and binary to hexadecimal conversions as needed to solve problems with hardware and software |
| **STANDARD 6.0 – DESCRIBE THE DEVELOPMENT/EVOLUTION OF THE INTERNET** | |
| 6.1 | Identify the components and functions of the internet |
| 6.2 | Identify the steps in the historical evolution of the internet |
| 6.3 | Identify how the internet has impacted modern life |
| **STANDARD 7.0 – DETERMINE ISSUES THAT AFFECT INTERNET SITE FUNCTIONALITY** | |
| 7.1 | Solve performance issues including bandwidth, internet connection types, pages taking too long to load, and resolution and size graphics |
| 7.2 | Identify security issues including authentication, permissions, and data |
| **STANDARD 8.0 – UTILIZE DIFFERENT TYPES OF SEARCH INDEXES (STATIC INDEX/SITEMAP, KEYWORD INDEX, AND FULL TEXT INDEX)** | |
| 8.1 | Index a site for a search |
| 8.2 | Use internet and intranet search engines |
| 8.3 | Compare and contrast spider-based search engines, directories, and RSS aggregators |
| 8.4 | Explain Meta search engines |
| 8.5 | Explain Spider search engines |
| 8.6 | Form Boolean searches to obtain desired results |
| **STANDARD 9.0 – OUTLINE THE KEY COMPONENTS OF A WEB-SERVED PLATFORM** | |
| 9.1 | Demonstrate knowledge of web server operating systems |
| 9.2 | Demonstrate knowledge of web server software |
| 9.3 | Identify additional services such as scripting languages, databases, and media |
| 9.4 | Understand APIPA and its uses |
| **STANDARD 10.0 – IDENTIFY THE ROLES OF CLIENT-SIDE INTERNET SOFTWARE** | |
| 10.1 | Demonstrate the correct use of FTP client software |
| 10.2 | Identify key functions of an internet browser |

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| 10.3 | Demonstrate knowledge of e-mail client configurations |
| 10.4 | Identify uses of client collaboration software |
| 10.5 | Identify tools and uses of remote computing |
| **STANDARD 11.0 – ADMINISTER INTERNET/INTRANET SITES** | |
| 11.1 | Configure permissions |
| 11.2 | Post content to a server, providing authentication information, specifying the server host name or IP address and the destination directory |
| **STANDARD 12.0 – DIFFERENTIATE BETWEEN POPULAR CLIENT-SIDE AND SERVER-SIDE PROGRAMMING LANGUAGES AND TERMS** | |
| 12.1 | Identify the purposes of server-side programming language such as PPHP, ASP, and ASP.net to create dynamic web pages |
| 12.2 | Identify the purposes of client-side programming language such as java script and XML |
| 12.3 | Demonstrate knowledge of when to sue client-side scripting and server-side scripting |
| **STANDARD 13.0 – CREATE HTML PAGES USING AN HTML EDITOR** | |
| 13.1 | Explain the importance of W3C standards and conventions |
| 13.2 | Identify the importance of creating cross-browser coding in HTML and XHTML |
| 13.3 | Create cascading style sheets, extensible style sheet language, DHTML, and XHTML code |
| 13.4 | Code metatags properly |
| **STANDARD 14.0 – IDENTIFY APPROPRIATE USE OF VARIOUS MULTIMEDIA EXTENSIONS, PLUGGING AND IMAGE, AND MULTIMEDIA FORMATS** | |
| 14.1 | Demonstrate the appropriate use of flash and other multimedia |
| 14.2 | Demonstrate when to use image and file formats such as GIF, JPEG, and PNG |
| **STANDARD 15.0 – IDENTIFY AND EXPLAIN COMMON FORMATS USED TO DELIVER CONTENT AND POPULAR TOOLS TO CONNECT A WEB SERVER TO A DATABASE** | |
| 15.1 | Demonstrate correct use of file formats such as XML |
| 15.2 | Explain how Web-based technologies and convergence technologies are often combined |
| 15.3 | Explain how SQL can be used to extract data from a database |
| **STANDARD 16.0 – OUTLINE THE CORE COMPONENTS OF THE INTERNET INFRASTRUCTURE** | |
| 16.1 | Identify problems with internet connectivity from source to destination for various types of servers such as e-mail, web, FTP, caching and DNS |
| 16.2 | Demonstrate the use of internet domain names and DNS |

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| 16.3 | Describe how various protocols or services apply to the function of their corresponding server, e.g., SSL, e-commerce, and streaming media protocols |
| 16.4 | Design web pages so that they can be accessed by individuals with disabilities |
| **STANDARD 17.0 – ASSESS AND DESCRIBE VARIOUS INTERNET SECURITY CONCEPTS** | |
| 17.1 | Identify concepts such as access control, authentication, encryption, secure socket layers, access security tools, auditing, and secure electronic transactions via log in after access control |
| **STANDARD 18.0 – IDENTIFY AND DESCRIBE VARIOUS E-BUSINESS AND E-COMMERCE TERMS AND CONCEPTS** | |
| 18.1 | Compare and contrast various online business models, such as e-commerce and affiliate marketing and publishing |
| 18.2 | Identify key factors, such as geographic location and public relations, relating to strategic marketing consideration as they relate to launching an e-business initiative |
| 18.3 | Identify key factors, such as intellectual property rights, privacy and jurisdiction, relating to legal and regulatory considerations when planning e-business solutions |
| **STANDARD 19.0 – DEMONSTRATE THE ABILITY TO CREATE WEB PROMOTION STRATEGY** | |
| 19.1 | Explain how determining target audience and competition is critical for a successful website |
| 19.2 | Identify web promotional strategies such as Search Engine Optimization, pay per click, affiliate marketing, social/virtual media, banners, and display ads |
| 19.3 | Determine the impact of web marketing strategies on web site traffic through the use of analytics |
| **STANDARD 20.0 – DEMONSTRATE KNOWLEDGE OF PAGE LAYOUT PRINCIPLES IN THE DESIGN OF PAGES** | |
| 20.1 | Identify the principles of navigation |
| 20.2 | Identify the principles of functionality |
| 20.3 | Explain the principle of usability in design |