

**IT FUNDAMENTALS
COURSE CODE: 5025
STUDENT PROFILE**

STUDENT'S NAME:		TEACHER'S NAME:			
School Year/Semester:		Grade:			
Begin Date:		Date Completed:			
<p>Directions: Document student's progress using the applicable rating scales below: Enter date of completion under the appropriate column.</p> <p>0 - Has not received instruction in this area / no experience or knowledge of this task (N/A) 1 – Can apply and perform independently (80-100) 2 – Can perform the task completely with limited supervision (70-79) 3 – Requires additional instruction and or close supervision (60-69)</p>					
A. SAFETY		0	1	2	3
1	Review school safety policies and procedures.				
2	Review classroom safety rules and procedures.				
3	Review safety procedures for using equipment in the classroom.				
4	Identify major causes of work-related accidents in office environments.				
5	Demonstrate safety skills in an office/work environment.				
B. STUDENT ORGANIZATIONS		0	1	2	3
1	Identify the purpose and goals of a Career and Technology Student Organization (CTSO).				
2	Explain how CTSOs are integral parts of specific clusters, majors, and/or courses.				
3	Explain the benefits and responsibilities of being a member of a CTSO.				
4	List leadership opportunities that are available to students through participation in CTSO conferences, competitions, community service, philanthropy, and other activities.				
5	Explain how participation in CTSOs can promote lifelong benefits in other professional and civic organizations.				
C. TECHNOLOGY KNOWLEDGE		0	1	2	3
1	Demonstrate proficiency and skills associated with the use of technologies that are common to a specific occupation				
2	Identify proper netiquette when using e-mail, social media, and other technologies for communication purposes.				

3	Identify potential abuse and unethical uses of laptops, tablets, computers, and/or networks.				
4	Explain the consequences of social, illegal, and unethical uses of technology (e.g., cyber bullying; piracy; illegal downloading; cyberbullying; licensing infringement; inappropriate uses of software, hardware, and mobile devices in the work environment).				
5	Discuss legal issues and the terms of use related to copyright laws, fair use laws, and ethics pertaining to downloading of images, photographs, Creative Commons, documents, video, sounds, music, trademarks, and other elements for personal use.				
6	Describe ethical and legal practices of safeguarding the confidentiality of business-related information.				
7	Describe possible threats to a laptop, tablet, computer, and/or network and methods of avoiding attacks.				
D. PERSONAL QUALITIES AND EMPLOYABILITY SKILLS		0	1	2	3
1	Demonstrate punctuality.				
2	Demonstrate critical thinking and problem-solving skills				
3	Demonstrate initiative and self-direction.				
4	Demonstrate integrity.				
5	Demonstrate work ethic.				
6	Demonstrate conflict resolution skills.				
7	Demonstrate listening and speaking skills.				
8	Demonstrate respect for diversity.				
9	Demonstrate customer service orientation.				
10	Demonstrate teamwork.				
E. PROFESSIONAL KNOWLEDGE		0	1	2	3
1	Demonstrate global or “big picture” thinking.				
2	Demonstrate career and life management skills and goal-making.				
3	Demonstrate continuous learning and adaptability skills to changing job requirements.				
4	Demonstrate time and resource management skills.				
5	Demonstrates information literacy skills.				
6	Demonstrates information security skills.				

7	Demonstrates information technology skills.				
8	Demonstrates knowledge and use of job-specific tools and technologies.				
9	Demonstrate job-specific mathematics skills.				
10	Demonstrates professionalism in the workplace.				
11	Demonstrates reading and writing skills.				
12	Demonstrates workplace safety.				
F. INFORMATION TECHNOLOGY (IT) LITERACY		0	1	2	3
1	Identify and explain the vocabulary of the pc, mobile, and laptop platforms, including the characteristics of various IO devices.				
2	Define information technology.				
3	Perform appropriate steps to set up a basic workstation, including <ul style="list-style-type: none"> a. Plug in cables b. Power on computer c. Screen resolution d. Audio settings e. Configure and verify internet connection f. Basic cable management 				
4	Identify and use the six-step process related to the troubleshooting process: <ul style="list-style-type: none"> a. Identify the problem. b. Establish a theory of probable cause. c. Test the theory to determine cause. d. Establish a plan of action to resolve the problem and implement the solution. e. Verify full system functionality and if applicable implement preventative measures. f. Document findings, actions, and outcomes 				
G. ENVIRONMENTAL AND SAFETY CONCEPTS		0	1	2	3
1	1. Describe proper disposal methods for the following <ul style="list-style-type: none"> a. RoHS (Restriction of Hazardous Substances) b. CRT monitors c. Scanners d. Batteries e. Ink/toner f. Hard drives 				
2	2. Research and analyze the environmental impact of power and power management. <ul style="list-style-type: none"> a. Energy efficient devices b. Power profiles c. Power options d. Sleep / hibernation 				

	e. UPS vs. surge protector vs. power strip f. Power limitations g. International power differences				
3	Design efficient device placement to create optimum airflow, humidity, temperature, and dust accumulation.				
4	Identify the primary causes of electrostatic discharge and ways to mitigate the effects of ESD on electronic devices.				
5	Demonstrate appropriate ergonomic practices.				
6	Describe Material Safety Data Sheets (MSDS).				
H. OPERATING SYSTEMS		0	1	2	3
1	Compare and contrast common mobile and desktop operating systems and their functions and features.				
2	Compare and contrast open-source and commercial operating systems.				
3	Describe software compatibility in relationship to operating systems.				
4	Analyze the basic functions of an operating system, (e.g., user interface, hardware management, application management, and file and data management).				
5	Select appropriate operating system features and tools based on customer needs.				
6	Use best practices to Install and secure operating systems including features, applications, and drivers.				
7	Use best practices to patch, update, and secure operating systems, including features, applications, and drivers.				
8	Identify different software versions and licensing protocols.				
I. SOFTWARE		0	1	2	3
1	Demonstrate the use of operating system software to install and manipulate applications and files.				
2	Demonstrate OS navigation using hot keys.				
3	Demonstrate methods for managing folders, files, and their permissions.				
4	Identify common programs, applications, and their purpose.				
5	Compare and contrast productivity, collaboration, utility, and specialized software.				
6	Differentiate between open-source and commercial software.				
7	Identify common file types and their extensions, (e.g., documents, audio, images, video, executables, and compression formats.				
8	Configure POP3, IMAP, SMTP e-mail platforms.				
J. HARDWARE		0	1	2	3
1	Identify basic wired and wireless peripherals and their purpose, (e.g. input, output, and input/output).				

2	Differentiate various computer connector/ports, (e.g., video, FireWire, eSATA, thunderbolt, USB, PS2, parallel, serial, RJ-45, RJ-11, audio, and power).				
3	Identify internal computer components.				
4	Explain the basic features and functions of wireless devices. a. unlocking/security b. Bluetooth pairing c. Wireless connection setup d. Email configuration e. Airplane mode.				
K. ALTERNATIVE TECHNOLOGIES		0	1	2	3
1	Define the term alternative technology.				
2	Identify the following alternative technologies and their purpose, (e.g., virtualization, cloud computing, streaming media (audio/video), web applications, VoIP, telepresence, and gesture-based interaction).				
3	Research and present an alternative technology to solve a real-world problem.				
L. NETWORKING		0	1	2	3
1	Use computational thinking procedures to analyze and set up a basic SOHO router (wire/wireless): a. Verify wired connection, if applicable. b. Set WEP vs. WPA vs. WPA2. c. Change SSID from default. d. Apply a new wireless password. e. Change admin password for router. f. Connect to the new network. g. Verify internet connectivity. h. Update firmware if necessary.				
2	Compare and contrast cellular, wireless, and wired data connections in regards to high vs. low mobility, availability, throughput/bandwidth, reliability, connection delay, number of concurrent connections, and levels of security.				
3	Compare and contrast different methods of sharing and storage. a. HTTP vs. HTTPS b. FTP vs. FTPS vs. SFTP c. Local vs. hosted storage d. Peer-to-peer e. Network vs. local printing				
4	Explain basic backup concepts, (e.g., importance, scheduling, frequency, mediums, and verification/testing).				
M. SECURITY		0	1	2	3
1	Research and discuss common security threats found IT.				
2	Describe methods used to prevent breaches in security, (e.g., password management, physical security, and Wi-Fi				

	security).				
3	Identify common e-mail security breaches, (e.g., phishing, spam, malware, etc.)				
4	Evaluate websites for data validity, security, credibility, accuracy.				
5	Identify suspicious links, ads, banner ads, and adware symptoms.				
6	Identify the security risk of using public workstations.				
7	Disable autofill forms/passwords.				
8	Clear browser cache/history/cookies.				
9	Recognize untrusted source warnings.				
N. COMPUTATIONAL THINKING		0	1	2	3
1	Apply strategies for identifying routine hardware and software problems current to everyday life.				
2	Identify compatibility issues and describe operational problems caused by hardware errors.				
3	Explain how technology can be used to solve problems.				
4	Explain software development process used to solve problems. a. Explore commonly used documentation tools for design specifications (e.g., flowcharts, visual and textual storyboards).				