Miami Dade College

CGS 1060C Introduction to Computer Technology and Applications

Course Description

This course provides the technology skills required for personal, academic and professional success. Students will learn essential computing concepts and skills including mobile productivity, cloud services, security, ethics, general programming concepts, email, web, operating systems, and the use of an office suite. The course satisfies the College's computer competency requirement. (3 hr. lecture; 2 hr. lab)

Course Competency	Learning Outcomes
Competency 1: The student will demonstrate general knowledge of computing concepts/skills by:	Information Literacy Computer / Technology Usage
1. a) Comparing the different types of computers (desktop, laptop, tablet, smartphone, etc.). b) Describing the hardware components of a personal computer including various types of storage solutions and input/output devices. c) Identifying common types of computer application software (word processing, spreadsheets, databases, accounting, etc.) and their uses. d) Maximizing, minimizing, restoring, moving, and navigating through folders and subfolders and finding files. e) Creating, renaming, copying, moving, deleting, compressing and extracting files and folders. f) Explaining the role of the internet and identifying some of its services (web, email, cloud computing, social media, etc.). g) Describing the use of technologies used across industries, such as healthcare, financial services, and education (e.g., Internet of Things (IoT), artificial intelligence (AI), augmented reality and virtual reality (AR/VR)). h) Demonstrating an understanding of the importance of	

staying informed about technological developments, engaging in lifelong learning, and upskilling to adapt to the evolving technological landscape.	
Competency 2: The student will demonstrate proficiency using the web and web browsers by:	Information Literacy Computer / Technology Usage
1. a) Defining the elements of and navigating to web URLs. b) Using a search engine effectively to locate a variety of reliable sources. c) Identifying various types of e-commerce services, such as Business-to-Business (B2B), Business-to-Consumer (B2C), Consumer-to-Consumer (C2C), etc. d) Saving a web address as a favorite or bookmark for later reference and saving web content/browsing history (cache, cookies, etc.) to a computer. e) Configuring a web browser.	
Competency 3: The student will demonstrate understanding of cloud computing by:	Information Literacy Computer / Technology Usage
1. a) Demonstrating an understanding of foundational cloud computing characteristics: on-demand self-service, broad network access, resource pooling, rapid elasticity, and measured service. b) Comparing the most common service models and deployment models. c) Discussing how cloud services are used in various industries.	
Competency 4: The student will demonstrate an understanding of using mobile devices by:	Information Literacy Computer / Technology Usage
1. a) Utilizing essential mobile apps that provide real-time information for everyday use, such as applications for time	

management, fitness, note taking, and productivity. b) Using the various functions available on digital voice assistants. c) Configuring a mobile device to increase privacy and security.	
Competency 5: The student will demonstrate an understanding of cybersecurity by:	Information Literacy Social Responsibility Ethical Issues Computer / Technology Usage
1. a) Demonstrating an understanding of foundational cybersecurity principles: confidentiality, integrity and availability. b) Describing potential cyber threat scenarios that may occur while using computing devices. c) Identifying a range of threats to computer networks, such as hacking, DDoS attacks, malware, and other potential security risks. d) Identifying a variety of practices to safeguard computing devices against security threats.	
Competency 6: The student will demonstrate an understanding of the role and significance of data by:	Numbers / Data Information Literacy Computer / Technology Usage
1. a) Defining data and describing how data is stored in a relational database. b) Identifying common relational database management systems and describing the need for big data solutions. c) Discussing how databases are used in a multitude of daily transactions and how users query those databases. d) Identifying how data is collected by a variety of organizations and discussing how that data is used for insights and decision-making (business intelligence, data analytics, etc.).	

Competency 7: The student will demonstrate proficiency using email applications and tools by:	Communication Computer / Technology Usage
1. a) Demonstrating effective use of email productivity tools, such as appointments, calendars, events, and tasks. b) Describing available tools for creating effective email communication and the practice of proper email etiquette in a business setting.	
Competency 8: The student will demonstrate the ability to understand programming concepts by:	Critical thinking Information Literacy Computer / Technology Usage
1. a) Describing the steps involved in creating software. b) Defining an algorithm and describing the problem-solving skills needed in programming. c) Identifying popular programming languages. d) Participating in a coding experience (e.g., Hour of Code), where a set of statements are put together to accomplish a simple task.	
Competency 9: The student will demonstrate the effective use of word-processing software by:	Communication Computer / Technology Usage
1. a) Creating and editing a document utilizing multiple formatting features and functions of the software. b) Creating a new document from an existing document or template. c) Finding and replacing text. d) Writing a research paper by using footnotes and citations (e.g., MLA, APA). e) Saving and modifying a document in multiple formats (e.g., pdf, html, etc.). e) Collaborating with others on a cloud-based document, using features such as shared files, editing and commenting.	

Competency 10: The student will demonstrate the effective use of spreadsheet software by:	Numbers / Data Computer / Technology Usage
1. a) Creating, editing, and saving multiple worksheets in a workbook utilizing various formatting features and functions of the software. b) Constructing and copying formulas and functions to complete a variety of mathematical operations. c) Graphing data to create sparklines and bar, column, line, and pie charts. d) Converting data into tables. e) Scaling worksheets for printing and configuring various print options, such as orientation.	
Competency 11: The student will demonstrate the effective use of presentation software by:	Communication Numbers / Data Computer / Technology Usage
1. a) Creating engaging and effective slides using presentation software. b) Creating, editing, and saving a presentation utilizing multiple formatting features and functions of the software. c) Applying animations and transitions to slides. d) Embedding multimedia elements in slides.	
Competency 12: The student will demonstrate proper use of social media for personal and professional life by:	Communication Information Literacy Social Responsibility Computer / Technology Usage
1. a) Describing the basic concepts of social media and their features. b) Discussing the importance of online etiquette and privacy when using social media. c) Describing the process of creating and sharing content on social media, including text, images, and video. d) Describing the importance of using social media for professional	

networking and job search purposes.	
Competency 13: The student will demonstrate an understanding of artificial intelligence (AI) and its potential impact in their lives and career development by:	Information Literacy Computer / Technology Usage
1. a) Describing various AI applications in personal and professional contexts and listing their potential impacts on different industries and job sectors. b) Identifying the limitations, potential risks, and benefits of AI, considering factors such as overreliance on technology, job displacement, and opportunities for innovation. c) Illustrating the role of AI in interdisciplinary collaboration and how it enhances problem-solving, creativity, and efficiency across various domains.	
Competency 14: The student will demonstrate an understanding of the ethical use of technologies by:	Critical thinking Information Literacy Ethical Issues
1. a) Identifying the ethical use of information as it affects privacy, accuracy, intellectual property, plagiarism, and accessibility. b) Discussing what constitutes copyright infringement and distinguishing between legal and illegal file-sharing practices. c) Distinguishing between appropriate and inappropriate behavior when using technology in both personal and professional settings.	