

Course Name	Introduction to Information Technology		
Course Number	10009		
Code	Current Standard	Code	Revised Standard
IT1.0	Understand the need for digital technologies within their life	IT1.0	Understand the need and impact of technology
IT1.1	Define how digital electronics devices and computers are related	IT1.1	Define the relationships between electronic devices and computers
IT1.2	Provide an explanation of the fundamentals of telecommunications, computer networking, the Internet and wireless networking	IT1.2	Describe the functional areas in which computers assist people
IT1.3	Describe functional areas in which computers assist people		
IT1.4	Discuss the uses of information systems for individuals and industry		
IT1.5	Define information security and how technologies impact society	IT1.3	Describe how technology is impacting community
IT2.0	Understand computer hardware required to meet specific needs	IT2.0	Understand computer hardware required to meet specific needs
IT2.1	Understand how computer information is represented	IT2.1	Understand how computer information is represented
IT2.2	Identify hardware components and their relationship to computer usage	IT2.2	Identify hardware components and their relationship to computer usage
IT2.3	Understand the different types of memory and storage	IT2.3	Understand different types of memory and storage
IT2.4	Identify input and output devices to meet the needs of users	IT2.4	Identify input and output devices to meet the needs of users
IT2.5	Understand the decision-making process involved in purchasing computer systems	IT2.5	Understand the decision-making process involved in purchasing computer systems
IT3.0	Understand software solutions for personal and professional use	IT3.0	Understand software solutions for personal and professional use
IT3.1	Explain how software is created, distributed, installed, and maintained	IT3.1	Explain how software is created, distributed, installed and maintained
IT3.2	Describe the functions of system software and operating systems	IT3.2	Describe the functions of systems software and operating systems
IT3.3	Describe different types and purposes of productivity software	IT3.3	Describe different types and purposes of productivity software
IT4.0	Understand technology used for the internet and World Wide Web	IT4.0	Understand technology used for the internet
IT4.1	Describe how the internet developed	IT4.1	Describe how the internet developed
IT4.2	Explain how hardware, protocols, and software work together to create the Internet	IT4.2	Explain how hardware, protocols, and software work together to create the internet
IT4.3	Explain the underlying structures and technologies used to support the internet	IT4.3	Explain the underlying structures and technologies used to support the internet
IT4.4	Explain what Internet2 is and the types of applications it will provide in the future.		
IT5.0	Understand computer network and telecommunications technologies	IT5.0	Understand computer network and telecommunications technologies
IT5.1	Understand the fundamentals of data communications	IT5.1	Understand the fundamentals of data communications
IT5.2	List the types of media, devices, and software needed for networking services	IT5.2	List the three types of media, devices, and software needed for networking services
IT5.3	List and describe the popular forms of wireless telecommunications technologies	IT5.3	List and describe the popular forms of wireless technologies
IT6.0	Understand the need for digital media for work and leisure	IT6.0	Understand the needs and uses of digital media
IT6.1	Understand the uses of digital audio and music technologies	IT6.1	Understand the uses of digital media
IT6.2	Describe the uses of 2D and 3D digital graphics		
IT6.3	Discuss how interactive media is used to educate and entertain	IT6.2	Discuss how interactive media is used to educate and entertain
IT7.0	Understand database management systems		
IT7.1	Understand the basic data management concepts		
IT7.2	Describe database models and characteristics		
IT7.3	Discuss the different types of database management systems		
IT7.4	Describe the role of a database administrator		
IT8.0	Understand the use of e-commerce for business and personal applications		
IT8.1	Define e-commerce and its role as a transaction processing system		
IT8.2	Explain how e-commerce supports the stages of buying, marketing, and selling		
IT9.0	Understand the tools and techniques for systems development		
IT9.1	Define the stages of decision-making and problem solving		
IT9.2	Describe the system development life cycle		
IT9.3	Describe how an existing system can be evaluated		
IT10.0	Understand computer crime and information security	IT7.0	Understand computer crime and information security
IT10.1	Describe methods of keeping a PC safe and secure	IT7.1	Describe methods of keeping electronic devices secure
IT10.2	Discuss the threats and defenses for networks	IT7.2	Discuss the threats and defenses for networks
IT10.3	Describe the threats posed by hackers, software, scams and the methods of defending against them	IT7.3	Describe the threats posed by hackers, software, scams, and the methods of defending against them
IT11.0	Understand technology ethics in a global society	IT8.0	Understand technology ethics in a global society
IT11.1	Describe how technology is impacting community		
IT11.2	List physical and mental health dangers associated with computer use	IT1.4	List physical and mental health dangers associated with computer use
IT11.3	Describe the negative and positive impact on freedom of speech	IT8.1	Describe the negative and positive impacts of social media
IT11.4	Explain the ways in which technology is used to invade personal privacy	IT8.2	Explain the ways in which technology is used to invade personal privacy
IT11.5	List ethical issues related to digital technology	IT8.3	Identify ethical issues related to digital technology
IT11.6	Explain globalization and its impact		
		IT9.0	Explore careers in information technology
		IT9.1	Identify skills, interests, and abilities related to information technology
		IT9.2	Compare personal interest survey results with information technology occupations
		IT9.3	Research labor market information for information technology
		IT9.4	Demonstrate necessary job skills needed for information and technology industries
		IT10.0	Demonstrate knowledge of the software development process
		IT10.1	Apply tools for developing software applications
		IT10.2	Demonstrate knowledge of programming structures

Course Name	Computer Hardware & Software			
Course Number	10254			
Code	Current Standard		Code	Revised Standard
CH1.0	Apply knowledge of hardware design, operation and maintenance		CIT1.0	Apply knowledge of hardware design, operation and maintenance
CH1.1	Apply knowledge of system board		CIT1.1	Understand how to design and assemble systems that use computer programs to interact with hardware
CH1.2	Install primary PC components		CIT1.2	Install and configure essential computer hardware and software components
CH1.3	Troubleshoot computer hardware components			
CH2.0	Identify software system requirements		CIT2.0	Understand the relationships among computer hardware, networks, and operating systems
CH2.1	Identify new IT technologies relevant to computer hardware		CIT2.1	Identify new IT technologies relevant to computer hardware
			CIT2.2	Determine compatibility of hardware and software
			CIT2.3	Understand the difference between an operating system, utility programs, and application software
CH2.2	Explain measurement techniques for increased productivity due to information systems implementation			
CH3.0	Provide computer hardware, operating system and software support			
CH3.1	Analyze technical needs to provide customer support			
CH3.2	Provide maintenance related to hardware, operating systems and software			
			CIT3.0	Understand basic networking services
			CIT3.1	Understand the basics of Internet protocol (IP) addressing
			CIT3.2	Trouble shoot basic network problems
			CIT4.0	Explore careers in information technology
			CIT4.1	Identify skills, interests and abilities related to information technology
			CIT4.2	Identify personal interests using survey instruments with information technology occupation
			CIT4.3	Research labor market information for information technology
			CIT4.4	Demonstrate necessary job skills needed for Information and technology industries

Course Name	Web Development I & II			
Course Number	10161			
Code	Current Standard	Code	Revised Standard	
WP1.0	Demonstrate and apply knowledge of web programming and hosting	WD1.2	Summarize Internet development and functions	
		WD1.3	Recognize the purpose of domains	
		WD1.4	Define the function of a Domain Name Server (DNS)	
		WD1.5	Define important Internet communications protocols and their roles in delivering basic Internet services	
		WD1.6	Demonstrate knowledge of standard copyright rules	
		WD1.7	Explain the use and purpose of acceptable use policy (AUP)	
WP1.1	Demonstrate knowledge of Internet programming basics			
WP1.2	Apply knowledge of basic web programming	WD2.0	Demonstrate creation of web pages	
		WD2.1	Demonstrate knowledge required to create a web page	
		WD2.2	Demonstrate appropriate file structure and naming	
		WD2.3	Create web pages with appropriate HTML structure and standards that can be validated using World Wide Web Consortium validator (W3C)	
		WD2.4	Demonstrate the use of elements and attributes	
		WD2.5	Incorporate meta tags for page documentation and search engine optimization (SEO)	
		WD2.6	Implement advanced elements to create web pages	
WP1.3	Apply knowledge of web hosting			
WP2.0	Design a software application			
WP2.1	Apply language specific programming tools/techniques	WD3.0	Format web pages using Cascading Style Sheets (CSS)	
		WD3.1	Apply essential aspects of the CSS	
		WD3.2	Apply CSS to a website	
		WD3.3	Use selectors in a CSS	
		WD3.4	Format page layout with advanced CSS	
WP2.2	Create design specifications for a computer application			
WP3.0	Produce an internet enabled application			
WP3.1	Demonstrate knowledge of programming language concepts			
WP3.2	Demonstrate knowledge of the stages of program development			
WP3.3	Demonstrate knowledge of basic software systems implementation			
WP3.4	Resolve problems with integration if they occur			
WPD1.0/AWPD1.0	Demonstrate and apply knowledge of internet technologies	WD1.0	Identify basic principles of how the Internet is constructed, how it functions and how it is used	
WPD1.1	Apply knowledge of the internet structure	WD1.1	Identify the infrastructure required to access the Internet	
AWPD1.1	Apply knowledge of web publishing and hosting			
WPD1.2	Apply knowledge of Internet Browsers			
AWPD1.2	Evaluate published website using different web browsers			
WPD1.3	Apply knowledge of Hypertext Markup Language			
AWPD1.3	Utilize web development software and editors to create web pages			
WPD1.4	Apply knowledge of web publishing software and editors	WD4.4	Upload and maintain a site	
WPD1.5	Apply knowledge of web hosting			
WPD2.0/AWPD2.0	Gather and define interactive media work to meet customer requirements	WD4.0	Plan, design, implement and maintain websites	
WPD2.1/AWPD2.1	Gather data to identify customer requirements			
WPD2.2/AWPD2.2	Interpret and evaluate project requirements	WD4.1	Analyze project requirements	
WPD2.3/AWPD2.3	Develop a project plan	WD4.2	Plan site design and page layout	
WPD3.0/AWPD3.0	Create interactive media product specifications	WD4.3	Create content for website	
WPD3.1/AWPD3.1	Prepare functional project specifications			
WPD3.2/AWPD3.2	Prepare visual design specifications			
WPD4.0/AWPD4.0	Develop and test interactive media products			
WPD4.1/AWPD4.1	Cooperate with clients and team members to develop an interactive media product			
WPD4.2/AWPD4.2	Develop and implement a test plan			
WPD4.3/AWPD4.3	Resolve product problems			
WPD4.4/AWPD4.4	Perform quality assurance tasks to produce a quality product			
		WD5.0	Explore advanced web concepts	
		WD5.1	Demonstrate the use of scripting and other interactive tools	
		WD5.2	Explore other web technologies	
		WD6.0	Explore careers in Web Development	
		WD6.1	Explore Information Technology Web Development Careers	
		WD6.2	Demonstrate job skills for programming industries	

Course Name	Computer Programming I & II			
Course Number	10152			
Code	Current Standard		Code	Revised Standard
CP1.0/VBP1.0/CCP	Demonstrate programming as it relates to the customer needs			
CP1.1/VBP1.1/CCP	Gather data to identify customer requirements			
CP1.2/VBP1.2/CCP	Demonstrate knowledge of programming language concepts		CP1.0	Identify and use a programming environment
			CP1.1	Demonstrate knowledge of external and internal computer hardware
			CP1.2	Demonstrate knowledge of software concepts
			CP1.3	Demonstrate the ability to compile, debug, and execute programs
CP1.3/VBP1.3/CCP	Develop software requirement specifications			
CP2.0/VBP2.0/CCP	Produce IT-based strategies and project plans to solve the problem			
CP2.1/VBP2.1/CCP	Define scope of work for the programming project			
CP2.2/VBP2.2/CCP	Demonstrate knowledge and skills of working in a software development team			
CP3.0/VBP3.0/CCP	Demonstrate knowledge of the software development process		CP2.0	Employ standard conventions for creation and design of a software program
			CP2.1	Demonstrate the ability to use a standard programming style
			CP2.2	Recognize software development processes
			CP2.3	Identify the syntactical components of a program
CP3.1/VBP3.1/CCP	Demonstrate knowledge of software development methodology			
CP3.2/VBP3.2/CCP	Apply tools for developing software applications			
CP3.3/VBP3.3/CCP	Apply language specific programming tools/techniques		CP3.0	Properly use language-fundamental commands and operations
			CP3.1	Demonstrate the ability to use basic elements of a specific language
			CP3.2	Employ basic arithmetic expressions in programs
			CP3.3	Demonstrate the ability to use data types in programs
			CP3.4	Incorporate functions/methods
CP4.0/VBP4.0/CCP	Create a logical design for a software application		CP4.0	Apply control structures
			CP4.1	Demonstrate the ability to use relational and logical operators in programs
			CP4.2	Investigate conditional statements
			CP4.3	Implement loops in programs
CP4.1/VBP4.1/CCP	Create a design specification for a computer application			
CP4.2/VBP4.2/CCP	Analyze real world problems for the applicability of structured object orientate, even driven logical design methods			
CP5.0/VBP5.0/CCP	Create a computer application by writing code			
CP5.1/VBP5.1/CCP	Demonstrate knowledge of programming language concepts			
CP5.2/VBP5.2/CCP	Develop an application using selected programming language			
CP5.3/VBP5.3/CCP	Demonstrate knowledge of basic software system implementation			
VGD1.0	Demonstrate basic game design elements			
VGD1.1	Understand basic game design elements			
VGD1.2	Understand the fundamentals of game art			
VGD1.3	Understand image rendering			
VGD2.0	Organize video game design projects			
VGD2.1	Design and implement procedures and timelines			
VGD2.2	Demonstrate knowledge and appropriate use of program development tools			
VGD2.3	Understand and evaluate online technologies			
VGD5.0	Explore safety, cultural, and legal issues related to video game design			
VGD5.1	Understand intellectual property			
VGD5.2	Demonstrate proper etiquette and safe behaviors when using network resources			
VGD5.3	Evaluate the cultural aspects of video game design fundamentals			
			CP5.0	Explore career opportunities in programming
			CP5.1	Identify personal interests and abilities related to computer programming/software engineering careers
			CP5.2	Investigate career opportunities, trends, and requirements related to computer programming/software engineering careers
			CP5.3	Demonstrate job skills for programming industries
			CP6.0	Integrate arrays
			CP6.1	Demonstrate the ability to use arrays in programs
			CP6.2	Demonstrate the ability to use strings in programs
			CP7.0	Implement object-oriented programming techniques
			CP7.1	Demonstrate the ability to use existing classes
			CP7.2	Demonstrate the ability to create user-defined classes
			CP7.3	Demonstrate proper design principles with classes

Course Name	Network Technologies				
Course Number	10101				
Code	Current Standard	Code	Revised Standard		
NT1.0/NS1.0	Identify and analyze customer/organizational network system needs and requirements				
NT1.1/NS1.1	Gather data to identify customer/organizational requirements				
NT1.2/NS1.2	Conduct a computer network needs analysis				
NT1.3/NS1.3	Develop networking requirements specifications				
NT1.4/NS1.4	Analyze requirements/specifications using current approaches				
NT2.0/NS2.0	Perform project management				
NT2.1/NS2.1	Produce strategies and plan to solve the specific networking problem				
NT2.2/NS2.2	Create a project plan				
NT2.3/NS2.3	Manage information system project methodology				
NT3.0/NS3.0	Analyze network system interdependencies and constraints				
NT3.1/NS3.1	Analyze the computer site environment				
NT3.2/NS3.2	Analyze network security systems	NT3.0	Apply knowledge of network security systems		
		NT3.1	Apply proper procedures for securing a network		
		NT3.2	Demonstrate penetration testing and ethical hacking		
NT3.3/NS3.3	Evaluate the correctness and effectiveness of implementing the network system				
NT4.0/NS4.0	Demonstrate knowledge of designing a networking system	NT1.0	Demonstrate knowledge of designing and implementing a networking system		
NT4.1/NS4.1	Demonstrate knowledge of the basics of network architecture	NT1.1	Demonstrate knowledge of basic network communications		
		NT1.6	Plan, design, and create network architecture		
NT4.2/NS4.2	Demonstrate knowledge of basic network classifications and topologies	NT1.2	Demonstrate knowledge of basic network classifications and topologies		
NT4.3/NS4.3	Demonstrate knowledge of common network computing platforms	NT1.3	Demonstrate knowledge of common network hardware		
NT4.4/NS4.4	Demonstrate knowledge of LAN physical media	NT1.4	Apply knowledge of local are network (LAN) physical media		
NT4.5/NS4.5	Demonstrate knowledge of network connectivity basis and transmission line applications				
NT4.6/NS4.6	Demonstrate knowledge of communication standards for networks	NT1.5	Demonstrate knowledge of communication standards for networks		
NT4.7/NS4.7	Demonstrate knowledge of WAN systems				
NT4.8/NS4.8	Demonstrate knowledge of network security systems				
NT4.9/NS4.9	Demonstrate knowledge of Network Operating Systems	NT1.7	Demonstrate knowledge of Network Operating Systems		
NT5.0/NS5.0	Perform network system installation and configuration				
NT5.1/NS5.1	Install a system	NT2.0	Perform network operating system installation and configuration		
		NT2.1	Install a network operating system		
NT5.2/NS5.2	Perform software loading and configuration	NT2.2	Configure a network operating system		
NT6.0/NS6.0	Perform network administration and monitoring				
NT6.1/NS6.1	Monitor the information/network system				
NT6.2/NS6.2	Demonstrate knowledge of disaster recovery and business continuance				
NT6.3/NS6.3	Perform network system administration tasks				
NT7.0/NS7.0	Perform network maintenance and user support service	NT4.0	Demonstrate knowledge of common help desk tools, resources, and techniques		
		NT4.1	Use proper documentation and incident reporting		
		NT4.2	Incorporate customer service skills		
NT7.1/NS7.1	Identify technical support needed				
NT7.2/NS7.2	Perform technical support needed				
NT7.3/NS7.3	Perform software upgrades and fixes				
NT7.4/NS7.4	Perform standard computer backup procedures				
NT7.5/NS7.5	Perform network system maintenance				
NT7.6/NS7.6	Troubleshoot problems	NT2.3	Troubleshoot and resolve network problems		
NT7.7/NS7.7	Troubleshoot data communications				
		NT5.0	Explore careers in network technology		
		NT5.1	Identify skills, interests, and abilities related to network technology		
		NT5.2	Compare personal interest survey results with network technology occupations		
		NT5.3	Research labor market information for network technology		
		NT5.4	Demonstrate necessary job skills needed for information technology industries		
		NT6.0	Maintain a safe and environmentally conscious environment		
		NT6.1	Determine safe working practices to avoid or eliminate physical and electrical hazards		
		NT6.2	Research environmental consideration when disposing of material		

C1.0	Understand the introductory concepts and some hands-on training required at the entry level of the telecommunications industry				
C1.1	Identify basic telecommunication systems and physical layer components present in the field of telecommunications				
C1.2	Understand the history and function of various telecommunication systems				
C1.3	Identify and analyze characteristics of cabling systems and terminations that constitute the physical layer				
C1.4	Identify general safety precautions				
C1.5	Identify tools, construction techniques, and test equipment utilized in network cabling				
C1.6	Identify and record faulty system identifications				
C1.7	Identify positive and negative impacts of possible future technological developments				
C2.0	Understand the tool use and construction, characteristics of various industry standards, and troubleshooting and repair of a copper based system				
C2.1	Identify the components of the advanced cable trainer and the data voice and electric test set				
C2.2	Identify and describe the characteristics, application, and configurations of various cables and terminations				
C2.3	Identify and explain the safety precautions, installation techniques, and tools used to install copper-based network cabling systems				
C2.4	Terminate twisted and test twisted pair cables				
C2.5	Identify, terminate and test 2-pair STP cabling systems				
C2.6	Identify, describe, terminate and test coaxial cable				
C2.7	Identify and explain the National Electra Code (NEC) codes and American National Standard Institute Telecommunication Industry Association, Electronics Industry Alliance 568-A Standards				
C3.0	Understand the tool use and construction techniques, characteristics of various industry standards, and trouble shooting and repair of a fiber optic system				
C3.1	Identify tools and equipment used to terminate and test fiber optic cables				
C3.2	Define the basic characteristics of light, optical sources, detectors, and continuity and attenuation				
C3.3	Identify and describe the components used in a fiber optic system				
C3.4	Identify the step-by-step procedure for placing fiber optic cables in a building				
C3.5	State the characteristics of continuity testing, testing with a power meter and light source, and the optical time domain reflect meter test				
C3.6	Demonstrate the ability to use the tools and follow step-by-step process used to attach a fiber connector to an optical fiber				