CIT 100 - Computers in Business-An Intro  
**Credit Hours: 3, Contact Hours: 3**  
**Division: Business**  
A first exposure to the world of computer applications in business, this course covers the hands-on use of word processing, spreadsheets, database, and presentation graphics programs. In addition, the Windows operating system, file and folder management, basic concepts, terminology and security threats will be covered. Group 2 course.  
Communications - Direct, Critical Thinking - Direct.

CIT 110 - Programming Logic and Design  
**Credit Hours: 3, Contact Hours: 4**  
**Division: Business**  
The student is introduced to topics in programming logic and design in preparation for subsequent programming courses. The course lecture material is presented via readings and videos, with activities being largely focused on coding, testing, debugging, and documenting applications. Good coding practices and simple design pattern are emphasized. Topics covered include: Simple Data Types, Control Structures, Decisions and Conditionals, Arrays, Lists, Methods, Functions, Enums, Classes, and File I/O. Group 2 course. Critical Thinking - Direct.

CIT 112 - Scripting and Automation  
**Credit Hours: 3, Contact Hours: 4**  
**Division: Business**  
This course introduces students to scripting and programming to achieve realizable goals in a networked environment. Students will write scripts that will be reusable, scalable, and efficient for interfacing with systems using user input and system information. The course focuses primarily on using Python as a scripting language. Group 2 Course. Required Prerequisite(s): CIT 110 or CIT 135, may be taken concurrently.

CIT 118 - Microsoft Office - Word Intro  
**Credit Hours: 1, Contact Hours: 1**  
**Division: Business**  
This course is designed to provide students with an introduction to word processing using Microsoft Word. Skills students will learn include preparing documents, formatting characters and paragraphs, customizing paragraphs, and formatting pages. Group 2 course.

CIT 119 - Microsoft Office - Word  
**Credit Hours: 3, Contact Hours: 3**  
**Division: Business**  
This course teaches students how to use Microsoft Word and prepares them to pass the Microsoft Office Specialist (MOS) Word certification exam. Skills students will learn include navigating in a document, customizing and formatting text, paragraphs and pages, inserting objects, maintaining and proofing documents, performing mail merge operations, document sharing and management, tracking and referencing documents, and managing macros and forms. Students enrolling in this course will take the Microsoft Office certification exam. Group 2 course.

CIT 120 - Microsoft Office - PowerPoint  
**Credit Hours: 2, Contact Hours: 2**  
**Division: Business**  
This course teaches students how to use Microsoft PowerPoint and prepares them to pass the Microsoft Office Specialist (MOS) PowerPoint certification exam. Skills students will learn include preparing and modifying a presentation, using help, formatting slides and inserting elements in slides, creating tables, charts, and SmartArt graphics, using slide masters and action buttons, applying custom animation and setting up shows, and integrating, reviewing, protecting and saving presentations. Students enrolling in this course will take the certification exam. Group 2 course.

CIT 124 - Microsoft Office - PowerPoint  
**Credit Hours: 2, Contact Hours: 2**  
**Division: Business**  
This course teaches students how to use Microsoft PowerPoint and prepares them to pass the Microsoft Office Specialist (MOS) PowerPoint certification exam. Skills students will learn include preparing and modifying a presentation, using help, formatting slides and inserting elements in slides, creating tables, charts, and SmartArt graphics, using slide masters and action buttons, applying custom animation and setting up shows, and integrating, reviewing, protecting and saving presentations. Students enrolling in this course will take the certification exam. Group 2 course.

CIT 122A - Computer & Internet Basics I  
**Credit Hours: 1, Contact Hours: 1**  
**Division: Business**  
Students will learn the essential skills required to use a computer with the Microsoft Windows operating system. The student will learn to interact with the Windows desktop to access software and data. The course emphasizes the importance of file and folder maintenance. The course also includes introductions to the World Wide Web, e-mail and searching. Students completing this course will master skills required for online courses. This course requires a Windows PC or a Mac with a Windows partition. Group 2 course.

CIT 122B - CompTIA A+ Certification I  
**Credit Hours: 3, Contact Hours: 3**  
**Division: Business**  
This course, in conjunction with CIT 157, covers the current objectives of the two CompTIA A+ Certification exams. Major topics areas include PC hardware, networking, laptops, printers, operational procedures, operating systems, security, mobile devices, troubleshooting, safety and professionalism. Group 2 course. Critical Thinking - Direct. Recommended Prerequisite(s): Recommended competency: Windows skills.
CIT 157 - CompTIA A+ Certification II
Credit Hours: 3, Contact Hours: 4
Division: Business
This course, in conjunction with CIT 156, covers the current objectives of the two CompTIA A+ Certification exams. Major topic areas include PC hardware, networking, laptops, printers, operational procedures, operating systems, security, mobile devices, troubleshooting, safety and professionalism. Group 2 course. Critical Thinking - Direct.
Recommended Prerequisite(s): CIT 156

CIT 160 - Cisco Internetworking I
Credit Hours: 3, Contact Hours: 4
Division: Business
This course, in conjunction with CIT 161 and CIT 260 provides the necessary preparation to pass the Cisco CCNA Routing & Switching Exam (Cisco Certified Network Associate). The following topics are covered in detail: basic switch and router configurations, OSI and TCP/IP models, IPv4 and IPv6 routing, and network security fundamentals. This course utilizes the Cisco Networking Academy "CCNA Routing and Switching: Routing and Switching Essentials" curriculum and integrates online curriculum, classroom activities, hands-on lab exercises, and group projects. Group 2 course. Critical Thinking - Direct.
Recommended Prerequisite(s): CIT 213

CIT 161 - Cisco Internetworking II
Credit Hours: 3, Contact Hours: 4
Division: Business
This course, in conjunction with CIT 160 and CIT 260, provides the necessary preparation to pass the Cisco CCNARouting & Switching Exam (Cisco Certified Network Associate). The following topics are covered in detail: router and switch configuration, VLANs, inter-VLAN routing, EtherChannel, STP, DHCP, SLAAC, FHRP, VLAN concepts and configuration, routing concepts, LAN security concepts, and static routing. This course utilizes the Cisco Networking Academy "CCNA Routing and Switching: Switching, Routing, and Wireless Essentials" curriculum and integrates online curriculum, classroom activities, hands-on lab exercises, and group projects. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 160 may be taken concurrently

CIT 178 - Relational Databases
Credit Hours: 3, Contact Hours: 4
Division: Business
This course introduces students to core database concepts including data, data types, and relationships. Students will interpret and create relational data structures and use SQL language to perform basic create, read, update, and delete operations. Students will perform, administrative, backup and security functions. Students will recognize the value of optimized data and produce normalized designs. Course content is mapped to the Certiport Information Technology Specialist - Database learning objectives, and students enrolled in this course will take the certification exam. Group 2 course. Critical Thinking - Direct.

CIT 180 - Web Development
Credit Hours: 3, Contact Hours: 4
Division: Business
This course covers how to plan, develop and publish websites using industry standard software. Students will learn responsive web design using HTML5 (Hypertext Markup Language) and CSS3 (Cascading Style Sheets). Students will develop a wide variety of web projects, which include navigation menus, multimedia, forms, lists, tables and CSS animation. Interactivity will be achieved through CSS and beginning JavaScript. Emphasis will be placed on Industry standard coding practices, ADA compliance, semantic HTML5, beginning, intermediate and advanced CSS. Course content is mapped to the Certiport Information Technology Specialist - HTML and CSS learning objectives, and students enrolled in this course will take the certification exam. Group 2 course. Critical Thinking - Direct.

CIT 190 - JavaScript Programming
Credit Hours: 3, Contact Hours: 4
Division: Business
Students in this course develop web client scripting skills using JavaScript and jQuery. Students use variables, decisions, loops, functions, objects, and other programming concepts as they add robust and powerful interactivity to web pages. Students create responsive web solutions integrating HTML, CSS, JavaScript, jQuery, JSON, and Ajax technologies. Course content is mapped to the Certiport Information Technology Specialist - JavaScript learning objectives, and students enrolled in this course will take the certification exam. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 180 with a grade of 2.0 or higher, or instructor permission.

CIT 195 - Application Development
Credit Hours: 3, Contact Hours: 4
Division: Business
The student is introduced to .NET application development. Students use the .NET framework and Visual Studio to develop applications and games for desktop and mobile devices. Object-oriented concepts including encapsulation, inheritance, polymorphism, collections, delegates, and events are included. Application design patterns including 3-tier architecture are emphasized. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 110 with a grade of 2.0 or higher.

CIT 210 - Microsoft Office - Excel
Credit Hours: 3, Contact Hours: 3
Division: Business
This course deals with a comprehensive study of Microsoft Office Excel spreadsheet software and the business applications which can be created and used with the software. The entry of data with different formats, formula creations, file transfer of data, graphing, data tables, solver programs, apply what-if scenarios and an introduction to macros will be covered. Course content is mapped to the current Microsoft Office Specialist (MOS) Excel learning objectives and students enrolled in this course will take the certification exam. Group 2 course. Quantitative Reasoning.
CIT 211 - Intro to Data Analytics  
Credit Hours: 3, Contact Hours: 3  
Division: Business  
Introductory course exploring the practice of data analytics. Using current business intelligence tools, students will learn data modeling, visualization, and analytical techniques. Power Pivot and Power Query will be used to import, cleanse, and shape data. Data Analysis Expressions (DAX) are then used to create simple to complex calculations within Power BI before creating interactive visualizations that bring big data to life. Group 2 course. Quantitative Reasoning. Recommended Prerequisite(s): None

CIT 213 - Networking Technologies  
Credit Hours: 4, Contact Hours: 5  
Division: Business  
This course covers the knowledge and skills needed to troubleshoot, configure, and manage wired and wireless networks. The OSI model will be studied and identified to better enhance the understanding of how various parts work together. Included is an in-depth study of TCP/IP and the characteristics for maintaining a network and ensuring its security. Cloud computing and virtualization technologies will also be introduced. This course maps to the CompTIA Network+ certification exam objectives. Group 2 course. Critical Thinking - Direct.  
Required Prerequisite(s): CIT 213 or instructor permission.

CIT 215 - Server Technologies  
Credit Hours: 3, Contact Hours: 4  
Division: Business  
Students in this course will learn about the latest Server Technologies. Concepts covered include Server Hardware Installation & Management, Server Administration, Security, Disaster Recovery, and Troubleshooting. Students will have an opportunity to work with different types of server installations. Windows PowerShell and Hyper-V will also be introduced. This course is aligned to the CompTIA Server+ certification exam. Group 2 course. Critical Thinking - Direct.  
Required Prerequisite(s): CIT 213 or instructor permission.

CIT 216 - Computerized Acctg Systems  
Credit Hours: 3, Contact Hours: 3  
Division: Business  
This course is designed to give the student experience with setting up and operating an accounting system on the computer. QuickBooks software will be used. Accounts receivable, accounts payable, general ledger, inventory and payroll will be covered, with an emphasis on conversion from manual accounting systems to both desktop and/or cloud-based platforms. Group 2 course.  
Required Prerequisite(s): ACC 121

CIT 218 - Web Application Development  
Credit Hours: 3, Contact Hours: 4  
Division: Business  
The student will develop multi-tier web applications using client-server technologies in a variety of frameworks. Development will include design patterns such as MVC and MVVM with students writing client-side and server-side code to create a functional, consistent, and robust web application. As a capstone project, the students will develop and deploy a functional web application. Group 2 course. Critical Thinking - Direct.  
Required Prerequisite(s): CIT 190 with a grade of 2.0 or higher, CIT 195 with a grade of 2.0 or higher. CIT 178 with a grade of 2.0 or higher.  
Recommended Prerequisite(s): None

CIT 228 - Advanced Database Systems  
Credit Hours: 3, Contact Hours: 4  
Division: Business  
This course builds upon database knowledge gained in CIT 178 by extending into other data sources and connection technologies. Students will be able to identify and evaluate data options and access data via code. Course content is mapped to the Certiport Information Technology Specialist - Python learning objectives, and students enrolled in this course will take the certification exam. Group 2 course. Critical Thinking - Direct.  
Required Prerequisite(s): CIT 110, CIT 180 and either CIT 178 or CIT 248, all with a grade of 2.0 or higher.

CIT 231 - Current Topics in IT  
Credit Hours: 3, Contact Hours: 3  
Division: Business  
The student is introduced to IT topics, each presented in five week modules, that are both timely and relevant to the IT industry. The course uses these modules to both present the new technologies and provide opportunity for the student to identify skills and resources relevant to profession development in the IT industry. Group 2 course. Critical Thinking - Direct.

CIT 240 - Network Security Management  
Credit Hours: 3, Contact Hours: 4  
Division: Business  
This course covers the knowledge and skills required to install and configure systems to secure applications, networks, and devices while supporting the principles of confidentiality, integrity, and availability. Additional topics include threat analysis and mitigation, risk assessments, and compliance. Course content is mapped to the CompTIA Security+ certification exam objective. Group 2 course. Critical Thinking - Direct.  
Required Prerequisite(s): CIT 213

CIT 243 - Cloud Technologies  
Credit Hours: 3, Contact Hours: 3  
Division: Business  
Students will explore cloud topics including cloud concepts, virtualization, infrastructure, resource and security management, security, and cloud system management. Cloud concepts will be explored using Microsoft Azure, Amazon Web Services, and Google Cloud Services. This course will prepare students for the CompTIA Cloud+ certification exam. Group 2 course.  
Required Prerequisite(s): CIT 213

CIT 246 - Windows Server Infrastructure  
Credit Hours: 3, Contact Hours: 4  
Division: Business  
Students taking this course will learn how to setup, configure, and maintain a Windows Server Infrastructure. Topics covered include Dynamic Host Configuration Protocol (DHCP), Domain Name Systems (DNS), Distributed File Systems (DFS), and Virtual Private Networks. Group 2 course. Critical Thinking - Direct.  
Required Prerequisite(s): CIT 213 or instructor permission
CIT 249 - Hybrid Cloud Technologies
Credit Hours: 3, Contact Hours: 4
Division: Business
Students in this course will administer core server workloads using on-premise and cloud technologies. Students will use administrative tools and technologies to manage both on-premise and cloud infrastructures. This course aligns with the Microsoft AZ-800 certification exam. Group 2 course.
Required Prerequisite(s): CIT 215 and CIT 247, or instructor permission
Recommended Prerequisite(s): CIT 243

CIT 256 - Linux Administration II
Credit Hours: 3, Contact Hours: 4
Division: Business
In this course students will take an in-depth look at Linux, focusing on proper installation, command line usage, and administration of the operating system. Students will examine various server technologies, including BASH scripting, X11, display managers, localization settings, printing, and security. Exploration will take the form of a practical, hands-on approach, using a mix of hands-on projects as well as web resources. This course will prepare students for the second CompTIA Linux+ exam. Group 2 course.
Required Prerequisite(s): CIT 256

CIT 266 - Advanced Enterprise Security
Credit Hours: 3, Contact Hours: 4
Division: Business
In this course, students will work in small teams with realizable objectives in several areas including risk management, security architecture, security operations, security integration, and security collaboration. Students will conceptualize, engineer, and implement secure solutions across complex environments to create a resilient enterprise. This course aligns with the CompTIA CASP+ certification exam. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 263, CIT 264
Recommended Prerequisite(s): CIT 256
CIT 280 - Systems Analysis and Design
Credit Hours: 4, Contact Hours: 5
Division: Business
This is the capstone course in the CIT Developer AAS. Students will gain practical knowledge in systems analysis and design through participation in a team-based software/hardware project that follows the systems development life cycle using agile development with industry patterns and practices. A capstone project will be developed and presented to a review group. Students will conduct a feasibility study, perform requirements analysis, model objects and data, develop and test the solution, and communicate effectively. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 255 with a grade of 2.0 or higher.

CIT 290 - CIT Internship
Credit Hours: 3, Contact Hours: 3
Division: Business
Work experience is an integral part of the CIT student’s program. In this course, students are placed in settings that utilize their business and CIT skills. Students will work 150 hours during the semester in a supervised on-the-job training experience. Students must meet with their academic advisor and submit a resume for review before they will be allowed to enroll in this course. Group 2 course.
Required Prerequisite(s): 20 credits with a minimum of 3.0 GPA in CIT courses and instructor permission.

CIT 291 - Web Developer Internship
Credit Hours: 3, Contact Hours: 3
Division: Business
Work experience is an integral part of the Web Developer Certificate program. In this course, students are placed in settings that utilize their web installation and development skills as well as business and CIT skills. Students will work 150 hours during the semester in a supervised on-the-job training experience. In addition to the required 150 hours in the internship placement, students participate in semi-monthly seminars. Students must apply one month prior to the semester in which they will complete the internship. Group 2 course.
Required Prerequisite(s): Instructor permission

CIT 292 - Support Specialist Internship
Credit Hours: 3, Contact Hours: 3
Division: Business
Work experience is an integral part of the Support Specialist Certificate program. Students are placed in settings that utilize their technical, business applications, and interpersonal communications skills. Students will work 150 hours during the semester in a supervised on-the-job training experience. Students must meet with their academic advisor and submit a resume for review before enrolling. Group 2 course.
Required Prerequisite(s): 27-30 hours in the Administrative Support Specialist Certificate and instructor permission.