COMPUTER INFO TECHNOLOGY (CIT)

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 and debugging in Visual Studio IDE. Good coding practices and simple design patterns are emphasized. Topics covered include: Data Types, Control Structures, Decisions and Conditionals, Data Validation, Arrays, Lists, Methods, Classes, and Exception Handling. 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.

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. Course content is mapped to the current Microsoft Office Specialist (MOS) Word learning objectives and students enrolled 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 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. Course content is mapped to the current Microsoft Office Specialist (MOS) PowerPoint learning objectives and students enrolled in this course will take the certification exam. Group 2 course.

CIT 131 - Game Development and Design
Credit Hours: 3, **Contact Hours: 3**
Division: Business
Introductory course exploring the concepts of game design before building fully functional, working prototypes after learning modern game development techniques within a 2D game engine. Game design investigates topics such as objective, narrative, genre, challenge and reward. Once students have developed a solid concept, the game development portion of the class will look at how to turn that into a working reality by creating sprite sheets, artwork, audio or other game assets before adding functionality. Completed games may be published to the web or for mobile devices for testing and feedback. Group 2 course. Communications - Direct, Critical Thinking - Direct.

CIT 135 - Introduction to Programming Using Python
Credit Hours: 3, **Contact Hours: 4**
Division: Business
This course is an introduction to programming using the Python language and intended for students without prior programming experience. Python is an interpreted language with a rich programming environment, and while easy for beginners to learn, is widely used in many areas including the web, data analysis and application development. Through online coding exercises and engaging projects students will explore good coding practices, simple design pattern, data types, control structures, decisions and conditionals, collections, methods, functions, classes and File I/O. 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. Recommended Prerequisite(s): Basic file management skills

CIT 156 - CompTIA A+ Certification I
Credit Hours: 3, **Contact Hours: 4**
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 CompTIA A+ Certification exam. Major topic areas for this course includes operating systems, security, software and operational procedures. 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 CCNA Routing & 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, WLAN 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 responsive design, 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 create responsive web solutions by integrating HTML, CSS, JavaScript, jQuery, JSON, XML, Ajax and Web API technologies. Students use variables, decisions, loops, functions, methods, objects, and other programming concepts as they add robust and powerful interactivity to web pages and web-based games. 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 Core application development. Students use the .NET framework and Visual Studio to develop applications for desktop and the web. Advanced topics and object-oriented concepts including inheritance, encapsulation, polymorphism, abstraction, data structures, collections, LINQ queries, Enums, delegates, events, unit testing and file I/O will be covered. 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 - Microsoft Power BI
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. Students enrolled in this course will take the Certiport IT Specialist exam. Group 2 course. Quantitative Reasoning.
Recommended Prerequisite(s): Familiarity with spreadsheets

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.

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
QuickBooks Online provides essential coverage of the new QuickBooks Online program. Topics covered include navigating QuickBooks Online features, creating company files, setting up customers and vendors, managing banking transactions and inventory, creating journal entries, generating and customizing reports and sales forms, and more. 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 full-stack, multi-tier web applications using .NET Core client-server technologies. Development will include design patterns such as MVC, ORM 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.

CIT 228 - Advanced Database Systems
Credit Hours: 3, **Contact Hours: 4**
Division: Business
This course builds upon database knowledge gained in CIT178 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.
Recommended 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

Recommended Prerequisite(s): Completion of CIT 215

CIT 247 - Windows Identity & Policy
Credit Hours: 3, **Contact Hours: 4**
Division: Business
In this course students will gain practical experience using Identity solutions in on-premise and cloud environments. Students will study Active Directory, Group Policy, Certificate Services, Federation Services and access solutions. Students will also build and manage on-premise and hybrid networking and storage infrastructures. This course aligns to the Microsoft AZ-800 certification exam. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 213 or instructor permission

CIT 255 - Object-Oriented Programming
Credit Hours: 3, **Contact Hours: 4**
Division: Business
The student builds on object-oriented fundamentals learned in CIT 195, focusing on implementing SOLID Principles throughout the course. Projects will explore design patterns, UI/UX considerations, multiple forms of desktop and online persistence, and the integration of various technologies to form a complete solution. Course content is mapped to the Certiport Information Technology Specialist - Software Development learning objectives, and students enrolled in this course will take the certification exam. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 178 with a grade of 2.0 or higher, CIT 195 with a grade of 2.0 or higher. CIT 218 (may also be taken concurrently).

CIT 256 - Linux Administration
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 the concepts common to all Linux systems. 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 CompTIA Linux+ Exam. Group 2 course.
Recommended Prerequisite(s): CIT 213

CIT 260 - Cisco Internetworking III
Credit Hours: 3, **Contact Hours: 4**
Division: Business
This course, in conjunction with CIT 160 and CIT 161 prepares the student for the Cisco CCNA Exam (Cisco Certified Network Associate). Describes the architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. Students will configure and troubleshoot routers and switches and resolve common issues with OSPF, ACLs, NAT, VPNs, and QoS for IPv4 and IPv6 networks, while also implementing network management, design, troubleshooting, virtualization, and automation techniques. This course utilizes the Cisco Networking Academy "CCNA Routing & Switching: Enterprise Networking, Security, and Automation" curriculum and integrates online curriculum, classroom activities, hands-on lab exercises and group projects. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 161

CIT 263 - Cybersecurity Penetration Testing
Credit Hours: 3, **Contact Hours: 4**
Division: Business
In this course, students will learn and practice current security assessment techniques. This includes the ability to plan/scope an assessment, understand legal/compliance requirements, perform vulnerability scanning/penetrations tests and analyze/report on their findings. This course aligns with the CompTIA Pentest+ certification exam. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 240, or instructor permission.

Recommended Prerequisite(s): Completion of CIT 256 and passing the CompTIA Security+ certification exam

CIT 264 - Cybersecurity Analytics and Threat Analysis
Credit Hours: 3, **Contact Hours: 4**
Division: Business
In this course, students will learn how to employ data analytics to interpret and identify security vulnerabilities, threats, and risks to an organization. Students will configure and use various threat detection tools and learn how to secure and protect applications and systems within an organization. This course aligns with the CompTIA CySA+ certification exam. Group 2 course. Critical Thinking - Direct.
Required Prerequisite(s): CIT 240, or instructor permission.

Recommended Prerequisite(s): Completion of CIT 256

CIT 266 - Advanced Enterprise Security
Credit Hours: 3, **Contact Hours: 4**
Division: Business
In this course, students will explore enterprise solutions to risk management as well as security architecture, operations, integration and collaboration. Students will conceptualize, engineer, and implement secure solutions across a complex environment to create a resilient enterprise network. The course aligns with the CompTIA Security X certification exam objectives. 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 stakeholders. 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.