

COURSES

PDF COMPUTER INFORMATION TECHNOLOGY

CIT110 A+ Hardware 3 Credits

Introduces the fundamentals of computer system repair. Students learn the hardware and software elements that define an operating computing system. Troubleshooting methods and the use of diagnostic tools are taught with reinforcement provided using hands-on exercises. Successful completion of this course will place a student in good standing to take the nationally recognized A+ certification exam created by the computing industry.

CIT112 Network + 3 Credits

Prerequisites: None Introduction to the concepts and practices needed to function in an entry level network technician capacity. Course content is mapped to current domains within the Comp/TIA Network+ Certification

CIT114 IT Essentials 4 Credits

Provides a comprehensive overview of the primary operating systems and the support of hardware devices. Demonstrates the integration between hardware and software. Emphasis is on installing, configuring, troubleshooting and upgrading a PC and working with computer users as an IT technician. Non-transferable/non-applicable towards an AA or AS degree

CIT128 Introduction to Software Development 4 Credits

Recommended prerequisite: MATH 95 or appropriate score on the WNC placement exam. Offers a first course in programming and software development, and assumes no prior programming experience. Introduces the basic syntax of a programming language and stresses the principles of good software engineering. Introduces HTML (the language of the Web), Webscripting (dynamic Web content), and SQL (Structured Query Language), which is used to access relational databases.

CIT129 Introduction to Programming 3 Credits

Prerequisites: IS101 or consent of instructor Offers a language-independent, introductory course on computer program design and development. Emphasizes identification and solution of business problems through various design tools.

CIT130 Beginning Java 3 Credits

Prerequisites: CIT129 or previous programming experience with consent of instructor Teaches Java, an object-oriented programming language used in general-purpose computing, Web development, client-server computing, n-tier e-commerce applications, and Web-based applets. Object-oriented programming techniques and hands-on learning will be emphasized. Students will complete several computer programming projects.

CIT133 Beginning C++ 3 Credits

Prerequisites: CIT129 or consent of instructor Teaches the "C++" programming language. Object-oriented programming techniques and hands-on learning will be emphasized. Students will complete several computer programming projects.

CIT134 Beginning Programming 3 Credits

Prerequisite: CIT 128 Introduction to the C# programming language. Uses C# programming language for solving problems. Covers C#'s control structures, Object Oriented Concepts, simple graphical displays, file input/output and error handling.

CIT148 Beginning Programming Python 3 Credits

Prerequisite: CIT 128 recommended or consent of instructor Introduction to the Python programming language. Covers Python data types, input, output, operators, decision and looping statements, functions, lists, exceptions and files.

CIT151 Beginning Development Web 3 Credits

Prerequisites: IS101 or consent of instructor Introduces students to XHTML and Web page construction. Topics cover construction and management of Web sites and creation of Web pages utilizing standards-based technologies such as Cascading Style Sheets. Emphasis on developing interoperable web sites that work with standards compliant web browsers. Interoperability with non standards-compliant web browsers is covered. As a technology driven course, graphic design is not emphasized. May be taught using basic text editing or a web-development tool such as Dreamweaver.

CIT152 Web Script Language Programming 3 Credits

Prerequisites: CIT 151 Programming class providing instruction in the creation of interactive web pages using technologies such as Javascript, SQL, CSS and HTML; investigates client- and server-side programming techniques.

CIT173 Introduction to Linux 3 Credits

Prerequisites: Basic computer literacy skills. Provides an introduction to the Linux Operating System. Topics include Linux origins, file system, user commands and utilities, graphical user interfaces, editors, manual pages and shells.

CIT180 Database Concepts and Sql 3 Credits

Prerequisites: CIT129 or equivalent programming experience or consent of instructor Teaches basic principles of data modeling and relational database design. Class is targeted for people with little or no SQL knowledge. Provides a comprehensive overview of query writing, focusing on practical techniques for the IT professional new to relational databases. Course accents hands-on learning in a Structured Query Language (SQL) and SQL procedures.

CIT183 Database Administration 3 Credits

Prerequisites: CIT 180 or consent of instructor Introduces the primary responsibilities of a database administrator. Includes instructions on installing a DBMS, such as SQL Server or Oracle, to manage database objects, to monitor performance, to manage data storage, to oversee database security and user access, to ensure database connectivity, and to plan for backup and recovery.

CIT198 Special Topics: Comp Info Tch 1 Credit

Applies to assorted short courses and workshops covering a variety of subjects.

CIT211 Microsoft Operating System Management 3 Credits

Through lectures, discussions, demonstrations, textbook exercises and classroom labs, teaches the basic skills and knowledge necessary to help prepare for the Microsoft Certified Professional (MCP) exam on the topic of a current Microsoft Workstation operating system.

CIT212 Microsoft II Networking 3 Credits

Through lectures, discussions, demonstrations, textbook study and hands-on lab exercises, teaches the basic skills and knowledge necessary to implement, administer and maintain the current Microsoft Windows Server Operation System.

CIT213 Microsoft 365 Security Administration 3 Credits

Prerequisites: CIT212 or consent of instructor Through lectures, discussions, demonstrations, textbook study, and hands-on lab exercises, teaches the basic skills and knowledge necessary to configure and maintain Microsoft Windows Network Infrastructure services and resources.

CIT214 Microsoft Administration Azure 3 Credits

Prerequisites: CIT213 or consent of instructor Through lectures, discussions, demonstrations, textbook study, and hands-on lab exercises, teaches the basic skills and knowledge necessary to implement, administer and maintain a Microsoft Directory Services environment.

CIT217 Security + 3 Credits

Prerequisites: Instructor Consent Introduces fundamental concepts of information security. Provides a basic understanding of best practices and current standards and explores topics of increasing importance in the industry as a whole. Provides practical knowledge and skills using monitoring and detection tools in a lab environment.

CIT220 Routing and Switching 4 Credits

Prerequisites: CIT 112 or Consent of Instructor Introduces the concepts and practices needed to function in an entry level network technician capacity. Course content is mapped to current domains within the Cisco ICND and CCNA certification exams.

CIT230 Advanced Java 3 Credits

Prerequisites: CIT130 Builds upon the foundation constructed in Beginning Java. Since Java works behind the scenes to power Internet applications, this class will focus more heavily upon application development with an emphasis on client-side and server-side techniques. Topics include, but not limited to, inheritance, interfaces, exception handling, javafx, input and output to files and databases, data structures, generics, and searching and sort algorithms.

**CIT248 Advanced Python
 Programming 3 Credits**

Prerequisite: CIT 148 Focus on Python as an object-oriented language and introduction to Python collections, modules and packages. Techniques for accessing data in relational databases and testing methodologies are included as part of development of larger programs.

intermediate concepts related to blockchain; including the concepts of access, privacy, and integrity. Provides an overview of the practical landscape for the blockchain workforce, including industry-specific applications, different types of blockchain, common project types, and limitations and opportunities that might define blockchain in the future.

**CIT251 Advanced Web
 Development 3 Credits**

Prerequisites: CIT 151 Extends student knowledge and skills with HTML, CSS and Scripting. Introduces additional web-related techniques used to make web pages more engaging and more versatile across multiple platforms in a mobile environment.

**CIT284 Unity Programming I 3
 Credits**

Prerequisites: CIT 134 Teaches the basics of C# programming within Unity software to create interactivity in games, apps, AR/VR and other experiences. The course objectives are aligned with current industry standards set by professionals and educators leading to Unity Industry User Certification.

**CIT263 Introduction to IT Project
 Management 3 Credits**

Introduces students to the concepts of project management as used within the information technology fields of study.

**CIT285 Unity Programming II 3
 Credits**

Prerequisites: CIT 284 Teaches the ability to create VR experiences and programs within Unity software. The course objectives are aligned with current industry standards set by professionals and educators.

CIT270 Network Tools 4 Credits

Prerequisites: CIT 112 or Consent of Instructor Introduces current needed tools and techniques to effectively enumerate, map, document, investigate, and configure within current network architectures and environments. Focuses on tools and methods needed in computer and network technician, and cybersecurity roles.

**CIT299 Independent Study Comp
 Info Technology 1 Credit**

Prerequisites: available to students who have completed most core and emphasis requirements and have a 2.5 or better GPA. Written consent of a full-time instructor is required Offers students special projects involving subjects or skills related to the CIT curriculum. This project will be designed with a faculty advisor. Class will have variable credit of one to six depending on the course content and number of contact hours required. Course may be repeated. It may be substituted for another course with special permission of the division.

CIT273 Network Defense 3 Credits

Prerequisites: Instructor Consent Details network security information domains regarding planning to protect a network, as well as detecting and responding to network attacks.

CIT274 Ethical Hacking 3 Credits

Prerequisites: Instructor Consent Explains basic IT security concepts and models. Introduces concepts of penetration testing to validate security measures and identify vulnerabilities; formulate a basic security policy; demonstrate basic penetration attacks; assess risks and countermeasures; explain legal and ethical concerns as they apply to penetration testing; explores methods to gain access to computer resources and methods to prevent/reduce vulnerabilities.

**CIT330 Designing Virtualized
 Systems 4 Credits**

Prerequisites: CIT 112 and CIT 211 Teaches students to install, configure, and manage vSphere; to install a complete virtual network on VMware Workstation consisting of ESXi hosts, a domain controller, a vCenter server, and an iScsi SAN. Course prepares students for VCA-DCV and VCP-DCV certifications.

**CIT275 Hacking Forensics
 Investigation 3 Credits**

Prerequisites: Instructor Consent Provides key baseline knowledge and practices in the digital forensic domains including file systems, operating systems, network and database systems, websites and email.

**CIT363 Advanced Project and
 Earned Value
 Management 3 Credits**

Prerequisites: Admission to BAS Organization and Project Management Program, CIT 263 Advanced study of Project Management techniques and methodology. Topics include: Earned Value Management, Financial Instruments, Standard Industry Codes, Concepts of Accounting Theory, Budget/Proforma, use of MS Project, Excel, Visio, PowerPoint, and Access to develop, track, present Project Management data for management review.

**CIT280 Introduction to
 Blockchain Concepts 3
 Credits**

Prerequisites: MATH 124 or higher Introduction to Blockchain technology; a type of distributed ledger technology. Covers what blockchain is, how blockchain was developed, how blockchain works, and the primary issues, challenges and opportunities blockchain faces. Engages students in hands-on contextualized code exercises, to lay a strong foundation for blockchain development.

**CIT281 Intermediate Blockchain
 Concepts 3 Credits**

Prerequisites: MATH 124 or higher, CIT 280 Builds on the concepts introduced in CIT 280 to address