INFORMATION TECHNOLOGY
(IT)

IT 11000 INTRODUCTION TO OFFICE PRODUCTIVITY APPS  3 Credit Hours
(Equivalent to CIS 24053) Covers the basic concepts and use of computer systems, including hardware, personal productivity software, Internet usage and file management.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: TAG Business

IT 11002 VISUAL BASIC PROGRAMMING  3 Credit Hours
Visual Basic.NET language introducing concepts of object-oriented, event-driven program design and implementation.
Prerequisite: IT None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 11004 SURVEY OF INFORMATION TECHNOLOGY  3 Credit Hours
Overview introduction to information technologies, career paths and professional certifications available.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 11005 INTRODUCTION TO OPERATING SYSTEMS AND NETWORKING TECHNOLOGY  3 Credit Hours
Survey of desktop and network operating systems essentials, including file and disk management, system tools utilization, resource sharing and introductory network concepts.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 11006 INTRODUCTION TO WEB SITE TECHNOLOGY  3 Credit Hours
Focuses on website technologies, including HTML. Students learn the history of the Internet and effective search techniques.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 11009 COMPUTER ASSEMBLY AND CONFIGURATION  4 Credit Hours
Covers disk operating system functions and features; hardware/software installation procedures; file and directories management; system configuration/optimization; backup procedures.
Prerequisite: CS 33211 or EMAT 26010 or IT 11005 or ENGR 10001.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

IT 12000 INTERMEDIATE OFFICE PRODUCTIVITY APPS  3 Credit Hours
Covers intermediate concepts and integration of computer applications. Emphasis on software suites, specifically word processing, electronic spreadsheets, database and presentation applications.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 13000 APPLIED SECURITY ESSENTIALS  3 Credit Hours
Course covering a basic introduction to securing connected devices. Topics include computer security, Internet security, and mobile security.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 20001 C++ PROGRAMMING  3 Credit Hours
Course using C++ introducing concepts of software development, object-oriented event-driven programming, testing and debugging, simple and complex data types language syntax and semantics.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 20011 JAVA PROGRAMMING  3 Credit Hours
Course using Java introducing concepts of software development, object-oriented event-driven programming, testing and debugging, simple and complex data types, language syntax and semantics.
Prerequisite: None.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 21002 NETWORK SETUP AND CONFIGURATION  4 Credit Hours
Introduces networking in local area network (LAN) and wide area network (WAN) environments. Topics include network protocol, configuration, operation, setup, installation, administration, management and security.
Pre/corequisite: IT 11009.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

IT 21005 VISUAL BASIC DATABASE PROGRAMMING  4 Credit Hours
Advanced course in the visual basic language focusing on database systems development.
Prerequisite: CS 13001 or EMAT 15310 or IT 11002 or CIS 24065.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
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IT 22000  SURVEY OF IT CYBERSECURITY  3 Credit Hours
Course introduces students to cybersecurity in information technology. Topics include authentication, encryption, enterprise computing, the role of users in security, data management and end-to-end security in networking.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 23000  INTRODUCTION TO OPERATING SYSTEM SECURITY  3 Credit Hours
Course introducing operating system security configurations, considerations, and best practices.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 24000  DEVELOPING AND IMPLEMENTING SECURITY POLICIES  3 Credit Hours
This course covers governance, legal considerations, and regulations related to information security policy development and implementation.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 31002  HEALTH INFORMATION TECHNOLOGY SUPPORT  3 Credit Hours
Course covers skills and knowledge required to implement and support healthcare IT (HIT) systems including regulatory and compliance issues; organizational behavior, IT and medical business operations; best practices and security.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 32002  LINUX NETWORKING  4 Credit Hours
Course covering network administration topics with the Linux operating system. Topics include distributions, storage solutions, network services and current security practices.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

IT 36301  ADVANCED C++ PROGRAMMING  4 Credit Hours
Course using C++ classes and data abstraction, stream I/O, inheritance, standard template library, Microsoft Foundation Classes, system programming concepts using Unified Modeling Language.
Prerequisite: IT 20001.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter

IT 36302  ADVANCED C# PROGRAMMING  3 Credit Hours
Advanced concepts of C# including classes and objects, inheritance, polymorphism, arrays, exception handling, files and streams and Extensible Application Markup Language (XAML).
Prerequisite: IT 20021.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36303  DIGITAL IMAGE MANIPULATION  3 Credit Hours
Course covers various concepts involved in the creation and manipulation of digital images.
Prerequisite: IT 11006 or EMAT 13210.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36308  ERGONOMICS IN COMPUTER SYSTEMS  3 Credit Hours
Introduction to ergonomics, usability design and assessment methods for the development of computer hardware, software and systems.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36309  PROGRAMMING MOBILE APPLICATIONS  3 Credit Hours
Introduces the unique program design considerations required by mobile devices. The course focuses on creating programs that can be deployed on different devices.
Prerequisite: CS 13001 or EMAT 15310 or IT 20011 or IT 20001 or IT 20021 or CIS 24065.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36310  MULTIMEDIA DEVELOPMENT TOOLS  3 Credit Hours
Course focuses on advanced technologies for Web development, including DHTML, plug-ins, etc. Students learn to create more interactive and dynamic websites.
Prerequisite: IT 21011 or EMAT 13210.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36311  ADVANCED JAVA PROGRAMMING  4 Credit Hours
Course using Java abstract data types and objects, object-oriented, event-driven design, file organization and access, and systems programming concepts.
Prerequisite: IT 20011.
Schedule Type: Lecture
Contact Hours: 4 lecture
Grade Mode: Standard Letter
IT 36314 SEMINAR IN EMERGING COMPUTER AND INFORMATION TECHNOLOGIES 3 Credit Hours
Survey of new and emerging technologies in computer and information technology.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36315 CERTIFICATION PREPARATION IN INFORMATION TECHNOLOGY 3 Credit Hours
(Repeatable for a maximum of 6 credit hours) Certification preparation course to help students prepare for professional certification attempts in information technology. Certification is not guaranteed and certification fees may apply.
Prerequisite: Special approval.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36318 SURVEY OF INFORMATION SECURITY, INTERNET FRAUD AND COMPUTER FORENSICS (WIC) 3 Credit Hours
Course provides a non-technical introduction to contemporary issues in information security, Internet fraud and computer forensics.
Prerequisite: ENG 21011 or HONR 10297; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
Attributes: Writing Intensive Course

IT 36320 COMPUTER FORENSICS 3 Credit Hours
Hands-on skills in incident response, forensic preparation and data recovery and analysis.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36321 NETWORK FORENSICS 3 Credit Hours
Emphasizing hands-on skills in live incident response, the proper use of network forensic tools, network monitoring, live data capture, evidence analysis, data integrity and other related topics.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36322 SOCIAL MEDIA AND MOBILE DEVICE FORENSICS 3 Credit Hours
Course covers data collection and analysis techniques for social media and mobile devices.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36330 LOCAL AREA NETWORK SECURITY FUNDAMENTALS 3 Credit Hours
Examines the primary issues involved in securing resources in a local area network (LAN), including threat assessment, countermeasures, best practices, security protocols, cryptography and management-related issues.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36331 ADVANCED ROUTING AND SWITCHING 3 Credit Hours
Reinforcing Internetworking concepts. Topics include network standards, LAN switching, VLANs, network designs, routing protocols and configuration, LAN and WAN segments, and other related topics.
Prerequisite: IT 21110.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36336 WEB SCRIPTING II 3 Credit Hours
Focuses on server-side scripting needed to create interactive and dynamic websites.
Prerequisite: IT 21036.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36340 HELP DESK SUPPORT 3 Credit Hours
Examination of help desks that exist, importance within organizations, the roles and skills required, and methods and technologies commonly employed.
Prerequisite: IT 11009 or ENGR 23010.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36350 PROGRAMMING OFFICE PRODUCTIVITY APPLICATIONS 3 Credit Hours
Introduces the use of Visual Basic for Applications (VBA) as a tool to create customized programs that automate repetitive and/or complex tasks performed using office suite applications.
Prerequisite: IT 11002 and IT 21010.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 36355 COMMAND LINE UTILITIES 3 Credit Hours
Course prepares students to perform effectively in Windows, Linux and various server command line environments. Topics include command syntax, batch files, script files and internal and external commands.
Prerequisite: CS 33211 or EMAT 15310 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
IT 36392  INTERNSHIP FOR INFORMATION TECHNOLOGY STUDENTS (ELR)  1-3 Credit Hours
(Repeatable for a maximum of 6 credit hours) An arranged work experience for students in the information technology field. Students complete 45 hours of internship per credit.
Prerequisite: Junior standing.
Schedule Type: Practical Experience
Contact Hours: 3-9 other
Grade Mode: Standard Letter
Attributes: Experiential Learning Requirement

IT 40000  CYBERSECURITY  3 Credit Hours
Builds on a background in networking and focuses on cybersecurity best practices, standard models and regulatory requirements.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 41010  MOBILE APPLICATIONS FOR INFORMATION TECHNOLOGY  3 Credit Hours
Course covers enterprise mobility technical concepts, strategies, and solutions across various domains and industries. Includes topics such as organizational issues, IT and business operations; and best practices and security.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 41002  CLOUD TECHNOLOGY  3 Credit Hours
Concepts of cloud computing, including storage; services; technology; and management.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 42000  SOCIAL MEDIA SECURITY  3 Credit Hours
Personal and corporate social media presence, security risks, intellectual property and ethical issues.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 42002  WIRELESS AND MOBILE DEVICE SECURITY  3 Credit Hours
Course covers wireless and mobile device security. Topics include risk assessments, threats, vulnerabilities and current security practices.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 43000  HEALTHCARE INFORMATION SYSTEMS  3 Credit Hours
Course focuses on the roles and responsibilities of the health information technology professional including the technology, legal and ethical responsibilities and complex systems and environment.
Prerequisite: Junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 44300  ADVANCED COMPUTER ASSEMBLY AND CONFIGURATION  3 Credit Hours
Focus is on advanced system components, streamlined operating system installation procedures, and current technology in local area network (LAN) connectivity.
Prerequisite: IT 11009; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46303  DIGITAL VIDEO EDITING  3 Credit Hours
Utilizes digital imaging technologies to produce videos. Includes timelines; filming, importing/exporting video; audio; effects, transitions and captions.
Prerequisite: IT 36303.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46300  ADVANCED COMPUTER ASSEMBLY AND CONFIGURATION  3 Credit Hours
Focus is on advanced system components, streamlined operating system installation procedures, and current technology in local area network (LAN) connectivity.
Prerequisite: IT 11009; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46308  ADVANCED VISUAL BASIC PROGRAMMING  3 Credit Hours
Advanced concepts of visual basic, including classes and objects, inheritance, polymorphism, arrays, exception handling, files and streams and dynamic-link library (DLL).
Prerequisite: CS 13001 or EMAT 15310 or IT 11002 or CIS 24065.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46309  ASP.NET WEB PROGRAMMING  3 Credit Hours
Using Visual Studio and the ASP.NET platform to develop secure, data-aware web applications. Topics covered include HTML and CSS, testing and debugging, master pages, state management, security and authentication, SQL and object data sources.
Prerequisite: IT 11002 or IT 20021 or CS 13001 or EMAT 15310 or CIS 24065.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46310  TECHNOLOGY OF OPERATING SYSTEMS  3 Credit Hours
Course covers installation, configuration, tuning and communication among state-of-the-art desktop operating systems, using available system tools, utilities and files.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46303  DIGITAL VIDEO EDITING  3 Credit Hours
Utilizes digital imaging technologies to produce videos. Includes timelines; filming, importing/exporting video; audio; effects, transitions and captions.
Prerequisite: IT 36303.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46300  ADVANCED COMPUTER ASSEMBLY AND CONFIGURATION  3 Credit Hours
Focus is on advanced system components, streamlined operating system installation procedures, and current technology in local area network (LAN) connectivity.
Prerequisite: IT 11009; and junior standing.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46308  ADVANCED VISUAL BASIC PROGRAMMING  3 Credit Hours
Advanced concepts of visual basic, including classes and objects, inheritance, polymorphism, arrays, exception handling, files and streams and dynamic-link library (DLL).
Prerequisite: CS 13001 or EMAT 15310 or IT 11002 or CIS 24065.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46309  ASP.NET WEB PROGRAMMING  3 Credit Hours
Using Visual Studio and the ASP.NET platform to develop secure, data-aware web applications. Topics covered include HTML and CSS, testing and debugging, master pages, state management, security and authentication, SQL and object data sources.
Prerequisite: IT 11002 or IT 20021 or CS 13001 or EMAT 15310 or CIS 24065.
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IT 46310  TECHNOLOGY OF OPERATING SYSTEMS  3 Credit Hours
Course covers installation, configuration, tuning and communication among state-of-the-art desktop operating systems, using available system tools, utilities and files.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46311  TECHNOLOGY OF NETWORKING  3 Credit Hours
Advanced topics of enterprise network management, including DNS, IP addressing, routing basics, subnet masking, firewalls, storage redundancy techniques, and general tuning, optimizing, troubleshooting, recovery strategies.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter
IT 46312  SCRIPTING FOR NETWORK ADMINISTRATORS  3 Credit Hours
Covers scripting technologies to configure and manage resources and services of local area network (LAN) servers and workstations.
Prerequisite: IT 21002 and IT 21036.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46313  VIRTUAL MACHINE CONFIGURATION AND ADMINISTRATION  3 Credit Hours
Focus on configuring and administering virtual machine software.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46314  ADVANCED SERVER CONFIGURATION  3 Credit Hours
Course focus is on the core service roles provided by application services, including configuration, maintenance and security.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46315  SQL WITH ORACLE  3 Credit Hours
Focus is on Structured Query Language (SQL) and relational databases using Oracle, a comprehensive and fully integrated stack of cloud applications and platform services.
Prerequisite: CS 13001 or EMAT 15310 or IT 21005 or CIS 24065.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46320  CLOUD FORENSICS  3 Credit Hours
Concepts of cloud forensics, including legal consideration and software tools involved with discovery in the cloud.
Prerequisite: CS 33211 or EMAT 26010 or IT 21002; or ENGR 23010 and ENGR 26301.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46321  WEB DATABASE INTEGRATION  3 Credit Hours
Course focus is on integrating data sources into websites. Current topics include advanced concepts in server-side processing principles, web forms, database programming objects and Structured Query Language (SQL).
Prerequisite: IT 21036.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46331  LOCAL AREA NETWORK SECURITY AND FIREWALLS  3 Credit Hours
Course examines the primary issues involved in defining and configuring a local area network (LAN) defense perimeter, including LAN security analysis, implementing firewalls and intrusion detection systems.
Prerequisite: IT 36330.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46340  DATA DESIGN AND IMPLEMENTATION  3 Credit Hours
Explores the role and design of databases in organizations, with emphasis on the technologies used in their implementation. Emphasis on Structured Query Language (SQL).
Prerequisite: IT 21005 and IT 21036.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter

IT 46350  DATABASE ADMINISTRATION AND REPORTING TOOLS  3 Credit Hours
Examines the role of database administrator, focusing on maintaining, validating and securing data along with use of report writing tools, techniques and best practices.
Prerequisite: IT 21005 and IT 21036.
Schedule Type: Lecture
Contact Hours: 3 lecture
Grade Mode: Standard Letter