

# INFORMATION TECHNOLOGY (IT)

## IT 11000 INTRODUCTION TO OFFICE PRODUCTIVITY APPS 3 Credit Hours

(Equivalent to MIS 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 11004.

**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:** IT 11004.

**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 DSCI 26010 or IT 11005 or TECH 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 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 20021 C# PROGRAMMING 3 Credit Hours

Introductory concepts of C#: development environment, variables, decisions, looping, arrays, strings, methods, exception and event handling.

**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 DSCI 15310 or IT 11002 or MIS 24065.

**Schedule Type:** Lecture

**Contact Hours:** 4 lecture

**Grade Mode:** Standard Letter

## IT 21007 INTERNET ETHICS AND POLICIES 3 Credit Hours

Covers the ethics, issues and policies regarding the Internet. Course includes discussion/research on intellectual property/freedom, hacking, pornography, privacy.

**Prerequisite:** None.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**IT 21008 COMPUTER METHODS IN SCIENCE AND ENGINEERING 3 Credit Hours**

Use of computers in problems related to science and engineering. Course includes introduction to elements of a high-level scientific language.

**Prerequisite:** None.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**IT 21009 SEMINAR IN COMPUTER TECHNOLOGY 3 Credit Hours**

Capstone course encompassing critical reading, writing and discussion applying the current theories of computer technologies to on-the-job experiences. Students develop a portfolio to confirm their level of knowledge.

**Prerequisite:** IT 11002 and IT 11005 and IT 11006 and IT 11009 and IT 21002 and IT 21010.

**Schedule Type:** Seminar

**Contact Hours:** 3 other

**Grade Mode:** Standard Letter

**IT 21010 WORKGROUP PRODUCTIVITY SOFTWARE 3 Credit Hours**

Research project-oriented course emphasizing workgroup methodologies for group project management, problem definition, data retrieval and analysis, conclusions and recommendations.

**Prerequisite:** IT 12000; or OTEC 16639 and OTEC 26611.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**IT 21011 TECHNIQUES OF MULTIMEDIA WEB DESIGN 3 Credit Hours**

Focuses on developing and managing effective web sites using multimedia elements, including sound and video.

**Prerequisite:** IT 11006.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**IT 21036 WEB SCRIPTING I 3 Credit Hours**

Course focuses on client-side scripting needed to create interactive and dynamic websites. The use of scripting in context with various technologies is explored.

**Prerequisite:** CS 13001 and CS 27101; or IT 11002 and IT 11006; or MIS 24065; or TECH 26301.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**IT 21092 COMPUTER PRACTICUM (ELR) 1-3 Credit Hours**

(Repeatable for credit) Supervised work experience in information technology environment; 45 hours supervised work experience per credit hour.

**Prerequisite:** Sophomore standing.

**Schedule Type:** Practicum or Internship

**Contact Hours:** 3-9 other

**Grade Mode:** Standard Letter

**Attributes:** Experiential Learning Requirement

**IT 21095 SPECIAL TOPICS IN COMPUTER TECHNOLOGY 1-4 Credit Hours**

(Repeatable for credit) Topics announced when scheduled.

**Prerequisite:** special approval.

**Schedule Type:** Lecture

**Contact Hours:** 1-4 lecture

**Grade Mode:** Standard Letter

**IT 21096 INDIVIDUAL INVESTIGATION IN COMPUTER TECHNOLOGY 1-4 Credit Hours**

(Repeatable for credit) Individual study in computer field.

**Prerequisite:** special approval.

**Schedule Type:** Individual Investigation

**Contact Hours:** 7-28 other

**Grade Mode:** Standard Letter

**IT 21100 LOCAL AREA NETWORK TROUBLESHOOTING 3 Credit Hours**

Covers local area network troubleshooting techniques. Topics include identifying the scope of the problem, systematic troubleshooting approaches, problem resolution and ongoing maintenance.

**Prerequisite:** CS 33211 or DSCI 26010 or IT 21002 or; TECH 23010 and TECH 26301.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**IT 21110 INTRODUCTION TO ROUTING AND SWITCHING 3 Credit Hours**

Introduces internetworking concepts. Topics include networking standards, cabling, Transmission Control Protocol/Internet Protocol (TCP/IP), router configuration, local area network (LAN) and wide area network (WAN) segments and other related topics.

**Prerequisite:** CS 33211 or DSCI 26010 or IT 21002; or TECH 23010 and TECH 26301.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**IT 21200 ETHICAL HACKING 3 Credit Hours**

Tools and techniques ethical hackers and security testers use to discover vulnerabilities and solutions to protect computer networks.

**Prerequisite:** CS 33211 or DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 26301.

**Schedule Type:** Lecture

**Contact Hours:** 4 lecture

**Grade Mode:** Standard Letter

**IT 36095 SPECIAL TOPICS IN COMPUTER TECHNOLOGY 2-3 Credit Hours**

(Repeatable for credit) Various special courses will be announced in the schedule of classes.

**Prerequisite:** None.

**Schedule Type:** Lecture

**Contact Hours:** 2-3 lecture

**Grade Mode:** Standard Letter

**IT 36301 ADVANCED C++ PROGRAMMING 4 Credit Hours**

Course using C++ classes and data abstraction, stream IO, 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.

**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 device platforms such as PDAs and Smartphones. Practical programming examples will utilize Visual Basic and the .NET Compact Framework.

**Prerequisite:** CS 13001 or DSCI 15310 or IT 11002 or IT 20001 or IT 20021 or MIS 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.

**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 COMPUTER TECHNOLOGY 3 Credit Hours**

(Repeatable for a maximum of 6 credit hours) Certification preparation course to help students prepare for professional certification attempts in computer 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 TECH 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 26301.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**IT 36392 INTERNSHIP FOR COMPUTER 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:** Practicum or Internship

**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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 26301.

**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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 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 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 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 DSCI 15310 or IT 11002 or MIS 24065.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter

**IT 46309 VISUAL BASIC WEB PROGRAMMING 3 Credit Hours**

Using Visual Basic 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, AJAX, and WCF services.

**Prerequisite:** CS 13001 or DSCI 15310 or IT 11002 or MIS 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 DSCI 15310 or IT 21005 or MIS 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 DSCI 26010 or IT 21002; or TECH 23010 and TECH 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 21010.

**Schedule Type:** Lecture

**Contact Hours:** 3 lecture

**Grade Mode:** Standard Letter