

NETWORKING (ICT)

ICT 112 Introduction to Networking 3 sem. hrs.

Students will study the elements of a computer network including the base framework and infrastructure, concepts of operation, installation, and configuration of the hardware and operating system software. Students will acquire hands-on experience from actual setup and configuration in a network lab environment.

ICT 210 Understanding UNIX/LINUX 3 sem. hrs.

Introduction to the UNIX/Linux operating systems will be conducted using a laboratory environment. Students explore the components of the UNIX/Linux operating system, discuss installation and configuration elements, and examine their application in today's business economy. Prerequisite: CS 111.

ICT 286 Introduction to Cybersecurity 3 sem. hrs.

This course examines intrusion detection methodologies and the approaches to handling intrusions. Students will examine the legal aspects of cybercrime and proper computer and network forensics procedures necessary for prosecution of criminal activity.

ICT 298 Comp Science Career Seminar I 1 sem. hr.

This introductory seminar focuses on helping beginning computer science students from all three majors gain valuable time with professionals in the field through seminars, presentations and at conferences meant to expose students to career options in CS.

ICT 301 Advanced Networking 3 sem. hrs.

This course is a continuation of Introduction to Networking. Advanced topics in evaluation, selection, and implementation of network hardware, operating systems, application software, and scalability and availability will be covered. Prerequisite: ICT 112.

ICT 302 Telecommunication Networking 3 sem. hrs.

Students will study the various technologies and applications of telecommunications. The course examines the current and future trends in telecommunications as well as understanding the management and strategy for business applications. Prerequisites: CS 108/CS 109.

ICT 303 Wireless and Mobile Computing 3 sem. hrs.

This course focuses on the use of wireless and mobile computing within the corporate network. Students will examine the configuration, administration, deployment techniques, and security aspects of implementing and maintaining wireless networks. Prerequisites: CS 108/CS 109.

ICT 386 Introduction to Cybersecurity 3 sem. hrs.

This course examines fundamental concepts of computer and network security, cyber-attacks, and cyber-defense. Students will examine the legal aspects of cybercrime and investigate standards and best practices for mitigating cybercrime. Prerequisites: CS 108/CS 109.

ICT 401 Fund of Inform & Network Secur 3 sem. hrs.

This course examines fundamental concepts of information security. Students will investigate developing and implementing organization-wide security policies to protect the information assets of an organization. Prerequisites: ICT 112, ICT 210, ICT 301, ICT 302, ICT 303.

ICT 402 Virtual, Cloud Comp & Secur 3 sem. hrs.

The course investigates the impact of virtualization technology on networks and business infrastructure. Students will examine the required infrastructure, determine the proper planning, and deployment of resources required to support virtualization, cloud computing, and information storage.

Prerequisites: ICT 112, ICT 301, ICT 302, ICT 303.

ICT 403 Adv Network Administration 3 sem. hrs.

This course focuses on the skills necessary to manage networking operating systems, client-server applications, SMTP, and directory server support. Topics include common operating systems, networking protocols, architecture design, and designing specific types of networks. Prerequisites: ICT 112, ICT 210, ICT 301, ICT 302, ICT 303, ICT 401, ICT 402.

ICT 404 Network Des & Mgmt (Capstone) 3 sem. hrs.

Students will study the techniques of network planning, selection and implementation. This course will focus on customer and system requirements, system constraints and performance, design of new networks, managing existing networks, system security requirements. Students will develop a detailed network design that encompasses course elements.

Prerequisites: ICT 112, ICT 301, ICT 302, ICT 303, ICT 401, ICT 402.

ICT 410 Intru Detect & Incid Response 3 sem. hrs.

This course examines intrusion detection methodologies and the approaches to handling intrusions. Students will examine the legal aspects of cybercrime and proper computer and network forensics procedures necessary for prosecution of criminal activity. Prerequisites: CS 386, CS 108/CS 109.

ICT 411 Digital Forensic Analysis 3 sem. hrs.

This course focuses on the collection, examination, and preservation of evidence of computer crimes. Student will examine the issues, tools, and control techniques needed to successfully investigate illegal cyber activities when breaches occur. Prerequisites: CS 386, CS 108/CS 109.

ICT 412 Ethical Hacking & Sys Defense 3 sem. hrs.

This course focuses on the fundamentals of ethical hacking and the ethics of attacking systems. A clear distinction will be presented between ethical and criminal hacking. Students will examine the elements needed to secure computer systems from criminals. The course investigate fundamentals of system defense to prevent unauthorized access through software and physical controls. In addition, this course will examine the psychological aspect of cyber crimes. Prerequisites: CS 386, CS 108/CS 109.

ICT 498 CS Career Seminar II 1 sem. hr.

This capstone experience focuses on helping advanced computer science students from all three majors gain valuable time with professionals in the field, through seminars, presentations, and at conferences.