

INFORMATION TECHNOLOGY, MINOR

Why Take This Minor?

Students who pursue Information Technology are those who enjoy working with computer hardware, networks, security, and databases. Graduates pursue careers as network administrators, computer security specialists, database administrators, and web programmers. The minor in information technology introduces students to the foundational courses in the field usually encountered during the first two years of study.

Required for Graduation

- Courses
 - 6
- Credits
 - 19

Requirements

Code	Title	Credits
CSIT 220	Data Communication	3
CSC 230	Programming Concepts and User Interfaces	4
CSC 240	Database Management Systems	3
Three additional CSIT courses numbered 300 or greater. ¹		9
Total Credits		19

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Choose three courses from the following options.

Code	Title	Credits
CSIT 300	Computers, Ethics, And Social Values	3
CSIT 301	Computer Architecture	3
CSIT 320	LANs and Network Administration	3
CSIT 321	Client Support	3
CSIT 327	Administrative Scripting	3
CSIT 330	Computer Forensics	3
CSIT 370	Selected Topics in Information Technology	3
CSIT 380	Applied Technology Systems	3
CSIT 422	Information Security	3
CSIT 440	Cloud Computing	3
CSIT 444	Research in CSIT I	3
CSIT 460	Internship	3
CSIT 470	Special Topics	3

Recommended Course Sequence

Course	Title	Credits
Second Year		
First Semester		
CSIT 220	Data Communication	3
Credits		3
Second Semester		
CSC 240	Database Management Systems	3
Credits		3

Third Year		
First Semester		
CSC 230	Programming Concepts and User Interfaces	4
Credits		4
Second Semester		
CSIT Elective #1		3
Credits		3
Fourth Year		
First Semester		
CSIT Elective #2		3
Credits		3
Second Semester		
CSIT Elective #3		3
Credits		3
Total Credits		19

Course Descriptions

CSIT 220 Data Communication

This course will address current methods and practices in the use of computer networks to enable communication; physical layers, architectural layers, design, operation, management, and the ISO standards. Local, cloud and wide area networks are examined. Student projects may include introductory LAN design, implementation and administration.

CSIT 300 Computers, Ethics, And Social Values

The topics in this course include privacy and information use/misuse offline and online, intellectual property, the First Amendment, e-waste, accuracy of information, ethics, effects of computers on work and society, responsibilities and risks of computing, current issues such as credit cards and associated debt, cyberwar, and cloud computing. (offered in alternate years) Prerequisite(s): CSIT 220, CSC 240 Corequisite(s): ENG 210

CSIT 301 Computer Architecture

This course is an introduction to computer architecture and hardware; underlying structures needed to accomplish tasks electronically; and hardware and software architecture components relative to memory management, I/O control, and processing capabilities. Prerequisite: .CSIT 220.

CSIT 320 LANs and Network Administration

This course provides a practical approach to network administration methodology using current technologies; network hardware; Network Operating System installation; account management; file sharing; network printing; protocol and services configuration; client connectivity and troubleshooting; network application support; server maintenance; and cross-platform integration. One hour of lecture and two hours of laboratory are scheduled per week. (offered in alternate years) Prerequisite(s): CSIT 220

CSIT 321 Client Support

Topics in this course include installation, maintenance, and customization of a PC client operating system (OS), additional system and application software and hardware installation. The course will also provide a survey of OS utilities, services, and settings, including command-line instructions, menus, start-up processes, purposes of essential OS files, browser options, the task manager, the registry, firewall, etc. (offered in alternate years) Prerequisite(s): CSIT 220

CSIT 327 Administrative Scripting

Production environments use scripts because of the rapid deployment and their "hands-off" nature, which is lacking in GUIs. The main focus is the use of scripts to automate installation, maintenance, and analysis of operating systems, networks, and applications. This course will examine popular scripting languages that are used in Windows and Linux environments. (offered in alternate years) Prerequisite(s): CSC 230 and CSIT 320

CSIT 330 Computer Forensics

This course focuses on legislation related to digital forensics, the role of a computer forensics examiner, evidence preservation, and computer forensic tools. This course provides a comparative study of legislation related to civil and criminal cases using digital forensics, evidence analysis, chain of custody, and data retrieval from computer hardware and software applications. Students will have hands-on labs examining network intrusion and digital evidence preservation using various computer forensic tools. Prerequisite(s): CSIT 220

CSIT 370 Selected Topics in Information Technology

This course is an introduction to specialized research in computers and computing, concentrating on one particular aspect of information technology. The subject matter will vary from term to term. Restriction(s): junior or senior standing

CSIT 380 Applied Technology Systems

This course will provide an overview of software systems used in a business environment. The course will discuss the network architecture needed to support these environments, including specific issues related to licensing, metrics, infrastructure, and environmental requirements. (offered in alternate years) Prerequisite(s): CSIT 220 and CSC 240

CSIT 422 Information Security

Topics in this course include basic computer security concepts, terminology, and issues, including network security, Windows security, and Linux security; hardening, TCP/IP, scanning, sniffing, IPSec, public key infrastructure, Kerberos, certificates, cryptography, firewalls, intrusion detection systems, security policies, and processes. (offered in alternate years) Prerequisite(s): CSIT 320 or CSIT 321

CSIT 423 Penetration Testing & Ethical Hacking

This course systematically covers the skills in penetration testing: the act of attempting to penetrate a computer system on behalf of the owners of the system for the purpose of discovering security vulnerabilities that can be exploited by the hacker. The topics of this course include reconnaissance, scanning, enumeration, vulnerability assessment, escalation, workflow of penetration testing, and legal aspects of ethical hacking.

CSIT 440 Cloud Computing

This course covers a series of current cloud computing technologies, including technologies for Infrastructure as a Service, Platform as a Service, Software as a Service, and Physical Systems as a Service. For different layers of the cloud technologies, students will work with current technologies to create, deploy, and administer the service. The course will provide a foundation for development and exploration of cloud resources. Prerequisite(s): CSIT 220, CSC 230, CSC 240

CSIT 444 Research in CSIT I

This course provides the student with an opportunity to do research with a faculty member. The student and the faculty member agree on the research project before the student registers for the course.

CSIT 460 Internship

Part-time, paid or non-paid employment in a cooperating site will provide practical experience in the discipline. Working under professional supervision for at least 20 hours per week, students learn how to apply their education to the everyday demands of the world of work. Students will meet regularly with a faculty member and will be encouraged to reflect on the relationship between course work and their internship experience. Restriction(s): junior or senior standing, 2.5 GPA overall and in the major, and departmental approval

CSIT 470 Special Topics