

BACHELOR OF SCIENCE IN APPLIED SCIENCE IN INFORMATION TECHNOLOGY

Information technology provides systematic foundations that include methodologies and models for conceptualizing the complex dynamics of the Information Technology environment as it applies to information systems design and implementation.

IT professionals possess the right combination of knowledge and practical, hands-on expertise to take care of both an organization's information technology infrastructure and the people who use it. They assume responsibility for selecting hardware and software products appropriate for an organization. They integrate those products with organizational needs and infrastructure, and install, customize and maintain those applications, thereby providing a secure and effective environment that supports the activities of the organization's computer users. In IT, programming often involves writing short programs that typically connect existing components (scripting).

Planning and managing an organization's IT infrastructure is a difficult and complex job that requires a solid foundation in applied computing as well as management and people skills. Those in the IT discipline require special skills – in understanding, for example, how networked systems are composed and structured, and what their strengths and weaknesses are. There are important software systems concerns such as reliability, security, usability, and effectiveness and efficiency for their intended purpose; all of these concerns are vital. These topics are difficult and intellectually demanding.

The program supports work processes and employee performance enhancements; is designed to improve overall workgroup and individual productivity; and addresses the creation, distribution, storage, and use of information in all its states. Business processes are incorporated as an integral part of all course content. Information Technology encompasses:

- End-User Computing
- Information Centers
- Computer-Supported Work
- Performance Support
- Project Management
- Multimedia
- Networks
- Database Systems
- System Analysis
- Information Security

IT graduates of the AAS degree program will continue their studies towards a bachelor's degree in a computer or information technology area or will obtain full-time employment as web technicians, help desk support, network technicians, and in other closely related fields.

IT graduates of the BSAS degree program will obtain full-time employment as web designers, network administrators, multimedia specialists, and in other closely related fields.

Bachelor's Degree Program

The information technology professional will develop his or her ability to conceptualize, design, and implement high-quality information systems based upon computer systems ranging from single-user systems to complex, interactive, and multi-user distributed systems. This degree may be earned in eight semesters if students average 16 hours per semester.

IT majors will choose to follow one of several concentration areas:

- database
- e-commerce programming
- multimedia/web design
- networking
- security

Students wishing to receive the Bachelor of Applied Science in information technology must complete the following:

COURSE	TITLE	S.H.
General Education Requirements		
Core Competencies		9
ENGL 1550	Writing 1	
ENGL 1551	Writing 2	
CMST 1545	Communication Foundations	
Mathematics Requirement <small>Included in Support Courses</small>		
University general education requirements in essential skills and knowledge domains.		28
Arts and Humanities		
Natural Sciences		
Social Science		
Social and Personal Awareness		
General Education Elective		
Major Requirements		
CSIS 1525	Survey of Modern Operating Systems	3
CSIS 1570	Web Systems and Technologies	3
CSIS 1590	Survey of Computer Science and Information Systems	3
CSIS 1595	Fundamentals of Programming and Problem- Solving 1	3
CSIS 2605	Fundamentals of Programming and Problem- Solving 2	3
CSIS 3722	Development of Databases	3
CSIS 3723 or CSIS 3782	Networking Concepts and Administration Cisco Networking Academy 1	3
CSIS 3731	Human-Computer Interaction	3
CSIS 3755	Information Assurance	3
INFO 2663	Information Technology Management	3
INFO 4880	Information Technology Analysis and Design	3
Concentration area		9
Database Concentration		
CSIS 3726	Visual/Object-Oriented Programming	
CSIS 4822	Database Applications	
INFO 3714	Advanced Spreadsheets	
E-Commerce Concentration		
CSIS 2660	Foundations of Electronic Commerce	
CSIS 3760	Electronic Commerce Programming	
CSIS 3761	Electronic Commerce Strategies	
Multimedia Concentration		
CSIS 3760	Electronic Commerce Programming	
INFO 3775	Multimedia Authoring	
INFO 3776	Client-Side Scripting Techniques	
INFO 3777	Computer Technology for Digital Image Processing	
INFO 5875	Advanced Multimedia Authoring	
Networking Concentration		
CSIS 2620	System Configuration and Maintenance	
CSIS 3783	Cisco Networking Academy 2	
CSIS 4823	Data Communications Networking	
CSIS 5883	Remote Access and Multilayer Switched Networks	

CSIS 5884	Building Scalable Networks and Advanced Internetwork Troubleshooting	
Security Concentration		
CSIS 2620	System Configuration and Maintenance	
CSIS 3756	Security Design	
CSIS 3757	Computer Forensics	
CSCI 5857	Encoding and Encryption	
CSCI 5895	Special Topics	
Departmental Electives		
Select at least 6 additional semester hours of upper division Information Technology or CSIS courses. CSCI or CIS courses numbered 3000 and above may also be used as electives with advisor approval.		6
Support Courses		
STAT 2601	Introductory Statistics	3
MATH 1552	Applied Mathematics for Management	4
INFO 3704	Business Communication	3
or ENGL 3743	Professional and Technical Writing	
Minor		
Select at least 18 s.h. from an unspecified minor.		18
Free Electives	Any courses to meet 120 total hours	7
Total Semester Hours		120
Course	Title	S.H.
Year 1		
Fall		
ENGL 1550	Writing 1	3
CSIS 1590	Survey of Computer Science and Information Systems	3
CSIS 1595	Fundamentals of Programming and Problem-Solving 1	3
CMST 1545	Communication Foundations	3
GER Natural Science + Lab		4
Semester Hours		16
Spring		
ENGL 1551	Writing 2	3
CSIS 1525	Survey of Modern Operating Systems	3
CSIS 2605	Fundamentals of Programming and Problem-Solving 2	3
INFO 2663	Information Technology Management	3
MATH 1552	Applied Mathematics for Management	4
Semester Hours		16
Year 2		
Fall		
CSIS 1570	Web Systems and Technologies	3
CSIS 3722	Development of Databases	3
STAT 2601	Introductory Statistics	3
Minor		
GER Arts & Humanities		3
Semester Hours		15
Spring		
CSIS 3731	Human-Computer Interaction	3
CSIS 3723 or CSIS 3782	Networking Concepts and Administration or Cisco Networking Academy 1	3
INFO 3704 or ENGL 3743	Business Communication or Professional and Technical Writing	3
Minor Course		3
GER Social Science		3
Semester Hours		15

Year 3		
Fall		
CSIS 3755	Information Assurance	3
INFO/CSIS UD Elective		3
Minor Course		3
GER Social & Personal Awareness		3
GER Arts & Humanities		3
Semester Hours		15
Spring		
IT Concentration		3
Free elective		3
Minor Course		3
GER Social Science		3
GER Social & Personal Awareness		3
Request a Graduation Evaluation after completing 80-85 s.h. from the STEM Advising Center, 2325 Moser Hall, (330) 941-2512.		
Semester Hours		15
Year 4		
Fall		
IT Concentration		3
INFO/CSIS UD elective		3
Minor Course		3
GER NS		3
Free Elective		3
Semester Hours		15
Spring		
INFO 4880	Information Technology Analysis and Design	3
IT Concentration		3
IT Concentration		3
Minor Course		3
Free Elective		1
GER NS, AH, SS, or SPA		3
Semester Hours		13
Total Semester Hours		120

Learning Outcomes

1. The Bachelors program in Information Technology provides preparation and instruction that enables for students acquire knowledge and technical competencies to perform network design, implementation, and administration.
2. The Bachelors program in Information Technology provides preparation and instruction that enables for students acquire knowledge and technical competencies to perform information assurance and security.
3. The Bachelors program in Information Technology provides preparation and instruction that enables for students acquire knowledge and technical competencies to design, implement, and administer databases.
4. The Bachelors program in Information Technology provides preparation and instruction that enables for students acquire knowledge and technical competencies to design and implement reports and documents required by the organization through extraction of information using appropriate programs and applications.
5. The Bachelors program in Information Technology provides preparation and instruction that enables for students acquire knowledge and technical competencies to demonstrate information management skills in project management and system analysis, design, implementation, testing and monitoring.
6. The Bachelors program in Information Technology provides preparation and instruction that enables for students acquire knowledge and technical

competencies to write and produce or assist in developing interactive programs.

7. The Bachelors program in Information Technology provides preparation and instruction that enables for students acquire knowledge and technical competencies to recognize technical and legal issues involved with technologies and concepts used in information technology.