Computer Information Technology

Background
The Computer Information Technology (CIT) major prepares students to become information technology professionals in both the private and public sectors. These professionals ensure that their organizations’ computer systems work properly, are secure, are properly used in developing solutions, and are properly administered.

Students are often unclear on the differences between the CIT major and the Computer Science (CS) major (which is also offered by the ICS department). Educationally, the CIT major has a stronger emphasis on database management and web design, whereas the CS major places a greater stress on programming languages, computer organization, operating systems, and mathematics. The CIT major prepares students for careers such as system administrator, database analyst, or web designer and may be more attractive to people who want to work with existing systems and software, or customize it for the needs of their employers.

Careers
Graduates of the program will pursue careers as web analysts, systems analysts, computer support analysts, database designers and analysts, technical managers, and application programmers. Most graduates of the program have started their careers in the Twin Cities.

For this purpose, the curriculum imparts an understanding of current concepts, best practices, and standards and the knowledge and ability to apply them in the core information technologies such as database systems and e-commerce applications. They will also have the ability to use current computing knowledge, techniques, skills, and tools to analyze a problem, determine user needs, develop systems or evaluate available systems, and create an effective project plan. They will work effectively in groups and communicate effectively with a range of audiences. Graduates will have an understanding of professional, ethical, legal, security and social issues.

Program
Metropolitan State University is accredited by The Higher Learning Commission and is a member of the North Central Association. The Bachelor of Science in Computer Information Technology is a four-year, 120 credits program offered through the Information and Computer Sciences (ICS) department. This major provides a foundation of both theoretical and practical knowledge in the many aspects of information sciences and technology. Course work to develop analytical and problem-solving skills is complemented by hands-on courses in Metropolitan State’s computer labs.

Major Requirements
The coursework in the program may be divided into two categories: Major prerequisites, and Required Core and Elective Courses.

Major Prerequisites
- MATH 115 College Algebra
- MATH 215 Discrete Mathematics
- ICS 140 Programming Fundamentals
- ICS 141 Programming with Objects

Required Core and Elective Courses
The core courses present and synthesize material that is essential to professionals in the field.
- ICS 225 Web Design and Implementation
- STAT 201 Statistics 1
- CFS 262 Computer and Operating Systems Fundamentals I
- CFS 264 Computer and Operating Systems Fundamentals II
- ICS 311 Database Management Systems
- ICS 370 Software Design Models
- ICS 382 Computer Security
- ICS 325 Internet Application Development OR ICS 425 Client/Server Architectures
- ICS 499 ICS Capstone Project

Eight elective course from CFS 280, CFS 380, ICS 240, or any of the upper-division ICS courses except ICS 381 and ICS 390

Undergraduate Catalog
Computer Information Technology Major Requirements, Course Descriptions, Major Checklist and Course Sequence
www.metrostate.edu/msweb/explore/catalog/undergrad/

Department of Information and Computer Sciences
www.metrostate.edu/msweb/explore/cas/departments/csci/index.html

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