INFORMATION TECHNOLOGY MAJOR

UMass Boston College of Management

OVERVIEW AND CAREER PATHWAYS

The Information Technology (IT) major is a jointly offered program between the College of Management (CM) and the College of Science and Mathematics (CSM) at the University of Massachusetts Boston. The IT major consists of a common core of ten courses, a track of four to six courses in a particular area of specialization (the business intelligence track requires five courses), a common capstone course, and three professional electives.

The IT major is designed to offer a top-notch program that addresses the Commonwealth's IT workforce needs through collaboration between CM and CSM. This degree provides a pathway from the bachelor's degree to IT positions in the public and private sectors as well as for-profit and nonprofit organizations. Exercises assigned throughout the IT major are designed to simulate real-world experience; collaboration, competence, and outcomes assessment are the hallmark characteristics of the program.

INFORMATION SYSTEMS AND BUSINESS ANALYTICS MAJOR REQUIREMENTS

All Bachelor of Science degrees from the College of Management require at least 120 credits, which is typically completed by taking five 3-credit courses each semester. The requirements outside of this major are:

General Education and Non-Major requirements: some may overlap with each other or major requirements

- Verbal Reasoning & Expression: ENGL 101 & ENGL 102
- First Year Seminar (if entering with less than 30 cr)
- Intermediate Seminar
- Non-Business Foundation[1]: ECON 101 & ECON 102
- Quantitative Reasoning course[1]: MSIS 111L
- Writing Proficiency Requirement: BC 290
- Areas of Knowledge Distribution courses
- Diversity course
- International Management course
- 200-Level Non-Business courses[1]

[1]: These courses can overlap with other degree requirements

General Electives: 7-8 courses [21-24 credits] track selection determines general elective requirement. General Electives may be used toward pre-requisite courses or fulfilled with transfer credit.

The requirements for this major, including the Information Technology Core, professional electives, and Track courses, are:

Information Technology Core: 11 courses [33 credits]

- IT 110: IT Problem Solving
- IT 111L: Managerial Statistics
- Programming Course (see degree audit for options)
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- IT 230L: Relational Databases
- IT 240: Web Fluency
- IT 244: Introduction to Linux/Unix
- IT 246: Introduction to Networks
- IT 285L: Social Issues and Ethics in Computing
- IT 425L: Project Management
- IT 485: Information Technology Capstone

Professional Electives: 3 courses [9 credits] - See degree audit for options

Track Requirement: All IT majors are required to complete at least one of the following tracks:

Business Intelligence Track	5 courses [15 credits] – offered by the College of Management
Computer Forensics Track	5 courses [15 credits] – offered by the College of Management
Information Architecture Track	4 courses [12 credits] – offered by the College of Management
System Administration Track	4 courses [12 credits] – offered by the College of Science and Mathematics

See Reverse for more details about each track option.

As a declared Information Technology Major you will have an assigned College of Management Academic Advisor from Orientation to Graduation. They will help you stay on track as you navigate these requirements and identify areas where they may overlap, while also meeting your personal and academic goals.

ADVISOR PRO TIP You may be able to use your General Electives to possibly pursue a 2nd major or minor within the College of Management. If this is of interest to you – bring it up at your next advising meeting!

DECLARE NOW

INFORMATION TECHNOLOGY MAJOR CONTINUED

See reverse for requirement overview

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All IT majors are required to complete at least one of the following tracks:

Business Intelligence Track **5 courses [15 credits] – offered by the College of Management**

Business Intelligence (BI) is the technology that companies such as Amazon.com and Google use to take advantage of the enormous amount of data they collect and analyze. It is the technology with which Amazon.com knows what book to recommend to you every time you login, Google knows how to rank the pages you are searching for, and banks decide whether to approve loan applications almost instantly. As organizations increasingly have to deal with "big data," the number of job openings and the need for skilled professionals in this field will continue to increase.

Choose three courses:

- IT 370: Introduction to Analytics
- IT 471: Data Warehousing for Business Intelligence
- IT 472: Data Mining for Management Applications
- MSIS 415: Advanced Coding for Analytics

Choose two courses:

- IT 360: Enterprise Software
- IT 428L: Information System Security
- IT 456: Information Storage and Management
- IT 460: Integration Methodologies and Tools
- IT 461L: System Analysis and Design

Computer Forensics Track **5 courses [15 credits] – offered by the College of Management**

Computer Forensics (CF) is a discipline of forensic science that combines elements of law and information technology to collect and analyze data from computer systems, networks, wireless communications, and storage devices in a way that is admissible as evidence in a court of law. CF is also the process of using scientific knowledge for collecting, analyzing, and presenting digital evidence to the courts. With the increasing use of computers to commit crimes and growing demand for computer-based data in civil proceedings, a need has rapidly developed for forensic experts to extract useful information from computer evidence.

Choose 5 courses:

- IT 220: Computer Forensics I
- IT 221: Computer Forensics II
- IT 420: Network and Mobile Forensics
- IT 421: Digital Forensics/Malware Analysis
- SOCIOL 104: Introduction to Systems of Criminal Justice
- SOCIOL 364: Internet, Society, and Cyber Crime

Information Architecture Track **4 courses [12 credits] – offered by the College of Management**

Information Architecture (IA) track is the discipline of designing and implementing information systems that support and enable business strategies and operations. The information architecture track addresses topics covering concepts such as usability (including accessibility, experience design, interaction design, and user interface design), information design (including information find ability and content management), component-based design (including web services, services-oriented architecture, process-oriented architecture, and cloud computing), and enterprise systems. As organizations are relying on increasingly more complex information systems to compete and survive, they are in dire need of IT professionals who understand how to design, deploy, and manage an efficient IT architecture to support their information systems.

Choose 4 courses:

- IT 360: Enterprise Software
- IT 428L: Information System Security
- IT 456: Information Storage and Management
- IT 460: Integration Methodologies and Tools
- IT 461L: System Analysis and Design
- IT 471: Data Warehousing for Business Intelligence

System Administration Track **4 courses [12 credits] – offered by the College of Science and Mathematics**

System Administration (SA) track focuses on the deployment and maintenance of computer systems and networks. The system administration track concerns issues related to the selection, installation, configuration and maintenance of Linux- and Windows-based systems (including shell programming and scripting, heterogeneous systems, remote management, the legal issues of system administration, as well as the design and implementation of policies and automated administration regimes) and Internet-working environments. As organizations keep investing in their information systems, talents are needed to help design, deploy, manage, and safeguard these systems.

Take all 4 courses:

- IT 341: Introduction to System Administration
- IT 442: Windows System Administration
- IT 443: Network Security Administration I
- IT 444: Network Security Administration II