Management, Information Systems, and Quantitative Methods

Degree Offered: Master of Science in Management Information Systems (MS MIS)

Director: Paul M. Di Gangi, Ph.D.
Phone: (205) 490-8324
Email: pdigangi@uab.edu
Website: http://misdegree.businessdegrees.uab.edu/lp-mis-short/

Admission

To obtain specific admissions requirements on how to apply to Graduate School, prospective students should visit this page:
https://businessdegrees.uab.edu/mis-degree-masters/

Application Deadlines
Fall semester - August 1st
Spring semester - December 1st
Summer semester - May 1st

Required Documents
- Online application (https://uabirmingham.force.com/graduate/TX_SiteLogin?startURL=%2Fgraduate%2FTargetX_Portal__PB) with a $70 application fee or $85 international application fee
- Current resume
- Personal Statement: statement must include the student’s professional career goals and how they faced and overcame challenges in their life
- References: 2 from supervisors, trainers, or instructors who can confirm requisite knowledge and skills as identified with the admission qualifications

Admission Requirements
Applicants for the MS MIS program must:

1. Have graduated with a baccalaureate degree in an information technology/systems related field from a regionally accredited college or university with a minimum overall grade point average (GPA) of 3.0 on a 4.0 scale. Those not meeting this requirement must have:
   - Completed a baccalaureate degree in other areas of study from a regionally accredited college or university, or completed another graduate degree; AND completed the UAB MS MIS Bridge Program with a grade of B or better in all coursework. The Bridge Program consists of the following courses:
     - BUS 350 Business Communications
     - IS 303 Information Systems
     - IS 302 Business Data Communications
     - IS 204 Introduction to Business Programming
     - IS 301 Introduction to Database Management Systems
     - IS 321 Systems Analysis
   OR:
     - Submitted evidence to UAB as to significant work experience in IS/IT/computer programming, enterprise systems, databases, and/or system design and analysis; OR
     - Submitted evidence to UAB as to IS/IT/Computer industry certifications in computer programming, enterprise systems, databases, and/or system design and analysis.

2. Provide evidence of relevant work experience (a minimum of 3 years of experience is preferred)

3. Have a GMAT score of 480 or higher. Those not meeting this requirement can:
   - Submit a GRE combined verbal and quantitative score of 1050 (score of 303 after August 1, 2011) or higher (GRE scores many not be more than 5 years old), OR
   - Show 5 years of relevant work experience, AND
   - Show documentation of completing a graduate degree in any discipline with a minimum GPA of 3.0 on a 4.0 scale, or completion of the MSMIS Bridge Program with a grade of B or better in all coursework AND maintain a minimum overall undergraduate GPA of 3.0 on a 4.0 scale.

International Applicants

International applicants whose native language isn’t English are required to show proof of English proficiency by submitting a TOEFL, IELTS, or PTE Academic test score. Official test scores are required and should be sent directly from the testing agency to UAB. Scores should not be more than 2 years old. The minimum score requirements are as follows:

- TOEFL (Test of English as a Foreign Language) score of 550 on the paper-based examination, 213 on the computer-based version, or 80 on the Internet-based version
- IELTS (International English Language Testing Service) score of 6.5 overall with at least a 5.0 on each section of the examination

Full Time Student Enrollment Status

To be enrolled as a full-time graduate student, a student must register for at least 9 semester hours in the fall, spring, and summer semesters. http://catalog.uab.edu/graduate/enrollment/. If a student is enrolled in courses offered in a 7-week format, those credit hours are applied toward the 9 semester hour requirement for the entire 14-week term.

Example: If a student is enrolled in 6 credit hours in the Spring A term (first 7 weeks) and 3 credit hours in the Spring B term (second 7 weeks), the university recognizes this student to be enrolled in 9 semester hours for the entire period (14-week term), and of full time status.
Master of Science in Management
Information Systems -
Concentration in Cyber Security Management

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<tr>
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<tr>
<td>IS 613 Information Security Management</td>
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<td>IS 644 Digital Forensics</td>
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Total Hours: 30

Concentration in Information Technology Management

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Concentration in Business Analytics

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<td>IS 619 Advanced Business Analytics</td>
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<tr>
<td>IS 651 Data Management &amp; SQL for Analytics</td>
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<tr>
<td>IS 652 Data Visualization for Business</td>
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Total Hours: 30

Students have a maximum of 3 years to complete degree requirements. Certain professional certifications are eligible for transfer credit upon Program Director approval. Students must be in current good standing and provide proof of completed continuing education requirements if certification is scheduled to expire with the calendar year. No more than 6 semester hours may be credited using certifications.

1 Security+ earned through CompTIA, or Certified Information Systems Security Professional (CISSP) earned through ISC2 may satisfy this course requirement.
2 Project Management Professional earned through PMI may satisfy this course requirement.

Courses

IS 599. Directed Readings. 1-3 Hour.
Readings and independent study in selected areas.

IS 607. Introduction to Cyber Security. 3 Hours.
This course serves as an introduction to the field of cyber security where students will develop a basic understanding of the cyber security principles. Students will be able to understand the business value of cyber security and its legal / ethical considerations. Students will also gain an appreciation for security planning and risk management and how risk may be mitigated through technical, physical, and administrative controls.

IS 608. Desktop Analytics with IT Tools. 3 Hours.
Business decisions require the basic skills of analyzing data to understand the problem more completely and to produce better solutions. This course examines the role of IT desktop tools to support a wide variety of business problems in the field of business analytics. Students work at the operational level using business analytics desktop tools to learn foundational topics relating to analysis, statistical modeling, and decision-making in an IT-based business environment. Students will gain hands-on experience with spreadsheet modeling and practical business problems that require analysis and interpretation of data.

IS 611. Information Technology and Business Strategy. 3 Hours.
This course is designed to improve your understanding of business strategy and the information technology that supports and shapes it. Information technology spans all business functions. We will study both the challenges and the opportunities that are the result of this pervasiveness.

IS 612. IT Governance and Management. 3 Hours.
This course introduces the concept of IT governance and will expose students to various IT governance frameworks. Particular focus will be given to the IT Governance Institutes COBIT framework, ITIL and ISO standards. Students will have an advanced understanding of the various IT governance frameworks, their application in an organizational setting and the managerial issues associated with different governance structures.

IS 613. Information Security Management. 3 Hours.
Primary objectives of the course are for the student to develop an understanding of key information security concepts, develop an understanding of how people, technology, and organizational policies should be developed and managed to safeguard an organization's information resources, learn how to manage under uncertainty and risk, develop policies and procedures to make information systems secure, and learn how to audit and recover from security breaches.

IS 616. Web Analytics. 3 Hours.
The Web Analytics course introduces technologies and tools used to realize the full potential of web sites. Focus is on collection and use of web data such as web traffic and visitor information to design web sites that will enable firms to acquire, convert, and retain customers.
IS 617. Data Science for Business. 3 Hours.
This course will introduce students to the rapidly growing fields of business analytics/ data science, focusing on how data can be used to support decision making in organizations. It explains what and how principles and technologies of data science can be used to extract useful information and knowledge from large volume of structured and unstructured data (e.g., textual content) in order to improve business decision making.
Prerequisites: IS 608

IS 618. IT Project Management. 3 Hours.
The course provides the foundation for the management and successful execution of projects of many types applying PMBOK, or the PMI Project Management Body of Knowledge. The objective is to provide students with an understanding of how to manage technology-oriented projects. A combination of skill development in the general area of project management and application of those skills in evaluating case studies involving technology projects will be used.

IS 619. Advanced Business Analytics. 3 Hours.
The course is the study and practice of how we can extract insightful knowledge from large amounts of data. It is a burgeoning area, currently attracting substantial demand from academy and industry.
Prerequisites: IS 617

IS 620. Cyber Attacks and Threat Mitigation. 3 Hours.
Covers the concepts of network vulnerabilities from a hacker’s perspective. Addresses the latest cutting edge attacks and common attacks still prevalent. Students will explore legal issues associated with computer network attacks. The course also provides students with the knowledge they need to design, build, and operate network systems to prevent, detect, and respond to attacks.

IS 621. Incident Response and Business Continuity. 3 Hours.
This course provides students with the knowledge necessary to prepare for and respond to computer security incidents. Topics include incident response preparation, detection, reaction, recovery, and maintenance. Computer-related disaster recovery and business continuity planning are also addressed.

IS 622. CISSP I. 3 Hours.
The goal of the CISSP I course is to prepare the professional for the challenging security exam CISSP by covering the syllabus as defined in the Common Body of Knowledge (CBK). The CISSP I course covers the first 5 CISSP domain areas.

IS 623. CISSP II. 3 Hours.
The goal of the CISSP II course is to prepare professionals for the challenging security exam CISSP by covering the syllabus as defined in the Common Body of Knowledge (CBK). The CISSP II course covers the second 5 CISSP domain areas.

IS 630. Web Development. 3 Hours.
In this course, we will discuss concepts, principles, and methods related to the design and implementation of web applications. We will also build basic understanding and technical skills of both client and server technologies.

IS 631. Web Interface Design/Content. 3 Hours.
This course provides an introduction to the study of human-computer interaction, user interface design, and content creation. Course readings focus on developing both a strong theoretical understanding of the field and practical user interface design skills, and creating compelling content. Students will work on several design projects, including paper designs and implemented prototypes. Students will also participate as usability experts in evaluating the designs of others.

IS 633. Mobile Applications. 3 Hours.
In this course, we will discuss concepts, principles, and methods related to the design and implementation of mobile applications. Emphasis is placed on developing web content and creating applications for mobile devices, including internet/business practices and techniques for delivery on mobile platforms.

IS 640. Technology Planning and Capital Budgeting. 3 Hours.
This course will cover financial techniques and metrics that IT managers should be familiar with, including topics such as measuring returns on IT investments, categories of IT investments, defining and quantifying expected benefits, managing the IT investment portfolio, and budgeting for IT expenditures.

IS 641. Leadership in IT. 3 Hours.
The Leadership in IT course will prepare students for leadership roles in IT related careers. The course will provide students with the knowledge, skills, and foundation in Leadership necessary to be effective in organizational settings, and develop an understanding of the components that make leadership successful.

IS 644. Digital Forensics. 3 Hours.
This course focuses on how organizations conduct digital forensics investigations due to intrusion or cyber crime. This course explores how organizations identify, track, and potential aide in the prosecution of cyber criminals. Students will gain an appreciation for how to conduct digital investigations, preserve evidence, understand the role of law enforcement, and intellectual property concerns associated with cyber crime.

IS 650. Business Intelligence Strategy. 3 Hours.
The goal of this course is to develop a managerial level understanding of the strategic role of business analytics. Students gain an appreciation for data-driven decision-making and its role in supporting business and IT strategy. This course explores the differences between the fields of data science, business analytics, and business intelligence. Topics covered include an introduction to the field of business analytics, data management planning, and decision-making with data. This course is designed to provide a high level overview of the disruptive nature of data in business today and how to prepare for a data-driven business environment.

IS 651. Data Management & SQL for Analytics. 3 Hours.
Explore various concepts of data management/ data warehousing for business analytics. The focus of this course is the process of extracting data from a diverse set of sources, transforming and cleaning data, and loading this data into a format used by analytics professionals. Students will also gain expertise in advanced data querying using Structured Query Language (SQL).

IS 652. Data Visualization for Business. 3 Hours.
In this course, students gain experience with techniques on how to effectively communicate the results of an analysis using information and visual aids. Students learn effective methods of presenting information in textual and graphical formats and how to frame data results in a business case format for interpretation by business managers. Students gain hands-on experience with the use of Tableau.

IS 660. Emerging IT Trends & Technologies. 3 Hours.
This course explores emerging IT trends and technologies arising in the business environment based on current events and business developments. The focus of this course will be on the presentation of emerging technologies and an exploration of their business role. Students will gain an appreciation for the business case associated with emerging technologies and IT trends facing IT managers.
IS 690. Current Topics in Information Systems. 3 Hours.
A study of selected current developments in information systems emphasizing development and managerial implications. Permission of instructor required.