Management Information Systems

Degree Offered:	Master of Science in Management Information Systems (MS MIS)
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The UAB Collat School of Business, Master of Science in Management Information Systems (MS MIS) program focuses on the business side of information systems and how to strategically position technology to maximize value for an organization. This program provides the broad perspective needed to advance in the information systems management field, and allow students to tailor their education based on specific career goals by focusing in one of two areas: **Cyber Security Management or Business Analytics**. UAB's emphasis is on the managerial aspects of information systems, and although the program does provide opportunities for skill development in the latest technologies, the goal of the program is to help those currently working in information systems related fields move into managerial positions by improving understanding of how to use the latest information technologies to benefit organizational stakeholders, such as managers, organizations, employees, customers and partners.

The Management of Information Systems field is growing at an exponential rate as organizations struggle to stay current with new and emerging technologies, such as mobile applications, social media, and business analytics. Professionals are needed that can help organizations understand the business potential of these new technologies, how to develop new applications to meet changing market dynamics, and how to secure these systems from threats. Students graduating from this program are prepared to succeed in an exciting and dynamic career field combining a solid technical information system foundation with business skills so they can immediately contribute to solving business problems, and can drill down into specific fields, such as IT management, web and mobile development or information security.

Program Details

The MS MIS program is taught completely online. Most students can complete degree requirements within 1.6 years (1 year for full-time students). Concentrations are available in Cyber Security Management and Business Analytics. Each concentration consists of twelve semester hours. The Collat School of Business is accredited by AACSB–The Association to Advance Collegiate Schools of Business.

Grade Point Average Policy

The MS MIS program follows the GPA policy set forth by the Graduate School: catalog.uab.edu/graduate/academicprogress/

Admission

Applicants for the MS MIS program must have graduated with a baccalaureate degree from a regionally accredited college or university with a minimum overall grade point average (GPA) of 3.0 on a 4.0 scale.

No GMAT/GRE required.

Application Deadlines

Fall semester - July 1st

Spring semester - November 1st

Summer semester- April 1st

Required Documents

• Application form including 3 letters of reference

• Current resume

• Official transcripts from all colleges and universities attended sent directly by the Registrar to the UAB Graduate School, 1720 2nd Ave. S., LHL G03, Birmingham, AL 35294-0013, or electronically to gradschool@uab.edu.

Additional Documents Required for International Applicants

• TOEFL IBT score of 80 with a minimum score of 20 in each section or IELTS of 6.5 with a minimum score of 6.0 in each section **or a composite score of 140 on the Duolingo with a minimum of 120 required in all skill areas (**international applicants only)

*The MSMIS program is offered in an online format only.

Transcript Evaluations

Applicants with coursework earned from institutions outside the United States must provide a course-by-course foreign college transcript evaluation of all attended non-U.S. institutions.* We will accept a transcript evaluation from any NACES accredited evaluation company. To determine academic eligibility for admissions, academic credentials must be:

- Translated to English;
- Evaluated course-by-course;
- Include the overall academic GPA; and
- From an approved third-party company. We will accept a transcript evaluation from any NACES accredited evaluation company.

SpanTran

SpanTran created a custom application for UAB that will make sure you select the right kind of evaluation at a discounted rate. You can access their application through the SpanTran application – The University of Alabama at Birmingham.

International Student and Scholar Services will have access to your decision and a representative will contact you directly if any other documentation is necessary to begin processing your immigration documents.

*UAB will complete the evaluation for institutions outside of the United States if they are on a 4.0 grading scale. UAB reserves the right to

request a NACES-accredited evaluation if a determination is made that the evaluation cannot be completed internally.

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

Requirements		Hours
Core Curriculum		
IS 607	Introduction to Cybersecurity [1]	3
IS 608	Desktop Analytics with IT Tools	3
IS 611	Information Technology and Business Strategy	3
IS 618	IT Project Management [2]	3
IS 650	Artificial Intelligence Strategy	3
IS 660	Emerging IT Trends & Technologies	3
Concentration Course Requirements		
IS 620	Cyber Attacks and Threat Mitigation	3
IS 621	Incident Response and Business Continuity	3
IS 613	Information Security Risk Management	3
IS 644	Digital Forensics	3
Total Hours		**30**

Concentration in Business Analytics

Requirements		Hours
Core Curriculum		
IS 607	Introduction to Cybersecurity [1]	3
IS 611	Information Technology and Business Strategy	3
IS 650	Artificial Intelligence Strategy	3
IS 660	Emerging IT Trends & Technologies	3
IS 608	Desktop Analytics with IT Tools	3
IS 618	IT Project Management [2]	3
Concentration Course Requirements		
IS 617	Artificial Intelligence and Machine Learning	3
IS 619	Text Mining & LLMs	3
IS 651	Data Management & SQL for Analytics	3
IS 652	Data Visualization for Business	3
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 Cybersecurity. 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 Risk Management. 3 Hours.
The primary objectives of the course are for the students to develop a managerial and operational understanding of critical information security risk management concepts. The focus of this course will be on an in-depth investigation of how risk, threats, and vulnerabilities impact information systems and work processes. The course will provide students with an opportunity to gain insights into critical security mitigation best practices.
Prerequisites: IS 607 [Min Grade: C]

IS 617. Artificial Intelligence and Machine Learning. 3 Hours.
This class will apply the basic principles of Artificial Intelligence (AI) and Machine Learning (ML) with regards to their revolution in business processes. Students will master AI and ML algorithms, how they can be used in decision making, process automation, data analysis and customer services. With hands-on exercises and case-study scenarios, participants will understand how companies use AI and ML to innovate, increase efficiency, and gain competitive advantages. It covers topics such as supervised and unsupervised learning, predictive modeling, and AI deployment ethics. Students will be able to critically evaluate and adopt AI and ML tactics in any business domain by the end of the course.

Prerequisites: IS 608 [Min Grade: C]

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. Text Mining & LLMs. 3 Hours.
This course provides an in-depth exploration of text analytics and the emerging field of large language models (LLMs). Students will learn foundational concepts in natural language processing (NLP), including text preprocessing, tokenization, sentiment analysis, and the practical applications of large language models. Students will also learn how powerful LLMs are used in the business world, such as summarizing insights, generating new opportunities, and making marketing predictions. You'll gain hands-on experience using these tools to solve real-world problems in business and beyond.
Prerequisites: IS 617 [Min Grade: C]

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 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. Artificial Intelligence Strategy. 3 Hours.
Students taking this class will gain a managerial-level understanding of the strategic implications of Artificial Intelligence (AI) for businesses today. By weighing data-driven decision-making, addressing data quality issues, managing big data and machine learning, and deliberating ethical considerations, students will learn to deploy AI in organizations to maximize business value.

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.