Management Information Systems

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

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lp-mis-short/

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 allows students to tailor their education based on specific career goals by focusing in one of three areas: **Cyber Security Management, IT 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, IT 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.

**Master of Science in Management Information Systems -**

**Concentration in Cyber Security Management**

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**Total Hours** 30

**Concentration in Information Technology Management**

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<td>IS 621</td>
<td>Incident Response and Business Continuity</td>
</tr>
<tr>
<td>IS 640</td>
<td>Technology Planning and Capital Budgeting</td>
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<tr>
<td>IS 641</td>
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**Concentration in Business Analytics**

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<td>IS 619</td>
<td>Advanced Business Analytics</td>
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<tr>
<td>IS 651</td>
<td>Data Management &amp; SQL for Analytics</td>
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<tr>
<td>IS 652</td>
<td>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 Cybersecurity. 3 Hours.
This course serves as an introduction to the field of cybersecurity
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. 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 [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. 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 [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 644. Digital Forensics. 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 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.