# MANAGEMENT INFORMATION SYSTEMS PROGRAM

## Master of Science (M.S.) Degree

## DEGREE INFORMATION

**Program Admission Deadlines:**

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|---|---|
| **Fall:** | July 1 |
| **Spring:** | November 1 |
| **Summer:** | No Admit |
| ***International:*** | |
| **Fall:** | February 1 |
| **Spring:** | July 1 |
| **Summer:** | No Admit |

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|---|---|
| **Minimum Total Hours:** | 33 |
| **Program Level:** | Masters |
| **CIP Code:** | 11.0501 |
| **Dept Code:** | QMB |
| **Program (Major/College):** | ISM BA |

**Also offered as:**
Track under Business Administration (Ph.D.) and
application area in Business Administration (M.B.A.)

## CONTACT INFORMATION

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|---|---|
| **College:** | Business |
| **Department:** | Information Systems/Decision Sciences |
| **Contact Information:** | www.grad.usf.edu |
| **Other Resources:** | www.usf4you |

## PROGRAM INFORMATION

**Management Information Systems (M.S./M.I.S.)**
The Master of Science in Management Information Systems (M.S./M.I.S.) meets the needs of the marketplace for expertise in both information technology and management. Highly qualified individuals with motivation for leadership in information technology fields are encouraged to apply for admission to this program. Graduates of the program are in great demand by firms in the information services sector of the economy, software development organizations, management consultants, and M.I.S. departments in industry. An Advisory Board consisting of senior information systems executives and consultants works closely with the department to ensure that the program maintains high standards.

The MS/M.I.S. program is designed for individuals who are challenged by applications of Information Systems and Information technology and who are willing to undertake a career that demands a broad rather than narrow range of skills. Students who already have considerable background either in information systems or in business coursework will make use of the built-in flexibility of the program, designing programs of study that will provide them with the best background for their careers. A faculty advisor will work closely with each student to design and monitor the most effective course sequence and optional thesis/practicum work.

**Accreditation**
Accredited by the Commission on Colleges of the Southern Association of College and Schools, and AACSB International - The Association to Advance Collegiate Schools of Business.

## ADMISSION INFORMATION

Must meet University requirements (see Graduate Admissions) as well as requirements listed below.

### Program Admission Requirements

Students are admitted to the M.S./MIS program based on the evaluation of their application in its entirety, including

- prior college level academic grades earned,

- GMAT or GRE scores,
- TOEFL scores (for international students only),
- letters of recommendations,
- statement of purpose, and
- relevant work experience.

## DEGREE PROGRAM REQUIREMENTS

The program requires 33 hours of coursework and may be taken either full-time or part-time. Full-time students with appropriate prerequisites may be able to complete the program in one full year (3 semesters) of study. Part-time students and full-time students who need prerequisites will typically need from 1 1/2 to 3 years to complete the degree. Early in the first semester, a student and the program advisor will work together to complete a formal Program of Study that will define a coherent sequence of courses to satisfy the student's objectives. A student may have the option to complete a master's thesis or a Practicum project, depending upon the availability and approval of a faculty sponsor.

**Prerequisites**
Incoming students are expected to have the following as prerequisites:*

1) One semester of a high-level, object oriented programming language (e.g., C#, C++, Java) or substantial programming experience;
2) One semester of *Information Systems Analysis and Design* or equivalent experience;
3) One semester of *Database* Systems or equivalent experience;
4) A course in Statistics
5) A course in economics, and
6) A course in financial accounting.

These required prerequistie courses may be taken concurrently with courses in the M.S./M.I.S. program. Prerequisitie courses do not count toward the 33 credit hours of course requiremetns in the M.S./M.I.S. program.

**Technical Core (12 credits)**
The following four courses provide a solid understanding of state-of-the-art research and practice in technical areas of Information Systems Management.

1. **ISM 6124 (3 credits) - Advanced Systems Analysis and Design**
   Students learn to manage and perform activities throughout an information systems development life cycle, from the analysis of system requirements through system design to system implementation and operation. Advanced system development processes, methods, and tools are presented. This course is continually revised to include the latest theories and tools. A group project using advanced CASE tools is an integral portion of the course.

2. **ISM 6218 (3 credits) - Advanced Database Administration**
   Advanced practice and research in database systems, to include entity-relationship modeling, relational databases, object-oriented databases, performance issues, and management of the database administration (DBA) function. State-of-the-art database systems will be used for individual and group projects.

3. **ISM 6225 (3 credits) - Distributed Information Systems**
   Students learn technological as well as managerial aspects of telecommunication systems and distributed systems. Important topics covered include telecommunications fundamentals, voice and data communications, local and wide area networks, Internet, wireless technologies, and distributed systems.

4. **ISM 6436 (3 credits) – Operations and Supply Chain Processes**
   Students learn several aspects of Operations management, a discipline in business concerned with managing the transformation of inputs into outputs, with a special emphasis on business processes and business process improvement.

**Capstone Course (3 credits)**

**ISM 6155 (3 credits) - Enterprise Information Systems Management**

An advanced study of information system management to include system planning, project selection, project management, and organizational information management policies. This course is considered to be the capstone of the M.S./MIS program and as such it must be taken during one of the last two semesters of the student's program.

**Electives ( 18 credits)**

Up to six elective courses may be selected from additional Information Systems courses or (with prior approval by the academic advisor) other areas of specialization such as areas of Management, Decision Sciences, Computer Science, Logistics, etc.**Existing Course Offerings**

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|---|---|---|
| ISM 6124 | Adv Systems Analysis and Design | 3 |
| ISM 6125 | Software Architecture | 3 |
| ISM 6145 | Seminar on Software Testing | 3 |
| ISM 6155 | Capstone Course | 3 |
| ISM 6218 | Adv Database Management | 3 |
| ISM 6225 | Distributed Information Systems | 3 |
| ISM 6305 | Managing the Info Sys Function | 3 |
| ISM 6382 | International Aspects of Info Systems | 3 |
| ISM 6405 | Decision Support Syst Applications | 3 |
| ISM 6480 | Electronic Commerce | 3 |
| ISM 6905 | Independent Study | 1-6 |
| ISM 6930 | Selected Topics in MIS | 1-6 |
| ISM 6971 | Thesis: Masters | 2-6 |
| ISM 6316 | Project Management | 3 |
| ISM 6136 | Data Mining | 3 |
| ISM 6208 | Data Warehousing | 3 |
| ISM 6056 | Web Application Development | 3 |
| ISM 6930 | Information Security and Risk Management | 3 |
| ISM 6156 | Enterprise Resource Planning & Bus Process Mgmt | 3 |

In addition, the following Special Topics are being offered:

ISM 6930 Multimedia Applications
ISM 6930 Mainframe Technologies
ISM 6930 Statistical Data Mining

**Business Intelligence (BI) Track**

The M.S./MIS program offers a track in business intelligence. The requirements for this track are as follows.

Students will have to take and pass four out of the following five courses:
ISM 6136 Data Mining
ISM 6218 Advanced Database Systems
ISM 6208 Data Warehousing
ISM 6930 Statistical Data Mining
QMB 7566 Applied Mulitvariate Statistical Methods

In addition, graduate students who take the courses to satisfy this track will receive a "Joint SAS/USF Certificate in Analytics and Business Intelligence," when they uses a SAS analytics package as part of some of these courses. Specifically, graduate students will need to use~~s~~ SAS Enterprise Miner or an **equivalent** SAS analytics package in the Data Mining and Statistical Data Mining courses. The tool will be provided free for class uses by SAS Institute.

**Thesis Option**

The master's thesis option requires six credits of ISM 6971, which count as six of the 18 MIS elective credits. The thesis must make a well-defined contribution to the research and development in an area of Information Systems.

**Practicum Option**

The practicum option requires an investigation of a new information technology artifact. The project typically occurs in the student's place of employment and is jointly supervised by a faculty member and a manager in the company. Based upon

the magnitude of the project, either three or six hours of credit in ISM 6905 would be taken. The practicum would count for three or six hours of the 18 hours of MIS electives.

## Accelerated BS/MS Program

The goal of the USF College of Business integrated undergraduate-graduate program in MIS is to provide outstanding undergraduate students an option to complete the B.S. undergraduate degree in MIS and the M.S. graduate degree in MIS in **five years** (141 total hours).

The integrated B.S./M.S. program is a 141-hour undergraduate-graduate option that allows eligible students to work towards the M.S. in MIS degree requirements while completing their undergraduate B.S. degree. Students interested in this option will work closely with an advisor and a faculty member to develop an integrated plan of study.

**General Guidelines**

- **Time of admission to the program:** Students will be eligible for admission to the integrated degree program at the beginning of their Senior year in MIS. Students must apply for admission consideration during their Junior year. Students will start taking courses in the graduate program in their Senior year.
- **Joint admission:** Students must apply to and meet admission requirements of the M.S. in MIS graduate program.
- **Plan of study:** In consultation with an advisor and a faculty member, students will be required to prepare a **Graduate Degree Action Plan**. The plan will cover the entire time period of the program and it will be periodically reviewed with an advisor.
- **Advising:** Students will present their portfolio (see below for details) and a plan of study in person to the integrated program committee prior to being admitted to the program.
- **Tuition charges:** Students will be required to pay graduate tuition rates when taking graduate courses.

**Admission Requirements**

1. Students with at least a Junior standing in their undergraduate degree program may apply for admission consideration into the integrated B.S./M.S. undergraduate/graduate program Students will submit an **Accelerated Program Interest Form** that must be signed by the Graduate Program.
2. Students must have a minimum 3.25 GPA.
3. Interested students will be required to present a "portfolio" of the following credentials:
    a. Three letters of recommendation, at least two from faculty
    **b.** Statement of intent—a personal statement about why the student wishes to apply for the integrated program.
    **c.** Undergraduate transcripts.
    **d.** Other supporting documents (e.g., projects and papers, software, work experience, internships, etc.) should be included where possible.
4. The GMAT or GRE should be taken sometime before or during the Fall semester of the Junior year of study.
5. All applicants will need to meet **any other admission requirements established** for the M.S. in MIS program.
6. The application to the integrated program will be considered as a complete package and therefore obtaining a high undergraduate GPA is not a guarantee of admission. Grades in the undergraduate MIS core courses will be taken in consideration and will have a significant impact on the M.S./MIS acceptance decision.

**Degree Requirements**

5-Year Plan of Study for Integrated B.S./M.S. Undergraduate-Graduate Program

With appropriate planning, a total of 12 hours of graduate credit may be taken that can be applied to both the B.S. and M.S. degrees. This will reduce the minimum total credits required for both programs from 153 (120 for B.S., 33 for M.S.) to 141 credits. Specifically:

- 9 hours of graduate credit can be taken in place of the 9 hours of elective undergraduate credits. The student must earn a minimum grade of B in each graduate course that is to be counted for both degrees.
- The graduate level Operations and Supply Chain Processes course ISM 6436 can be taken in place of the comparable undergraduate course ISM 3431.

A comprehensive plan of study to complete the integrated B.S./M.S. program will be developed with the guidance of an advisor and a faculty member. A possible plan of study could be as follows. Summer sessions may also be included in the study plan.

**First Year and Second Year**
Courses and credits as designated for Freshman and Sophomore years.

**Third Year (Apply for Admission to Integrated B.S./M.S. Program)**

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|---|---|
| ISM 3232 | 3 |
| ISM 3113 | 3 |
| Additional UG Courses | 9 |
| | |
| ISM 4212 | 3 |
| ISM 4220 | 3 |
| Additional UG Courses | 9 |

**Fourth Year (Student accepted in M.S./MIS Program)**

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|---|---|
| ISM 6436 | 3 |
| UG Courses | 12 |
| | |
| ISM 4300 (B.S. Capstone) | 3 |
| | |
| ISM 6124 | 3 |
| UG Courses or Graduate Electives | 6 hrs |

**Fifth Year**

| | |
|---|---|
| ISM 6225 | 3 |
| ISM 6218 | 3 |
| Graduate Electives | 6 |
| | |
| ISM 6155 (M.S. Capstone) | 3 |
| Graduate Electives | 12 |

The following courses are suggested specialization elective courses, cross-listed between the graduate and undergraduate catalog:

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|---|---|
| ISM 6145/4930 | Software Testing |
| ISM 6156/4153 | Enterprise Resource Planning |
| ISM 6328/4323 | Information Security and Risk Management |
| ISM 6930/4930 | Mainframe Technologies |

## COURSES

See http://www.ugs.usf.edu/sab/sabs.cfm