INFORMATION SYSTEMS (MS)

The MS in Information Systems (IS) bridges the gap between business and IT. Business organizations are most interested in serving customers with the best products and services. IT is a fast-moving area with many kinds of technologies, tools, and systems. Our MS-IS program emphasizes understanding diverse technology trends, agile project management, digital transformation, analytics systems, and innovation with five major elective domains. Students can interact with local IT leaders at annual IS conferences and participate in prominent companies' real-world projects. Our curriculum allows students to gain hands-on experience with the latest versions of SAP ERP systems used by Fortune 500 companies and beyond.

Program Requirements	Quarter Hours
Introductory Courses	0-8
Degree Requirements	48
Total hours required	**48-56**

Learning Outcomes

Students will be able to:

- Determine the main business impact from emerging trends in Information Systems (IS).
- Describe key outcomes in each of the five phases of a systems development life cycle.
- Explain key benefits and challenges of best practices in IS projects.
- Use diagrams for IS requirements and conceptual design specifications (e.g., context diagram, data flow diagram, use case diagram, entity relationship diagram), given a short business case.

Degree Requirements

Course Requirements

No Introductory Course may be substituted for any other course at any level.

Introductory Courses

Course	Title	Quarter Hours
IT 403	STATISTICS AND DATA ANALYSIS	4
IS 411	INTRODUCTION TO PROGRAMMING FOR BUSINESS APPLICATIONS	4

Foundation Courses

Course	Title	Quarter Hours
IS 421	SYSTEMS ANALYSIS AND DESIGN	4
IS 430	FUNDAMENTALS OF IT PROJECT MANAGEMENT	4
IS 435	ORGANIZATION MODELING FOR DIGITAL TRANSFORMATION	4
IS 451	DATABASE DESIGN FOR INFORMATION SYSTEMS	4
IS 460	ENTERPRISE CLOUD COMPUTING (FORMERLY IS 536)	4

IS 468	ENTERPRISE SYSTEMS (FORMERLY IS 560)	4

Major Electives

16 credit hours of Major Electives are required and are subject to the following criteria:

- Students take at least 12 credit hours of courses from one of the domains below.
- Students must take at least two (2) 500-level courses.

Project Management and Business Analysis

Course	Title	Quarter Hours
IS 431	DIGITAL PRODUCT DEVELOPMENT AND MANAGEMENT	
IS 535	INFORMATION TECHNOLOGY INVESTMENT FINANCIAL ANALYSIS	
IS 556	AGILE ENTERPRISE PROJECT MANAGEMENT	
IS 570	MANAGING CHANGE FOR DIGITAL TRANSFORMATION	
IS 586	CUSTOMER RELATIONSHIP MANAGEMENT TECHNOLOGIES	

Analytics-Driven Decision Making

Course	Title	Quarter Hours
DSC 423	DATA ANALYSIS AND REGRESSION	
DSC 465	DATA VISUALIZATION	
IS 436	SOCIAL MARKETING AND SOCIAL NETWORKING APPLICATIONS	
IS 452	BIG DATA & THE INTERNET OF THINGS (IOT)	
IS 550	ENTERPRISE DATA MANAGEMENT	
IS 574	BUSINESS INTELLIGENCE AND ANALYTICS SYSTEMS	

IT Governance and Legal Responsibilities

Course	Title	Quarter Hours
CSEC 440	INFORMATION SECURITY MANAGEMENT	
IS 424	ENTERPRISE INFRASTRUCTURE	
IS 444	IT AUDITING	
IS 482	LEGAL RESPONSIBILITIES IN INFORMATION TECHNOLOGY	
IS 486	CYBERSECURITY LAW	
IS 487	DATA PRIVACY LAW: US & EU	
IS 505	BUSINESS CONTINUITY/DISASTER RECOVERY THEORIES AND STRATEGIES	
IS 506	BUSINESS CONTINUITY/DISASTER RECOVERY MANAGEMENT AND TACTICS	
IS 511	SOCIAL ISSUES OF COMPUTING	
IS 568	IT GOVERNANCE	

Data Management

Course	Title	Quarter Hours
CSC 452	DATABASE PROGRAMMING	
CSC 454	DATABASE ADMINISTRATION AND MANAGEMENT	
IS 453	INTRODUCTION TO MANAGING EMERGING DATABASES	
IS 549	DATA WAREHOUSING	
IS 550	ENTERPRISE DATA MANAGEMENT	

Digital Transformation and Entrepreneurship

Course	Title	Quarter Hours
IS 431	DIGITAL PRODUCT DEVELOPMENT AND MANAGEMENT	
IS 478	INFORMATION TECHNOLOGY CONSULTING	
IS 531	DIGITAL INNOVATION STRATEGIES, PROCESSES AND TOOLS	
IS 580	TECHNOLOGY ENTREPRENEURSHIP	

Open Elective

Students must complete four (4) credit hour of Open Electives.

- Any CSEC, CSC, DSC, ECT, GAM, GPH, HCI, HIT, IS, IT, NET, PM, or SE course in the 421-699 range qualifies.

Capstone Options

Four (4) credit hours are required for the capstone. Students have the option of completing either (a) IS 577 (Information Systems capstone course) or IS 531 (Digital Innovation Strategies, Processes and Tools), (b) a Graduate Internship (4 credits), (c) two quarters of CSC 500 (a Research Colloquium course), (d) IS 696 (a Master's Project course), or (e) a Master's Thesis.

- **Capstone Course**
  - IS 577
  - IS 531
- **Graduate Internship**
  - An internship offers students the opportunity integrate their academic experience with on-the-job training in information systems. Students must enroll in CSC 697 for four (4) credit hours to satisfy the practicum requirement. These are the steps:

1. Secure an internship with a focus in information systems.
2. International Students must obtain the appropriate practical training form and meet with an advisor in the CDM Academic Center for approval (http://oiss.depaul.edu/Requests/Forms/index.asp (http://oiss.depaul.edu/Requests/Forms/)).
3. Login to MyCDM and click the "MyInternships"link on the left to start the course enrollment process.

- **Research Options**
  - CSC 500 This is a course for two (2) credit hours therefore students must enroll in the course in each of two (2) separate quarters.
  - Master's Research
    - Up to eight (8) credit hours with Major Elective substitutions.
  - IS 696

- Master's Thesis
  - A student who has made an original contribution to the area may choose to complete a Master's Thesis. The process is:

1. Complete IS 590 as a Major Elective substitution.
2. The student and the student's research advisor form a Master's Thesis Committee of three (3) faculty.
3. The student enrolls in IS 698 for two (2) consecutive quarters. In the event, the students has not completed the thesis within these two (2) quarters, the student will be allowed to register for the zero (0) credit hour course CSC 698 and the transcript will show the thesis title as the course topic.
4. The student will need to submit to the committee a thesis detailing the results of the research project. After a public defense, the committee will decide whether to accept the thesis.

Degree Requirements

Students in this degree program must meet the following requirements:

- Complete a minimum of 48 graduate credit hours in addition to any required introductory courses of the designated degree program.
- Complete all graduate courses and requirements listed in the designated degree program.
- Earn a grade of C- or better in all courses of the designated degree program.
- Maintain a cumulative GPA of 2.5 or higher.
- Students pursuing a second (or more) graduate degree may not double count or retake any course that applied toward the completion of a prior graduate degree. If a required course in the second degree was already completed and applies toward a previous degree, the student must meet with a faculty advisor to discuss a new course to be completed and substituted in the new degree. This rule also applies to cross-listed courses, which are considered to be the same course but offered under different subjects.
- Students pursuing a second master's degree must complete a minimum of 48 graduate credit hours beyond their first designated degree program in addition to any required introductory courses in their second designated degree program.

Students with a GPA of 3.9 or higher will graduate with distinction.