Information Systems

Choose from seven specializations — study on campus and online.
The IT program for leaders

MASTER OF SCIENCE IN INFORMATION SYSTEMS

The part-time MSIS program trains students in information systems methodologies, with an emphasis on design, cyber security, management of information technology, project management, health informatics, business intelligence, data science, implementation and evaluation of software applications and theoretical models.

MSIS is a flexible program that recognizes the need to accommodate busy schedules, and one designed to build skills that translate into success at the workplace.

The program is especially well suited for working students, who may take some or all classes online and can choose a specialization that leverages their professional experience. Students will also find a diverse network of peers with a range of IT experience — many have found career opportunities through these peers or program faculty. Courses are taught by leaders in the field, and each includes a project based on professional practices and needs.

MSIS students may select an optional specialization that focuses on particular academic or professional interests. Core and specialization courses emphasize modern distributed applications, including design and implementation, evaluation, underlying enabling technologies, theoretical models and the networks through which computer-based technologies travel.

MSIS graduates find positions in the public, private and nonprofit sectors as quality assurance analysts, project managers, database administrators, software engineers, systems analysts, business analysts, IT service desk managers, IT relationship managers, IT service managers, IT service continuity managers, IT supplier managers, information security managers, technology security analysts, disaster recovery analysts, and application developers.
Curriculum

The MSIS program requires 11 units of credit to earn the Master of Science degree. Students complete three core courses and six elective courses based on an area of specialization. Electives allow MSIS students the flexibility to tailor their curricula to specific professional goals. Lastly, the degree also requires completion of a leadership course and a capstone project. Current students should refer to curriculum requirements in place at time of entry into the program.

**Core Courses**
- CIS 413-0 OR 413-DL Telecommunication Networks
- CIS 414-0 OR 414-DL Object-Oriented Programming
- CIS 417-0 OR 417-DL Database Systems Design and Implementation
- CIS 498-0 OR 498-DL CIS Capstone Project
- CIS 590-0 Thesis Research
- LEADERS 481-0 Leadership
- LEADERS 481-DL Leadership

**Areas of Specialization**

**Analytics and Business Intelligence**
- CIS 494 Project Management Concepts
- CIS 435 Practical Data Science Using Machine Learning
- CIS 436 Big Data Management and Analytics
- PREDICT 400 Math for Modelers
- PREDICT 401 Introduction to Statistical Analysis
- Plus any two electives available from the MSIS curriculum

**Database and Internet Technologies**
- CIS 494 Project Management Concepts
- CIS 419 Web Application Development
- CIS 431 Database Administration
- CIS 435 Practical Data Science Using Machine Learning
- Plus any two electives available from the MSIS curriculum

**Health Informatics**
- MHI 402 Introduction to Clinical Thinking
- MHI 403 Introduction to Medical/Health Informatics
- MHI 405 HIT Integration, Interoperability and Standards
- MHI 406 Decision Support Systems and Health Care
- Plus any two available electives from the MSIS curriculum

**Information Systems Management**
- CIS 494 Project Management Concepts
- CIS 457 Management of Information Security
- CIS 460 Information Technology Management
- CIS 465 Information Technology Strategy
- Plus any two electives available from the MSIS curriculum

**Information Systems Security**
- CIS 494 Project Management Concepts
- CIS 452 Fundamentals of Network Security
- CIS 455 Business Continuity and Disaster Recovery Techniques
- CIS 457 Management of Information Security
- Plus any two electives available from the MSIS curriculum

**Information Systems**
- CIS 494 Project Management Concepts
- Plus any five electives available from the MSIS curriculum

**Project Management**
- CIS 494 Project Management Concepts
- CIS 495 IT Project Management
- CIS 496 Information Technology Finance and Communication
- Plus any three electives available from the MSIS curriculum

**Leadership Course**
- LEADERS 481-0 Leadership
- LEADERS 481-DL Leadership

**Capstone Project**
- Plus any five electives available from the MSIS curriculum

Electives allow MSIS students the flexibility to tailor their curricula to their professional needs. These areas of specialization are designed to help students focus their studies effectively. The following specializations are available.

- SPS strives to equip its students with fundamental skills in effective leadership, communication, innovation, and change management. To gain exposure to theories and best practices in these administrative areas, MSIS students join other SPS graduate students in a 10-week leadership class. With these skills complementing the core curriculum, graduates are better prepared to face the challenges of the modern workplace.

- Students may pursue their capstone experience independently or as part of a team. As their final course, students take either the individual research project in an independent study format or the classroom final project class in which students integrate the knowledge they have gained in the core curriculum in a project presented by the instructor. In both cases, students are guided by faculty in exploring the body of knowledge on information systems while contributing research of practical value to the field. The capstone independent project and capstone class project count as one unit of credit.
Admission

Applicants must hold a bachelor’s degree from a regionally accredited institution or its foreign equivalent. A competitive undergraduate record that indicates strong academic ability is required, though applicants need not have extensive academic experience in public policy. Work experience in the public sector is desirable but not necessary. The Graduate Record Examination (GRE) is not required, but strong scores bolster chances for admission. GRE scores and/or new, relevant course work at the undergraduate level are recommended for applicants whose previous academic performance was below a B average.

APPLICATION CHECKLIST

- Online application — access from sps.northwestern.edu/msis and then click “Start Application Process”
- $75 nonrefundable application fee
- Sealed copies of official transcripts from ALL attended colleges and universities
  - Official transcripts must arrive in our office in the original sealed envelope issued by the institution. Northwestern University School of Professional Studies accepts electronic transcripts from U.S. institutions via secure electronic transcript providers. Consult with your institution to see if they are part of a secure e-delivery network. All electronic transcripts should be sent to spsadmissions@northwestern.edu. Please note transcripts are not accepted by fax or personal email.
  - Applicants with international transcripts must request an official course-by-course evaluation of transcripts from a NACES member such as WES or ECE. A course-by-course evaluation will translate courses, degrees and grades to U.S. equivalency.
- Two letters of recommendation focusing on academic achievement and/or success in the workforce
- Statement of purpose (see following)
- Current resume or curriculum vitae

Transcript mailing address:
MSIS Graduate Admissions
Northwestern University School of Professional Studies
Wieboldt Hall, Sixth floor
339 E. Chicago Ave.
Chicago, Illinois 60611-3008

STATEMENT OF PURPOSE

Applicants must submit a 300-word statement of purpose explaining how the degree program will help them meet their academic and professional goals. Applicants who did not major in computer science, engineering, or a related field should explain how other academic and nonacademic experiences have equipped them to undertake graduate study in this program.

APPLICATION DEADLINES

Applications are accepted every quarter.

- **Fall:** July 15
- **Winter:** October 15
- **Spring:** January 15
- **Summer:** April 15

For detailed admission information visit sps.northwestern.edu/msis. For application assistance call 312-503-2579 or email msis@northwestern.edu
The SPS faculty is outstanding. The instructors have deep subject matter expertise, strong dedication to students and work at Fortune 500 companies. I’m really happy I chose Northwestern.”

Darrell Swanson (MSIS ’14), Business and Technical Analyst, Merck

“I got so excited when I looked at the coursework because all the classes covered things I deal with all the time at SpaceX.”

Nancy Dandridge (MSIS student), Business Manager, Information Systems at SpaceX
Northwestern | SCHOOL OF
PROFESSIONAL STUDIES

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