Information Systems

Choose from seven specializations — study on campus and online.
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 non-profit 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.
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** (3 COURSES)
- CIS 413 Telecommunications Networks
- CIS 414 or 414 Object-Oriented Programming
- CIS 417 or 417 Database Systems Design and Implementation

**AREAS OF SPECIALIZATION** (6 COURSES)
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.

**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 Technology
- 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** (1 COURSE)
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.

**CAPSTONE PROJECT** (1 COURSE)
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.
Applicants to the MSIS program must hold a bachelor’s degree from a regionally accredited institution or its foreign equivalent. Applicants should have a competitive undergraduate record that indicates strong academic ability but need not have extensive experience in computer science or information technology. Three to five years of professional experience is recommended but not required.

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

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

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<td>FALL</td>
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TUITION

- 2017–18 tuition per course: $4,494
- Estimated cost for entire program: $49,434–$50,754*

* Please note — each online course requires a $120 technology fee.

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
The IT program for leaders

MSIS  MASTER OF SCIENCE IN INFORMATION SYSTEMS