

MANAGEMENT INFORMATION SYSTEMS

What can I do with this major?

AREAS

Management information systems is the study of people, technology and organizations. Some areas of specialization are included:

NETWORK ADMINISTRATION

Intranet, local area networks (LANs), wide area networks (WANs), network segments, hardware, and software:

- Development
- Installation
- Testing
- Monitoring
- Maintenance
- Security
- Support

EMPLOYERS

Most areas of business, industry and government:

- Financial
- Healthcare/Medical
- Manufacturing/Construction
- Education
- Retail/Hospitality
- Nonprofit
- Energy
- Transportation
- Media/Telecommunications

STRATEGIES

- Seek technical work experience in university computer labs.
- Develop effective analytical and problem solving skills and the ability to think strategically about technology.
- Acquire strong oral and written communication skills and interest in helping others, particularly those who may have limited computer training.
- Expect to spend a significant amount of time responding to inquiries from colleagues, customers, employees.
- Obtain applicable certifications such as those offered by Cisco or Microsoft for network administrator roles.

DATABASE ADMINISTRATION

System or application:

- Development
- Installation
- Testing
- Maintenance
- Support
- Data archiving, storage, restoration
- Security
- Upgrading
- Systems integration
- Management

Most areas of business, industry and government:

- Financial
- Healthcare/Medical
- Manufacturing/Construction
- Education
- Retail/Hospitality
- Nonprofit
- Energy
- Transportation
- Media/Telecommunications

- Develop logical thinking skills, attention to detail, and the ability to concentrate for long periods of time.
- Seek general knowledge of computer languages and database management software; consider specializing in one for increased marketability.
- Acquire strong communication skills for working with teams of programmers and with staff who may have limited computer training.
- Plan to work with management to identify the goals of the database and analysts' needs.

AREAS

EMPLOYERS

STRATEGIES

SYSTEMS DEVELOPMENT/ANALYSIS

Planning
Analysis
Design
Implementation/Coding
Integration/Testing
Installation/Deployment
Operations/Maintenance
Evaluation
Disposal

Most areas of business, industry and government:
Financial
Healthcare/Medical
Manufacturing/Construction
Education
Retail/Hospitality
Nonprofit
Energy
Transportation
Media/Telecommunications

Develop excellent interpersonal skills for effective communication with technical and non-technical colleagues and clients.
Gain knowledge of industries, business areas or government agencies of interest. Complete a minor to gain specialized knowledge related to the field.
Strengthen logical thinking and problem solving skills.
Maintain current knowledge of computer languages and technology.
Gain programming experience and specialize for increased opportunities.
Obtain business experience through internships or part-time employment.
Supplement program with courses such as accounting, management, human resources, consulting to increase understanding of business theory.
Earn a graduate degree in technology or business for advanced opportunities in analysis, project management and executive operations.

SECURITY

Monitoring
Testing
Research
Training

Most areas of business, industry and government:
Financial
Healthcare/Medical
Manufacturing/Construction
Education
Retail/Hospitality
Nonprofit
Energy
Transportation
Media/Telecommunications

Develop strong analytical skills, as well as attention to detail, to monitor computer systems for breaches and changes in performance.
Stay current on the field of cybersecurity, as security analysts are expected to develop preventative measures to protect and recover, if needed, their organizations' data.
Plan to work in a particular organization or industry before advancing into a security position. A graduate degree such as a Master of Business Administration in information systems may be preferred for this advanced position.

AREAS

EMPLOYERS

STRATEGIES

WEB DEVELOPMENT

Website:

Design

Programming/Development

Management

Administration

Internet-related companies:

Browsers

Search engines

Website design services

Most areas of business, industry and government

Financial

Healthcare/Medical

Manufacturing/Construction

Education

Retail/Hospitality

Nonprofit

Energy

Transportation

Media/Telecommunications

Gain experience in web development or maintenance through part-time jobs or internships.

Seek expertise in information architecture and usability.

Volunteer to design web sites for student organizations or community groups.

Learn web-related programming languages.

Develop problem solving and creative thinking skills.

Learn to work effectively in a team by participating in group projects or student organizations.

CONSULTING

Consulting firms

Self-employed

Develop exceptional analytical and interpersonal skills for communicating with clients.

Obtain a strong technical knowledge of computers, a background in business management and experience in systems analysis.

Become familiar with various programming languages and operating systems.

Earn applicable certifications.

Demonstrate abilities to self-motivate and work independently.

AREAS

EDUCATION/TRAINING

Primary and secondary education
Higher education
Adult education/training

EMPLOYERS

Proprietary (for profit) schools
K-12 public and private schools
Colleges and universities
Corporations
Nonprofit organizations

STRATEGIES

Gain experience working with students through tutoring, part-time employment, internships in computer labs, and/or other technical positions.
Develop excellent interpersonal and public speaking skills.
Inquire about certification, which is required for K-12 teaching and varies by state.
Earn a graduate degree in information technology or a related field for increased opportunities. A Master's degree may be sufficient for teaching at community or two-year institutions.
Seek doctoral degree related to information sciences for teaching opportunities at colleges and universities.

OTHER AREAS

Technical support
Training
Technical writing
Marketing
Sales

Software, hardware and systems developers
Technical service providers

Develop excellent listening, verbal and written communication skills, and patience.
Display interest and ability in customer problem solving. A commitment to customer satisfaction is imperative.
Seek work experience in university computer labs and help desks.
Obtain general sales or customer service experience.
Develop extensive knowledge of merchandise for retail sales positions.
Take technical writing courses to develop skills.

GENERAL INFORMATION

- Professionals in this industry are excellent communicators who manage time efficiently. They are detail- and big picture-oriented.
- Expect to work extended and/or irregular hours at times and to be “on call.”
- Prepare to learn new information on a regular basis through online discussions, classes, conferences, periodicals and update your skills accordingly.
- Certifications may be necessary for some technical careers. Obtain the certifications that are the most applicable to career goals and interests.
- Gain as much diverse technical experience as possible. Seek positions in computer labs, retail computer/technology stores or as technological support for any office or business.
- Investigate technology in additional areas such as audio/visual or telecommunications. Become familiar with the integration and application of these areas to management information systems.
- Develop physical stamina and strength. Many networking professionals are involved in hands-on, physical activity during network installation and maintenance.
- Specialize in a specific area of business or industry and become familiar with the applicable software and hardware. Earn a minor in your field of specialization i.e., biology for work with a scientific database.
- Plan to earn a Master’s degree such as an MBA with a technology component for increased management opportunities.

NOTE: The Management Information Systems major is closely related to other majors such as Computer Information Systems, Information System, Information Sciences and Information Technology. While each is unique, all are focused on the application of technology in various environments. In contrast, Computer Science focuses on the theory of mathematical foundations required for the development of systems software such as operating systems and language translators.