# MANAGEMENT INFORMATION SYSTEMS

## What can I do with this major?

<table>
<thead>
<tr>
<th>AREAS</th>
<th>EMPLOYERS</th>
<th>STRATEGIES</th>
</tr>
</thead>
</table>
| **NETWORK ADMINISTRATION**  
Intranet  
Development  
Installation  
Testing  
Monitoring  
Maintenance  
Security  
Support  
Hardware and Software Design | Most areas of business, government and non-governmental organizations including:  
Financial institutions  
Insurance companies  
Consulting firms  
Manufacturers  
Computer companies  
Telecommunications companies  
Retailers  
Healthcare organizations  
Hotels and restaurants  
Entertainment companies  
Environmental management firms  
Education institutions  
City, state and federal government | Seek work experience in university computer labs.  
Develop effective analytical and problem solving skills.  
Expect to spend a significant amount of time responding to inquiries from colleagues, customers and employees.  
Acquire strong oral and written communication skills and interest in helping others.  
Gain knowledge in a variety of computer areas including minor programming, software and hardware.  
Stay abreast of the latest technologies.  
Obtain applicable certifications such as Cisco or Microsoft. |

| **DATABASE ADMINISTRATION**  
Development  
Installation  
Testing  
Maintenance/Support  
Archiving/Security  
Upgrading  
Systems Integration  
Management | Most areas of business, government and non-governmental organizations including:  
Financial institutions  
Insurance companies  
Consulting firms  
Manufacturers  
Computer companies  
Telecommunications companies  
Retailers  
Healthcare organizations  
Hotels and restaurants  
Entertainment companies  
Environmental management firms  
Education institutions  
City, state and federal government | Develop logical thinking skills, attention to detail and the ability to concentrate for long periods of time.  
Obtain technical experience through paid or volunteer positions.  
Seek general knowledge of computer languages and database management software; consider specializing in one for increased marketability.  
Acquire strong communication skills to prepare for work with teams of programmers and with staff who may have limited computer training. |
## AREAS

**WEB ADMINISTRATION**
- Website Design
- Programming/Development
- Management
- System Administration
- Analysis

**SYSTEMS DEVELOPMENT**
- Planning/Analysis
- Design
- Building/Coding
- Integration/Testing
- Operations/Maintenance
- Project Management

## EMPLOYERS

**WEB ADMINISTRATION**
- Internet-related companies including:
  - Browsers
  - Search engines
  - Website design services
- Most areas of business, government and non-governmental organizations including:
  - Financial institutions
  - Insurance companies
  - Consulting firms
  - Manufacturers
  - Computer companies
  - Telecommunications companies
  - Retailers
  - Healthcare organizations
  - Hotels and restaurants
  - Entertainment companies
  - Environmental management firms
  - Education institutions
  - City, state and federal government

**SYSTEMS DEVELOPMENT**
- Most areas of business, government and non-governmental organizations including:
  - Financial institutions
  - Insurance companies
  - Consulting firms
  - Manufacturers
  - Computer companies
  - Telecommunications companies
  - Retailers
  - Healthcare organizations
  - Hotels and restaurants
  - Entertainment companies
  - Environmental management firms
  - Education institutions
  - City, state and federal government

## STRATEGIES

**WEB ADMINISTRATION**
- 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.

**SYSTEMS DEVELOPMENT**
- 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.
### Systems Development Continued

**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.**

### Technical Support

<table>
<thead>
<tr>
<th>Areas</th>
<th>Employers</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware, Software, Systems Support</td>
<td>Software, hardware and systems developers</td>
<td>Develop excellent listening, verbal and written communication skills and patience.</td>
</tr>
<tr>
<td>System Oversight/Evaluation</td>
<td>Technical service providers</td>
<td>Display interest and ability in customer problem solving. A commitment to customer satisfaction is imperative.</td>
</tr>
<tr>
<td>Training</td>
<td>Retailers</td>
<td>Seek work experience in university computer labs and help desks.</td>
</tr>
<tr>
<td>Technical Writing</td>
<td>Education institutions</td>
<td>Obtain general sales or customer service experience.</td>
</tr>
<tr>
<td>Marketing</td>
<td></td>
<td>Develop extensive knowledge of merchandise for retail sales positions.</td>
</tr>
<tr>
<td>Sales</td>
<td></td>
<td>Take technical writing courses to develop skills.</td>
</tr>
</tbody>
</table>

### Education/Training

<table>
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<th>Areas</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Proprietary (for profit) schools</td>
<td>Gain experience working with students through tutoring, part-time employment, internships in computer labs and/or other technical positions.</td>
<td>develop excellent interpersonal and public speaking skills.</td>
</tr>
<tr>
<td>K-12 public and private schools</td>
<td></td>
<td>Inquire about certification process which is required for K-12 teaching and varies by state.</td>
</tr>
<tr>
<td>Colleges and universities</td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>Corporations</td>
<td></td>
<td>Seek doctoral degree related to information sciences for teaching opportunities at colleges and universities.</td>
</tr>
<tr>
<td>Non-profit organizations</td>
<td></td>
<td></td>
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</tbody>
</table>
AREAS

CONSULTING
Consulting firms
Self-employed

EMPLOYERS

STRATEGIES
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.

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 may be slightly different, 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.
**PROFESSIONAL ASSOCIATIONS**
- American Society for Information Science and Technology
- Association for Computing Machinery
- Association of Independent Information Professionals (AIIP)
- Association of Records Managers & Administrators, Inc.
- IEEE Computer Society
- International Webmasters Association
- Internet Society
- Institute for Operations Research & The Management Sciences
- League of Professional Systems Administrators

**OCCUPATIONAL OUTLOOK INFORMATION**
- Computer and Information Systems Managers
- Computer Programmers
- Computer Support Specialists and Systems Administrators
- Systems Analysts, Computer Scientists, and Database Administrators
- Computer Systems Design Industry Guide
- Internet Services Industry Guide

**MISCELLANEOUS CAREER INFORMATION**
- *Sloan Foundation Careers in Science, Technology, Engineering and Mathematics
- Computer Science Career Guide
- Computer Science and IT Jobs in the Federal Government
- Developers.net
- Institute for the Certification of Computer Professionals
JOB POSTINGS

- ComputerJobs.com
- Computer World - Careers
- Computerwork.com
- Tech-Centric.net

* = Recommended Sites