



Computer Information Systems

What is Computer Information Systems?

The CIS program provides a strong foundation in the business and managerial issues related to information systems. Computer Information Systems are presented as tools for strategic advantage in the marketplace. To facilitate this, course offerings provide computer, technological and problem solving skills. The CIS program addresses such areas as CASE (Computer Assisted Software Engineering), Networks and Telecommunications, Structured Query Language, and Object Oriented Technologies.

Occupational opportunities

A Bachelor's degree in CIS provides the foundation for a wide range of occupations in the computer industry ranging from design and development of complex software systems to testing and maintenance of existing software. In addition, computer software specialists are now needed in most areas outside the computer industry, including business, education, research, entertainment and the arts, and the medical fields. Eighty percent of majors are working in a closely related field after graduation, 15% in a somewhat related field, and only 5% are working in a totally non-related field.

Technical	Business/Finance	Research Education/Health Care	Information Systems/Communication
<ul style="list-style-type: none"> • Software engineer • Systems analyst • Applications programmer • Systems programmer • Network manager • Digital arts and entertainment programmer 	<ul style="list-style-type: none"> • Technical consultant • Software developer for e-commerce <p><u>Graduate Study Needed</u></p> <ul style="list-style-type: none"> • Financial engineer • Business Manager 	<ul style="list-style-type: none"> • Applications programmer • Systems programmer • Medical systems administrator • Data analyst <p><u>Graduate Study Needed</u></p> <ul style="list-style-type: none"> • Professor/teacher 	<ul style="list-style-type: none"> • Telecommunication analyst • Systems security specialist • Database administrator • Technical writer <p><u>Graduate Study Needed</u></p> <ul style="list-style-type: none"> • Intellectual properties attorney

Career Snapshot: Systems Analyst

Systems analysts help organizations redesign their computer systems. Sometimes they add only a few software programs to make better use of computers. At other times, they design entirely new software systems. Analysts often specialize in business, science, or engineering systems. Systems analysts begin projects by gathering information. They discuss an organization's needs with its managers and staff. Once the goals are clear, analysts determine if they need to design a new software system. Once these plans are approved, systems analysts coordinate the upgrade or installation of the computer system. When the system is set up, analysts train staff on how to use it. They also write manuals that describe

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how to use the system. These manuals must be written in terms that managers and other users can understand. Change happens quickly in the information technology field. Thus, systems analysts frequently read manuals and magazines to keep their knowledge up-to-date. They may also take classes. Systems analyst is one of the fastest growing occupations in the United States and as a result is often seen on “hottest job” lists. Systems analysts are well-paid and boast higher than average job satisfaction.

Skills and Abilities

The study of Computer Information Systems develops the ability to solve problems using careful analysis and design techniques, as well as the ability to compare the relative effectiveness of various solutions. Implementation of a solution using software engineering principles is often the end-result of this process in a job setting. Most individuals in this field prefer to work with their minds, using both their intelligence, either mathematical or technological, and their creativity. They tend to be thorough, systematic, determined, patient, and logical. A sampling of representative skills and abilities follows:

Analytical

- Analyzing problems: identifying and rectifying
- Thinking logically
- Assessing needs
- Evaluating tradeoffs in software design
- Testing differing programs and operating systems
- Solving complex design problems
- Modeling and simulation of real-world activities

Communication

- Writing program documentation
- Training personnel
- Technical writing
- Data visualization/presentation

Organizational

- Working in teams or alone
- Coordinating tasks
- Planning complex projects
- Integrating different approaches

Additional Resources

U.S. Government’s Occupational Outlook Handbook
<http://stats.bls.gov/oco>

Association for Computing Machinery (ACM)
www.acm.org

IEEE Computer Society – a leading organization for computer professionals
www.computer.org

CISjobs.com
A website containing hundreds of job postings for CIS professionals
www.cisjobs.com

Association for Information Systems (AIS)
www.aisnet.org

Tech-centric job listings for tech. Professionals.
www.tech-centric.net

New York Software Industry Association
www.nysia.org

Software and Information Industry Association
<http://jobsnetwork.siiia.net>

Information Technology Association of America
www.itaa.org