Career Options

- Applications Programmer
- Applications Programmer
- Business Manager
- Data Analyst
- Database Administrator
- Digital Arts and Entertainment Programmer
- Financial Engineer
- Intellectual Properties Attorney
- Medical Systems Administrator
- Network Manager
- Professor/Teacher
- Software Developer for E-commerce
- Software Engineer
- Systems Analyst
- Systems Programmer
- Systems Security Specialist
- Technical Consultant
- Technical Writer
- Telecommunication Analyst

What is Computer Information Systems?

The Computer Information Systems (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.

Skills & 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
- Analyzes problems: identify and rectify
- Thinks logically
- Assesses needs
- Evaluates tradeoffs in software design

Analytical
- Tests differing programs and operating systems
- Solves complex design problems
- Models and simulate real-world activities

Communication
- Writes program documentation
- Trains personnel
- Technical writing
- Data visualization/presentation

Organizational
- Works in teams or alone
- Coordinates tasks
- Plans complex projects
- Integrates different approaches

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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 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.

Career Snapshot: Technical Writer

Technical writers are also called technical communicators, who put technical information into easily understandable language. They work primarily in information-technology-related industries, coordinating the development and dissemination of technical content for a variety of users. Technical writers also develop documentation for computer programs and set up communications systems with consumers to assess customer satisfaction and quality control matters. In addition, they commonly work in engineering, scientific, healthcare, and other areas in which highly specialized material needs to be explained to a diverse audience, often of laypersons. Technical writers also oversee the preparation of illustrations, photographs, diagrams, and charts. Technical writers increasingly are using a variety of multimedia formats to convey information in such a way that complex concepts can be understood easily by users of the information. Some technical writers work on a freelance or contract basis. They either are self-employed or work for a technical consulting firm and may be hired to complete specific short-term or recurring assignments.

Additional Resources

U.S. Government's Occupational Outlook Handbook
http://bls.gov/oco

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

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

New York Technology Council
www.nytech.org

Make the Difference
www.makingthedifference.org/federalcareers

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

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

Tech-centric – job listings for tech professionals.
www.tech-centric.net

Software and Information Industry Association
http://jobsnetwork.siia.net