



National Survey of Information Technology Occupations, 2002

List of Occupations

Computer and Information Systems Managers

Computer and information systems managers plan, organize, direct, control and evaluate the activities of organizations that analyse, design, develop, implement, operate and administer computer and telecommunications software, networks and information systems.

Information Technology (IT) Project Managers

IT Project Managers coordinate systems development for major applications; define project requirements including information and data needs, business analysis and programming; and develop, plan, analyze, evaluate and assign priorities to deliverables and requirements. Additionally, they define project phases, set deadlines and direct staff.

E-commerce Managers

E-commerce managers plan, organize, direct, control and evaluate the design, development and maintenance of Internet and Intranet sites to manage an organization's Internet presence including public relations, communications and commercial activities.

Electrical and Electronics Engineers

Electrical and electronics engineers design, plan, research, evaluate and test electrical and electronic equipment and systems.

Computer and Telecommunications Hardware Engineers

Computer and telecommunications hardware engineers analyze user's requirements, and design and develop system architecture and specifications; research, design, develop and integrate computer and telecommunications hardware such as microprocessors, integrated circuit boards and semiconductor lasers; develop and conduct design verification simulations and prototype bench tests of components; supervise, inspect and provide design support during the manufacturing, installation and implementation of computer and telecommunications hardware; establish and maintain relationships with suppliers and clients.

Network Systems and Data Communication Engineers

Network system and data communication engineers research, design and develop information and communication system network architecture; research, evaluate and integrate network system and data communication hardware and software; assess, document and optimize the capacity and performance of information and communication system networks.

Information Systems Business Analysts and Consultants

Information systems business analysts and consultants confer with clients to identify and document requirements; conduct business and technical studies; design, develop and implement information systems business solutions; and provide advice on information systems strategy, policy, management and service delivery.

Systems Security Analysts

Systems security analysts assess physical and technical security risks to data, software and hardware; and develop policies, procedures and contingency plans to minimize the effects of security breaches.

Information Systems Quality Assurance Analysts

Information systems quality assurance analysts develop and implement policies and procedures throughout the software development life cycle to maximize the efficiency, effectiveness and overall quality of software products and information systems.

Systems Auditors

Systems auditors conduct independent third-party reviews to assess quality assurance practices, software products and information systems.

Database Analysts

Database analysts design, develop and administer data management solutions using database management software. Database analysts perform some or all of the following duties: collect and document user's requirements; design and develop database architecture for information systems projects; design, construct, modify, implement and test data models and database management systems; conduct research and provide advice to other informatics professionals regarding the selection, application and implementation of database management tools; operate database management systems to analyse data.

Data Administrators

Data administrators develop and implement data administration policy, standards and models; research and document data requirements, data collection and administration policy, and data access rules; develop policies and procedures for network access and usage and for the backup and recovery of data; conduct research and provide advice to other information systems professionals regarding the collection, availability and suitability of data.

Software Engineers

Software engineers research, design, evaluate, integrate and maintain software applications, technical environments, operating systems, embedded software, information warehouses, and telecommunications software.

Computer Programmers

Computer programmers write, modify, integrate and test computer code for microcomputer and mainframe software applications, data processing applications, operating systems-level software and communications software.

Interactive Media Developers

Interactive media developers write, modify, integrate and test computer code for internet applications, computer-based training software, computer games, film, video and other interactive media.

Web Designers and Developers

Web designers and developers research, design, develop and produce internet and intranet sites; consult with clients to develop and document web site requirements; prepare mock-ups and storyboards; develop web site architecture and determine hardware and software requirements; source, select and organize information for inclusion and design the appearance, layout and flow of the web site; create and optimize content for web site using a variety of graphics, database, animation and other software; research and evaluate a variety of interactive media software products.

Electrical and Electronics Engineering Technologists and Technicians

Electrical and electronics engineering technologists and technicians may work independently or provide technical support and services in the design, development, testing, production and operation of electrical and electronic equipment and systems.

Computer and Network Operators

Computer and network operators establish, operate, maintain, and co-ordinate the use of local and wide area networks (LANs and WANs), mainframe networks, hardware, software and related computer equipment.

Web Technicians

Web technicians set up and maintain internet and intranet web sites and web server hardware and software, and monitor and optimize network connectivity and performance.

User Support Technicians

User support technicians provide first-line technical support to computer users experiencing difficulties with computer hardware and with computer applications and communications software.

Systems Testing Technicians

Systems testing technicians execute test plans to evaluate the performance of software applications and information and telecommunications systems.

Information Technology (IT) Trainers

IT trainers teach, train and instruct at all levels to include any aspects of expertise within the scope of informatics (systems development, support and operations, technical skills).

Technical Writers

Technical writers analyze material, such as specifications, notes and drawings, and write manuals, user guides and other documents to explain clearly and concisely the installation, operation and maintenance of software and electronic, mechanical and other equipment.

Graphic Designers

Graphic designers conceptualize and produce graphic art and visual materials to effectively communicate information for publications, advertising, films, packaging, posters, signs and interactive media such as web sites and CD-ROMs.

Illustrators

Illustrators conceptualize and create illustrations to represent information through images.