Computers, Engineering, and Science

Atmospheric Scientists

Requires a Bachelor's Degree or Higher

Atmospheric scientists, commonly called meteorologists, study the atmosphere's physical characteristics, motions, and processes and the way these factors affect the rest of the environment. The best known application of this knowledge is forecasting the weather. Atmospheric scientists can also work in research or in organizations concerned with air-pollution control, agriculture, forestry, air and sea transportation, and national defense.

Growth Rate: 15.4%

Current Jobs: 600

Job Change: 90

Replacement Job Openings: 150

Factors Driving the Job Growth

Overall employment of atmospheric scientists is expected to grow faster than the average for all occupations. As research leads to continuing improvements in weather forecasting, demand should grow for private weather consulting firms, especially to climate-sensitive industries. The federal government is the single largest employer of these workers, but there are many opportunities in the private sector. Opportunities in broadcasting, however, are rare and highly competitive.

Where Jobs are Currently Found

Other Professional, Scientific, & Technical Services* (71%)

Wages and Salaries

Mean Annual Earnings: $82,270

Education and Training Requirements

A bachelor's degree in meteorology or atmospheric science is usually the minimum requirement degree in meteorology or atmospheric science is usually the minimum requirement for an entry-level position. A second bachelor's degree or a master's degree will enhance employment opportunities, pay, and advancement potential. An advanced degree is required for research positions.

Career Paths

Workers in other occupations concerned with the physical environment include environmental scientists, geoscientists, physicists and astronomers, mathematicians, and civil, chemical and environmental engineers.

* Includes Weather Forecasting Services

Chemical Engineers

Requires a Bachelor's Degree or Higher

Chemical engineers apply the principles of chemistry to solve problems involving the production or use of new chemicals and biochemicals. They design equipment and processes for large-scale chemical manufacturing, plan and test methods of manufacturing products and treating byproducts, and supervise production.

Factors Driving the Job Growth

Chemical engineers are expected to grow much faster than the average for all occupations through 2016. Although overall employment in the chemical manufacturing industry is expected to decline, chemical companies are expected to continue to research and develop new chemicals and processes. Most employment growth is expected to be in research and development, particularly in energy, biotechnology, and nanotechnology.

Growth Rate: 17.1%

Current Jobs: 1,550

Job Change: 270

Replacement Job Openings: 390

Where Jobs are Currently Found

Scientific Research & Development Services (44%)

Manufacturing (29%)
- Chemical Manufacturing (14%)

Wages and Salaries

Mean Annual Earnings: $89,330

Education and Training Requirements

A bachelor's degree in chemical engineering is required for almost all entry-level engineering jobs. A master's degree or higher is required for some research, consulting, teaching, and managerial positions.

Career Paths

Chemical engineers usually start as junior or assistant engineers and may advance to supervising engineer, chief engineer, or plant manager. Engineers engaged in research may be given increasingly responsible assignments with increases in salary, or may progress to such positions as supervisor, project engineer, or director of research.

Chemists

Requires a Bachelor's Degree or Higher

Chemists conduct research, analysis, and experimentation on substances for such purposes as product and process development, quantitative and qualitative analysis, and improvement of analytical methodologies. They develop new products such as paints, adhesives, drugs, and cosmetics. They may also develop processes that save energy or reduce pollution.

Growth Rate: 19.7%

Current Jobs: : 3,190

Job Change: 620

Replacement Job Openings: 840

Factors Driving the Job Growth

As the population ages, the need for more chemists to develop and improve drugs should grow rapidly. Growing concerns about the environment will also spur demand for chemists to create chemicals that may be produced and disposed of cleanly. Job opportunities should be best in research and development.

Where Jobs are Currently Found

Scientific Research & Development Services (49%)

Chemical Manufacturing (17%)

Trade, Transportation, & Utilities (7%)

Government (7%)

Wages and Salaries

Mean Annual Earnings: $81,340

Education and Training Requirements

A bachelor's degree in chemistry is generally required for entry-level positions in sales, service, or quality control. However, a Ph.D. degree is needed for most research jobs. Many employers will provide bachelor's degree chemists with additional training or education. Job seekers who have good communications skills and knowledge of computers, business, marketing, or economics have an edge over the competition.

Career Paths

Senior chemists can advance to management positions. Other occupations closely related to the work of chemists include chemical engineers, biological scientists, and chemical technicians.

Civil Engineers

Civil engineers plan, design, and oversee the construction of roads, airports, tunnels, bridges, dams, and water and sewage systems. They may also conduct research, advise on engineering problems, prepare feasibility reports, and teach.

Growth Rate: 9.9%

Current Jobs: 7,490

Job Change: 740

Replacement Job Openings: 1,970

Factors Driving the Job Growth

Civil engineers are expected to see average job growth through 2016. The need to repair existing facilities and build new ones will spur growth but opportunities will vary geographically depending on the location of the project.

Where Jobs are Currently Found

Architectural, Engineering, & Related Services (43%)

Government (23%)

Construction (15%)

Local Government (7%)

Self-employed (4%)

Wages and Salaries

Mean Annual Earnings: $84,270

Education and Training Requirements

A bachelor's degree civil engineering is suitable for beginning engineering jobs. Interpersonal skills combined with well-developed communication and engineering skills offer civil engineers a distinct advantage when applying for management positions. Civil engineers should be able to work as part of a team and exhibit creativity, an analytical mind, and a capacity for detail.

Career Paths

Civil engineers may advance to management positions such as construction site supervisor or city engineer once they gain some experience. Those who specialize may start their own businesses. Other workers who apply scientific and mathematical principles in their work include architects, biologists, oceanographers, computer scientists, and physical and life scientists.

Computer Engineers

Requires a Bachelor's Degree or Higher

Computer hardware engineers research, design, develop, test, and oversee the installation of computer hardware. They also supervise its manufacture and installation. Computer software engineers apply the principles and techniques of computer science, engineering, and mathematical analysis to the design, development, testing, and evaluation of the software and systems that enable computers to perform their many applications.

Applies only to Computer Software Engineers

Growth Rate: 27,6%

Current Jobs: 49,650

Job Change: 13,710

Replacement Job Openings: 7,990

Factors Driving the Job Growth

Demand for computer engineers should soar. As the Internet expands and competition increases, businesses' need for better, faster, more intelligent computer information systems will surge, swelling the need for more computer engineers. This is expected to be one of the fastest growing occupations in Massachusetts through 2016.

Where Jobs are Currently Found

Information (21%)

Systems Design & Related Services (21%)

Software Publishers (16%)

Finance & Insurance (9%)

Manufacturing (21%)

Trade, Transportation, & Utilities (7%)

Computer & Electronic Product Manufacturing (17%)

Self-Employed (2%)

Wages and Salaries

Mean Annual Earnings:	$109,260	Computer Hardware Engineers
	$ 99,580	Computer Software Engineers, Applications
	$100,760	Computer Software Engineers, Systems Software

Education and Training Requirements

A bachelor's degree in computer engineering, electrical engineering, or mathematics is usually the minimum requirement. Prior work experience is also important, as is keeping up with the latest developments in computer science. Good communication skills are also very important.

Career Paths

After several years of experience, computer engineers can advance into managerial or project leadership positions and become chief technology officers. Some may start their own consulting firms.

Computer Support Specialists

Requires Specialized Training or an Associate's Degree

Computer support specialists provide technical assistance, support, and advice to customers and other users. This occupation includes technical support specialists and help-desk technicians.

Factors Driving the Job Growth

Employment of computer support specialists is expected to grow slightly slower than the average for all occupations through 2016. Advances in computer technology are expected to continue, creating an increased demand for individuals with the expertise to provide technical assistance. However, employment growth may be tempered as employers shift more routine work to other countries.

Growth Rate: 6.1%

Current Jobs: 17,360

Job Change: 1,060

Replacement Job Openings: 5,630

Where Jobs are Currently Found

Professional, Scientific, & Technical Services* (21%)

Computer & Electronic Product Manufacturing (11%)

Information (11%)

Colleges, Universities, & Professional Schools (10%)

Finance & Insurance (9%)

Wholesale Trade (6%)

Wages and Salaries

Mean Annual Earnings: $58,630

Education and Training Requirements

While there is no universally accepted way to prepare for a job as a computer support specialist, most employers prefer to hire someone with formal college education. Job prospects should be best for college graduates who are up to date with the latest skills and technology.

Career Paths

Advancement in this occupation depends on performance as well as formal education. Some computer support specialists become applications developers, designing products rather than assisting others. Other related occupations include computer programmers, computer software engineers, computer systems analysts, computer scientists, and database administrators.

* This sector includes the Computer Systems Design and Related Services industry group

Database Administrators

Database administrators work with database management systems software and determine ways to organize and store data. They identify user requirements, set up computer databases, and test and coordinate modifications to the computer database systems.

Growth Rate: 21.2%

Current Jobs: 4,240

Job Change: 920

Replacement Job Openings: 450

Factors Driving the Job Growth

Employment of database administrators is expected to grow much faster than the average for all occupations through 2016 as organizations continue to adopt and integrate increasingly sophisticated technologies. Job opportunities for this occupation will be found in virtually all sectors of the economy. However, the rate of job growth will not be as rapid as in the previous decade as the information technology sector begins to mature and as routine work is increasingly outsourced overseas.

Where Jobs are Currently Found

Educational Services (14%)

Scientific Research & Development Services (11%)

Information (10%)

Computer Systems Design & Related Services (9%)

Manufacturing (7%)

Management of Companies & Enterprises (7%)

Security Brokers & Other Financial Investment Activities (7%)

Management, Scientific, & Consulting Services (6%)

Wages and Salaries

Mean Annual Earnings: $78,110

Education and Training Requirements

For database administrator positions, many employers seek applicants with a bachelor's degree in a computer-related field. Employers increasingly seek individuals with a master's degree in business administration (MBA), with a concentration in information systems.

Career Paths

Experienced database administrators can become supervisors or managers in their organization or they can become manufacturers' sales representatives. Other occupations that require similar skills are computer programmers, computer software engineers, and computer systems analysts.

Electrical and Electronics Engineers

Requires a Bachelor's Degree or Higher

Electrical and electronics engineers design, develop, test, and supervise the manufacture of electronic and electrical equipment, such as power generating and transmission equipment, radar, sonar, communications equipment, computers, compact discs players, VCRs, microwave ovens, and medical devices. They may also test equipment, solve operating problems, prepare feasibility reports, and estimate the time and cost of projects.

Growth Rate: 0.7%

Current Jobs: 11,050

Job Change: 80

Replacement Job Openings: 2,560

Factors Driving the Job Growth

Jobs for electrical and electronics engineers are expected to grow much more slowly than the average for all occupations. Nevertheless, to remain competitive, companies will need to invest heavily in research and development and, thus, hire engineers. Most of the jobs will arise due to the need to replace workers who leave the occupation and opportunities will be best for those who have learned the latest technologies. Most new jobs should arise in high-tech industries and business consulting firms.

Where Jobs are Currently Found

Computer & Electronic Product Manufacturing (36%)

Navigational, Measuring, Electromedical & Control Instruments Manufacturing (15%)

Scientific Research & Development Services (11%)

Architectural, Engineering, & Related Services (14%)

Trade, Transportation, & Utilities (6%)

Electrical Equipment, Appliance, & Component Manufacturing (4%)

Information (4%)

Management of Companies & Enterprises (3%)

Self-Employed (2%)

Wages and Salaries

Mean Annual Earnings:	$102,160	Electrical Engineers
	$96,400	Electronics Engineers, except Computer

Education and Training Requirements

A bachelor's degree in electrical engineering is the minimum requirement for employment in this field. Graduates of four-year engineering technology programs may have some difficulty finding jobs, as some employers regard graduates of these programs as having skill levels between those of a technician and an engineer. Graduate training enhances promotional opportunities, as does keeping abreast of the latest technological advances.

Career Paths

Electrical and electronics engineers may advance with experience to become supervisors or lead engineers. With good management and engineering skills, some may become department managers or directors of research and development. Many individuals trained as engineers apply their knowledge to work in other fields such as sales. Firms selling a technical product often employ engineers in sales because they have the background to discuss electrical or electronic problems with prospective customers.

Engineering, Science, and Computer Systems Managers

Requires a Bachelor's Degree or Higher

Computer and information systems managers plan, coordinate, and direct research, and facilitate the computer-related activities of firms. They direct the work of systems analysts, computer programmers, computer support specialists, and other computer-related workers. Engineering managers supervise people who design and develop machinery, products, systems, and processes, or they may direct and coordinate production operations in industrial plants. Natural science managers oversee the work of life, physical, and medical scientists. They may direct research and development projects and coordinate activities such as testing, quality control, and production.

Applies only to Computer and Information Systems Managers

Growth Rate: 8.0%

Current Jobs: 17,890

Job Change: 1,440

Replacement Job Openings: 3,230

Factors Driving the Job Growth

Employment is expected to increase somewhat faster than the average for all occupations. As companies update and improve their products more frequently, more engineering, science and computer systems managers will be needed to supervise the teams of engineers who will design the products. Investment in new technologies will also foster rapid job growth.

Where Jobs are Currently Found

Manufacturing (23%)

Finance & Insurance (11%)

Information (9%)

Computer Systems Design & Related Services (9%)

Education & Health Services (8%)

Trade, Transportation, & Utilities (7%)

Government (7%)

Scientific Research & Development Services (7%)

Architectural, Engineering, & Related Services (6%)

Wages and Salaries

Mean Annual Earnings:	$128,260	Computer and Information Systems Managers
	$137,160	Engineering Managers
	$136,000	Natural Sciences Managers

Education and Training Requirements

Experience as an engineer, systems analyst, mathematician, chemist, physicist, biologist, or other natural scientist is usually required to become an engineering, science, or computer systems manager. Education requirements vary; a bachelor's degree is required, and a master's degree is often preferred. Employers also look for job applicants who are effective leaders and communicators who can organize and coordinate work flow.

Career Paths

Much of the work of engineering, science, and computer systems managers focuses on planning and directing key departments crucial to the company's success. With experience some of these managers may advance to hold senior executive positions within the company. Some may start their own firms or pursue academic careers.

Environmental Engineers

Requires a Bachelor's Degree or Higher

Environmental engineers develop solutions to environmental problems using the principles of biology and chemistry. Their areas of operation include water and air pollution control, recycling, waste disposal, and public health issues. They also conduct research on the environmental impact of construction projects, analyze scientific data, and perform quality control checks. Many environmental engineers work as consultants helping their clients comply with federal, state, and local regulations.

Growth Rate: 20.7%

Current Jobs: 2,100

Job Change: 430

Replacement Job Openings: 620

Factors Driving the Job Growth

Employment of environmental engineers is expected to grow at a much faster rate than the average for all occupations and job opportunities are expected to be good. Much of the expected growth will be due to the emergence of this occupation as a widely recognized engineering specialty rather than an area of other engineering specialties. The increasing level of concern about the environmental impact of economic activity will also contribute to the demand for this specialty. If deteriorating economic conditions lead to more lax environmental regulations, demand could be somewhat curtailed.

Where Jobs are Currently Found

Architectural, Engineering, and Related Services (40%)

Government (28%)

Management, Scientific, & Technical Consulting Services (12%)

Federal Government (8%)

Wages and Salaries

Mean Annual Earnings: $82,540

Education and Training Requirements

A minimum of a bachelor's degree is required for any position in environmental engineering and, like other engineers, environmental engineers must be licensed. To be licensed, an engineer must have a degree from an accredited engineering program, four years of relevant work experience, and a passing score on a state examination. Upon passing the test, the engineer is called an engineer in training (EIT) or engineer intern (EI) until the work experience is met.

Career Paths

As environmental engineers gain experience, they can become responsible for larger and more important projects or become supervisory engineers. They may also work in research or academia or they may start their own consulting firms.

Mechanical Engineers

Requires a Bachelor's Degree or Higher

Mechanical engineers design machines, products, and processes that produce, transmit, and use power and heat. They develop, design, and build power-using engines (steam, jet, and rocket engines) and power-driven machines (refrigerators, air-conditioners and other appliances, robots, printing presses, tools, and elevators). They may specialize in heating, ventilating, air-conditioning and refrigeration, pollution control, solar energy, aviation and space, and underwater technology.

Factors Driving the Job Growth

Demand for mechanical engineers is expected to decline through 2016. Manufacturing employment is expected to go down, slowing the demand for mechanical engineers in this sector. However, there will be openings to replace workers who leave the occupation or the labor force.

Growth Rate: -2.2%

Current Jobs: 6,840

Job Change: -140

Replacement Job Openings: 1,480

Where Jobs are Currently Found

Computer & Electronic Product Manufacturing (25%)

Architectural & Engineering Services (20%)

Navigational, Measuring, Electromedical, & Control Instruments Manufacturing (13%)

Machinery Manufacturing (11%)

Fabricated Metal Product Manufacturing (7%)

Semiconductor & Other Electronic Component Manufacturing (7%)

Wages and Salaries

Mean Annual Earnings: $86,040

Education and Training Requirements

A bachelor's degree in mechanical engineering is required for most entry-level jobs. Four-year programs in engineering technology provide practical experience in this field. However, employers generally consider this training sufficient only for a technician's position. Mechanical engineers must keep up to date on new technologies and methods of analysis. Graduate training is essential for advancement. Patience, resourcefulness, creativity, and curiosity about the way devices and machines work are also necessary.

Career Paths

Mechanical engineers have many career paths open to them. They may work in research and development, design and testing, or become supervisors or department managers. Some may become managers of operations/maintenance or enter into sales or other administrative positions.

Network and Computer Systems Administrators

Network and computer systems administrators design, install, and support an organization's local-area network (LAN), wide-area network (WAN), or other types of systems. They maintain network hardware and software, analyze problems, and monitor the system to ensure its availability to users.

Growth Rate: 20.9%

Current Jobs: 9,390

Job Change: 1,950

Replacement Job Openings: 2,140

Factors Driving the Job Growth

Employment of network and computer systems administrators is expected to increase much faster than the average for all occupations through 2016, as firms continue to invest heavily in securing computer networks. Opportunities are expected across a wide array of industries, as more firms place a high priority on safeguarding their data and systems.

Where Jobs are Currently Found

Information (13%)

Finance & Insurance (11%)

Manufacturing (11%)

Computer Systems Design & Related Services (10%)

Management of Companies & Enterprises (9%)

Colleges, Universities, & Professional Schools (8%)

Wholesale Trade (5%)

Elementary & Secondary Schools (4%)

Wages and Salaries

Mean Annual Earnings: $76,380

Education and Training Requirements

Most employers seek applicants with a bachelor's degree, although not necessarily in a computer-related field. Job prospects will be best, however, for college graduates who are up to date with the latest skills and technologies in the computer field.

Career Paths

Experienced administrators can become supervisors or managers in their organization or they can become manufacturers' sales representatives. Other occupations that require similar skills are computer software engineers, computer systems analysts, computer systems scientists, and database administrators.

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Network Systems and Data Communications Analysts

Requires a Bachelor's Degree or Higher

Network systems and data communications analysts design, test, and evaluate systems such as local area networks (LANs), wide area networks (WANs), the Internet, Intranets, and other data communication systems. Systems can range from a connection between two offices in the same building to globally distributed networks.

Growth Rate: 49.5%

Current Jobs: 7,670

Job Change: 3,800

Replacement Job Openings: 1,560

Factors Driving the Job Growth

Employment of network systems and data communications analysts is projected to be the most rapidly growing occupation in Massachusetts through 2016, increasing at a rate significantly faster than the average for all occupations. Opportunities are expected across a wide array of industries, as more firms increase their use of the Internet, the World Wide Web (the graphical portion of the Internet), or electronic commerce (doing business on the Internet).

Where Jobs are Currently Found

Professional, Scientific, & Technical Services* (23%)

Financial Activities (16%)

Self-Employed (15%)

Information (14%)

Educational Services (7%)

Management of Companies & Enterprises (7%)

Manufacturing (4%)

Wages and Salaries

Mean Annual Earnings: $80,390

Education and Training Requirements

A bachelor's degree is a prerequisite for many network systems and data communications analyst positions, although an associate's degree or certificate is sufficient for some positions, such as webmaster.

Career Paths

Experienced administrators can become supervisors, managers, or project leaders in their organization. Other occupations that require similar skills are computer programmers, computer software engineers, computer systems analysts, and database administrators.

* This sector includes the Computer Systems Design & Related Services industry group

Science Technicians

Requires Specialized Training or an Associate's Degree

Science technicians set up, operate, and maintain laboratory instruments, monitor experiments, and measure and record results. They may conduct tests, collect data, and draw preliminary conclusions. This occupational group includes biological, chemical, and other science technicians.

Factors Driving the Job Growth

Jobs for science technicians should grow faster than the average for all occupations through the year 2016. Increased spending on research and development, especially in biotechnology, will contribute to the job growth.

Growth Rate: 21.0%

Current Jobs: 9,220

Job Change: 1,940

Replacement Job Openings: 3,220

Where Jobs are Currently Found

Colleges, Universities, & Professional Schools (32%)

Scientific Research & Development Services (29%)

Manufacturing (17%)

Architectural, Engineering, & Related Services (10%)

Chemical Manufacturing (12%)

Government (4%)

Wages and Salaries

Mean Hourly Earnings:	$25,36	Biological Technicians
	$22.60	Chemical Technicians
	$21.41	Environmental Science and Protection Technicians, including Health
	$20.64	Agricultural and Food Science Technicians

Education and Training Requirements

Most prefer applicants with at least two or more years of specialized training. Emphasis should be on theory as well as extensive hands-on experience with a variety of laboratory equipment. Training may be obtained from junior or community colleges or technical institutes. Many applicants also have bachelor's degrees and, with experience, may become supervisors.

Career Paths

Science technicians advance by taking on more responsibilities and continuing their education. They usually begin as trainees, working under the direct supervision of a scientist or experienced technician. As they gain experience, some physical and life scientists can become lab supervisors. However, a bachelor's degree is often necessary for jobs in sales. A doctoral degree is required to become a research director. Other workers who apply scientific theories to help improve human life include health technologists and technicians and engineering technicians.

Scientists (Biological, Medical, and Physical)

Requires a Bachelor's Degree or Higher

Applies only to Biochemists & Biophysicists, Medical Scientists, and Environmental Scientists

Growth Rate: 24.6%

Current Jobs: 12,910

Job Change: 3,170

Replacement Job Openings: 3,460

Biological scientists study living organisms and their relationship to their environment. Most specialize in some area of biology, such as zoology (the study of animals) or microbiology (the study of microscopic organisms). Medical scientists research human diseases in order to improve human health. Most medical scientists conduct research and development to advance knowledge of life processes and living organisms such as viruses, bacteria, and other infectious agents. Physical scientists study non-living things and systems in contrast to the life (biological and medical) scientists. This group comprises such occupations physicists, geologists, and environmental scientists. In all three cases, scientists may work in private industry, research and development, government agencies, or in universities.

Factors Driving the Job Growth

Employment of scientists is expected to grow much more rapidly than the average for all occupations. Development of new scientific products and methods and growing concern about the environment will drive much of this growth. Most new jobs will occur in private industry, especially in biotechnology firms that conduct genetic and biotechnical research for new product development.

Where Jobs are Currently Found

Scientific Research & Development Services (46%)

Colleges, Universities, & Professional Schools (19%)

Government (9%)

Hospitals (6%)

Management, Scientific, & Technical Consulting Services (5%)

Chemical Manufacturing (5%)

Wages and Salaries

Mean Annual Earnings:	$91,89	Biochemists & Biophysicists
	$63,710	Microbiologists
	$62,390	Zoologists & Wildlife Biologists
	$96,640	Medical Scientists, except Epidemiologists
	$68,600	Biological Scientists, All Other
	$82,160	Environmental Scientists & Specialists, Including Health

Education and Training Requirements

A master's degree or Ph.D. is required for most research jobs. A bachelor's degree may be adequate preparation for some non-research jobs in testing and inspection or technical sales. Whatever the job, employers prefer biological, medical, and physical scientists who can work both independently and as part of a team and who can communicate clearly and concisely.

Career Paths

A degree in the life or physical sciences is a good starting point for further education leading to many jobs in the private industry, government, or academia, including careers as a physician, dentist, or veterinarian.

Requires a Bachelor's Degree or Higher

Systems Analysts

Systems analysts plan ways to use computers to solve scientific, engineering, and business problems. They determine what data must be collected, the equipment needed for computation, and the steps to be followed to process the information. Once a computer system has been developed, they prepare charts and diagrams that describe its operation. They may also prepare reports to help clients understand the system.

Growth Rate: 24.0%

Current Jobs: 14,810

Job Change: 3,560

Replacement Job Openings: 3,930

Factors Driving the Job Growth

As companies attempt to make their organizations more efficient by expanding and improving their computer systems, jobs for systems analysts will increase rapidly. Prospects will continue to be very good for college graduates with training and experience in business, science, and other applied fields. The occupation is projected to grow much faster than the average for all occupations in Massachusetts.

Where Jobs are Currently Found

Professional,Scientific, & Technical Services (28%)

Financial Activities (17%)

Manufacturing (11%)

Information (11%)

Colleges, Universities, & Professional Schools (6%)

Self-Employed (5%)

Wages and Salaries

Mean Annual Earnings: $88,370

Education and Training Requirements

Most employers require a college degree with a major in computer science or a closely related field. However, for some jobs that are more complex, graduate degrees are necessary. Job applicants must be able to communicate effectively and keep abreast of the latest technological changes.

Career Paths

With experience junior systems analysts may advance to senior and lead system analyst positions. Those who exhibit management abilities may become supervisors or managers of data processing or other information systems departments. Many workers sometimes enter this occupation from other professional occupations. For example, an auditor in accounting may become a computer systems analyst specializing in accounting systems development.