

| ONET       | Job Title                                  | National median annual wage | Minimum education needed | Current national employment | Expected national job growth (2002-2012) | Demand for workers is low, average, high | Knowledge skills needed  | Other required skills and abilities   |
|------------|--|-----------------------------|--------------------------|-----------------------------|--|--|--|---|
| 19-1021.01 | Biochemists                                | \$64,390                    | BA, may require MA       | 17,000                      | 9,000                                    | HIGH                                     | Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo; knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment; knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications. | Using scientific rules and methods to solve problems; using mathematics to solve problems; conducting tests and inspections of products, services, or processes to evaluate quality or performance. |
| 25-1042.00 | Biological Science Teachers, Postsecondary | \$60,850                    | BA, may require MA       | 1,581,000                   | 960,000                                  | HIGH                                     | Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment; knowledge of principles and methods for curriculum and training design; knowledge of the structure and content of the English language; knowledge of the chemical composition, structure, and properties of substances.                       |   |

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| 19-1029.99 | Biological Scientists | \$48,660                    | MA, most w/ PhD          | 75,000                      | 15,000                                   | HIGH                                     | <p>Usually work in laboratories and use electron microscopes, computers, thermal cyclers, or a wide variety of other equipment. Some conduct experiments using laboratory animals or greenhouse plants. This is particularly true of botanists, physiologists, and zoologists. For some biological scientists, research also is performed outside of laboratories. For example, a botanist might do research in tropical rain forests to see what plants grow there, or an ecologist might study how a forest area recovers after a fire. Some marine biologists also work outdoors, often on research vessels from which they study various marine organisms such as marine plankton or fish.</p> | <p>Biological scientists should be able to work independently or as part of a team and be able to communicate clearly and concisely, both orally and in writing. Those in private industry, especially those who aspire to management or administrative positions, should possess strong business and communication skills and be familiar with regulatory issues and marketing and management techniques. Those doing field research in remote areas must have physical stamina. Biological scientists also must have patience and self-discipline to conduct long and detailed research projects.</p> |

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| 19-4021.00 | Biological Technicians | \$33,360                    | BA                       | 48,000                      | 17,000                                   | AVE                                      | <p>Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment; knowledge of principles and methods for curriculum and training design; knowledge of the structure and content of the English language; knowledge of the chemical composition, structure, and properties of substances.</p> | <p>Use engineering and biology to solve problems in health care. Biological technicians work in a variety of settings including: academic research centers, medical centers and commercial industry. In medicine, biological technicians analyze DNA to search for mutations that cause genetic diseases. Research biological technicians use DNA technology and protein modeling to develop and test new drugs. Analyze collected samples of blood, hair, skin tissue or urine at crime scenes to help police identify crime suspects.</p> |

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| 19-1020.01 | Biologists           | \$48,660                    | BA, may require MA and some PhD, MD or JD | 75,000                      | 38,000                                   | Average                                  | Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment; knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process; knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications; knowledge of principles and methods for describing the features of land, sea, and air masses. | Understanding implications of new information for both current and future problem-solving and decision-making. Determine the tools/equipment needed to do a job.  |
| 17-2031.00 | Biomedical Engineers | \$64,780                    | MA  | 8,000                       | 3,000                                    | HIGH                                     | Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment; knowledge of principles and methods for curriculum and training design; knowledge of the structure and content of the English language; knowledge of the chemical composition, structure, and properties of substances.   | Identify viruses and diseases and monitor the effects of medication and other treatments. Biomedical engineers/scientists learn to work with computers, sophisticated automated equipment, microscopes and other hi-tech laboratory equipment. They employ a wide range of complex modern techniques. |

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| 19-1021.02 | Biophysicists        | \$64,390                    | BA, may require MA and some PhD, MD or JD | 17,000                      | 9,000                                    | HIGH                                     | Knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment; knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub-atomic structures and processes; knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications. | Ability to generate or use different sets of rules for combining or grouping things in different ways; ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.   |
| 19-4031.00 | Chemical Technicians | \$37,620                    | AA, may require BA                        | 69,000                      | 20,000                                   | LOW                                      | Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo; knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.  | Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems; ability to apply general rules to specific problems to produce answers that make sense; ability to choose the right mathematical methods or formulas to solve a problem. |

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| 11-3021.00 | Computer & Info. Systems Managers | \$90,490                    | BA; many require MA; some PhD, MD, or JD | 284,000                     | 154,000                                  | HIGH                                     | Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming. Knowledge of business management principles and strategic planning, leadership, and production methods | Bringing others together and trying to reconcile differences; usign logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.                              |
| 15-1071.01 | Computer Security Specialists     | \$75,060                    | BA                                       | 251,000                     | 122,000                                  | HIGH                                     | Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.  | Understanding the implications of new information for both current and future problem-solving and decision-making; Determine how systems work and how changes in conditions, operations, and environment will affect outcomes. |
| 15-1041.00 | Computer Support Specialists      | \$39,900                    | vocational training or AA; some BA       | 39,900                      | 507,000                                  | HIGH                                     | knowledge of principles and processes for providing customer and personal services. Customer assessment, meeting quality standards for services, and evaluating services;  | Determining causes of operating errors and deciding what to do about it.   |
| 15-1051.00 | Computer systems analysts         | \$65,050                    | BA                                       | 468,000                     | 237,000                                  | HIGH                                     | knowledge of design techniques, tools, and principles involved in production of predision technical plan,s blueprints, drawings, and models; knowledge of transmission, broadcasting, switching, control, and operation of telecommunications systems    |  |

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| 25-1032.00 | Engineering Teachers, post secondary        | \$71,070                    | BA, may require MA or PhD                                   | 1,581,000                   | 960,000                                  | HIGH                                     | Practical applications of engineering science & technology. Applying principles, techniques, procedures, and equipment to the design and production of various goods and services.  | Use mathematics to solve problems; knowledge of design techniques, tools, and principles; knowledge of repair, use, and maintenance of tools and equipment; Talking to others to convey information effectively.  |
| 29-2012.00 | Medical and Clinical Laboratory Technicians | \$30,140                    | HS diploma & vocational training or job related course work | 147,000                     | 68,000                                   | AVE                                      | Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction; knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology; knowledge of the information and techniques needed to diagnose and treat human injuries, diseases, and deformities. | Ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position; ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules; the ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects. |

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| 29-2011.00 | Medical and Clinical Laboratory Technologists | \$44,460                    | BA                       | 150,000                     | 69,999                                   | AVE                                      | <p>Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo; knowledge of plant and animal organisms, their tissues, cells, functions, interdependencies, and interactions with each other and the environment; knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming; knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications; knowledge of machines and tools, including their designs, uses, repairs, and maintenance.</p> | <p>Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.</p> |

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| 19-1022.00 | Microbiologists | \$52,100                    | BA                       | 16,000                      | 8,000                                    | AVE                                      | <p>Knowledge of plant and animal organisms, their tissues, cells, functions; knowledge of principles and processes for providing customer and personal services; knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.</p> | <p>Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems; communicate indicating effectively in writing as appropriate for the needs of the audience; ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.</p> |

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