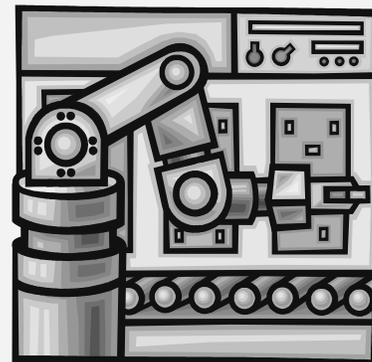


Florida Institute of Technology– Career Management Services

Career Profile: Mechanical Engineering

Engineers develop new products, and during the process, they consider several factors. For example, in developing an industrial robot, engineers specify the functional requirements precisely; design and test the robot's components; integrate the components to produce the final design; and evaluate the design's overall effectiveness, cost, reliability, and safety. This process applies to the development of many different products, such as power plants, helicopters, and toys. In addition to their involvement in design and development, many engineers work in testing, production, or maintenance. These engineers supervise production in factories, determine the causes of component's failure, and test manufactured products to maintain quality.



Mechanical Engineers research, design, develop, manufacture, and test tools, engines, machines, and other mechanical devices. Mechanical engineering is one of the broadest engineering disciplines. Engineers in this discipline work on power-producing machines such as electric generators, internal combustion engines, and steam and gas turbines. They also work on power-using machines such as refrigeration and air-conditioning equipment, machine tools, material-handling systems, elevators and escalators, industrial production equipment, and robots used in manufacturing. In addition, mechanical engineers work in manufacturing or agriculture production, maintenance, or technical sales; many become administrators or managers. Materials Engineers are involved in the development, processing, and testing of the materials used to create a range of products, from computer chips and aircraft wings to golf clubs and snow skis. They work with metals, ceramics, plastics, semiconductors, and composites to create new materials that meet certain mechanical, electrical, and chemical requirements.

Most engineers work office buildings, laboratories, or industrial plants. Others may spend time outdoors at construction sites and oil and gas exploration and production sites, where they monitor or direct operations or solve onsite problems. Some engineers travel extensively to plants or worksites here and abroad. Many engineers work a standard 40-hour week. At times, deadlines or design standards may bring extra pressure to a job, requiring engineers to work longer hours.

A bachelor's degree in engineering is required for almost all entry-level engineering jobs. College graduates with a degree in a natural science or mathematics occasionally may qualify for some engineering jobs, especially in specialties that are in high demand. However, engineers trained in one branch may work in related branches. For example, many aerospace engineers have training in mechanical engineering. This flexibility allows employers to meet staffing needs in new technologies and specialties in which engineers may be in short supply. It also allows engineers to shift to fields with better employment prospects or to those which more closely match their interests.

The median annual wage of mechanical engineers was \$78,160 in May 2010. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$50,550, and the top 10 percent earned more than \$119,480.

For more information on a career in Mechanical Engineering contact the Career Management Services Office or your academic advisor.

Sources: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition
National Association of Colleges and Employers Salary Survey: Winter 2011



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