

Mechanical engineering science

[Engineering](#)



Mechanical engineers use these core principles along with tools like computer-aided engineering and product lifecycle management to design and analyze manufacturing plants, industrial equipment and machinery, heating and cooling systems, transport systems, aircraft, spacecraft, robotics, medical devices, weapons, and others. Mechanical engineering emerged as a field during the industrial revolution in Europe in the 18th century; however, its development can be traced back several thousand years around the world.

Mechanical engineering science emerged in the 19th century as a result of developments in the field of physics. The field has continually evolved to incorporate advancements in technology, and mechanical engineers today are pursuing developments in such fields as composites, mechanics, and nanotechnology. Mechanical engineering overlaps with aerospace engineering, metallurgical engineering, civil engineering, electrical engineering, petroleum engineering, manufacturing engineering, chemical engineering, and other engineering disciplines to varying amounts.

In Spain, Portugal and most of South America, where neither B.S. nor B.Tech. programs have been adopted, the formal name for the degree is "Mechanical Engineer", and the course work is based on five or six years of training. In Italy the course work is based on five years of training, but in order to qualify as an Engineer you have to pass a state exam at the end of the course. In Greece, the coursework is based on a five year curriculum and the requirement of a 'Diploma' Thesis, which upon completion a 'Diploma' is awarded rather than a B. Sc.

In Australia, mechanical engineering degrees are awarded as Bachelor of Engineering (Mechanical) or similar nomenclature[9] although there are an increasing number of specializations. The degree takes four years of full-time study to achieve. To ensure quality in engineering degrees, Engineers Australia accredits engineering degrees awarded by Australian universities in accordance with the global Washington Accord. Before the degree can be awarded, the student must complete at least 3 months of on the job work experience in an engineering firm.