

Mechanical Engineering

Mechanical engineers have traditionally been associated with mechanical design, energy conversion, fuel and combustion technologies, heat transfer, materials, noise control and acoustics, manufacturing processes, power in transportation, automatic control, product safety and reliability, refrigeration and air conditioning.

Along with diverse areas of specialization come a wide range of career paths. A mechanical engineer may work in the area of classical machine design conceiving and optimizing devices to perform any number of functions. Mechanical Engineers can also be associated with the development and design of biomedical products, the control of satellites, and more efficient energy transfer techniques.

Career Opportunities

Design:

- Machines that manufacture and package all varieties of products
- Rotating equipment-pumps, compressors, blowers, turbo machinery, internal combustion engines
- Pressure vessels-reactors, heat exchangers, boilers
- Biomaterials, robots
- Vehicles-cars, trucks, heavy equipment, buses, aircraft

Mechanical Engineers also work in other areas such as: analyzing, fabrication, testing, sales, and other disciplines to design plants that manufacture a variety of different products.

Coursework

A significant portion of a mechanical engineering curriculum involves the study of mathematics, materials, basic mechanics, thermal science, and fluid mechanics. This theory and the associated analysis skills are then put into practical use during a series of design-oriented classes that emphasize open-ended problems. In the College of Engineering, both theoretical and practical skills are developed and refined in cooperative internships. While in interest in “working” with tools can be an asset to a mechanical engineering student, skills in mathematics, science and computer use are better predictors of ultimate success.

Faculty

The Temple Engineering Faculty is noted and recognized for its talents in teaching, advising, mentoring and in scholarship. The College of Engineering currently has 35 full-time faculty members, making the faculty-to-student ratio about 20:1, and the size of a typical engineering class is 10-20 students.

Senior Design Projects

The Senior Design Project is a capstone course in the senior year for mechanical engineering students. The course is broken into two semesters and is designed to create a professional work environment in which a group of students, along with a faculty advisor (sometimes a local company may provide assistance and donate materials) work together to provide a solution to a problem.

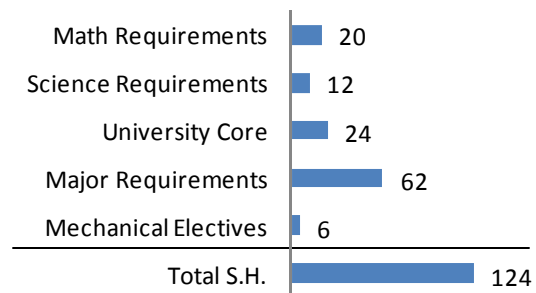
Most recent projects:

- Air Conditioning Design-Temple Building
- Cryoablation Surgery-Biomedical Procedure
- Formula SAE Race Car, Hybrid Golf Cart
- Solar Powered Boat
- Shape Metal Wing Control

Honors Program

Honors students at Temple University are part of the ultimate learning community. These exceptionally talented students enjoy course sections designed exclusively for them; the latest technology is integrated into all sections. The distinguished Honors Program faculty challenges students while addressing their unique needs. The Temple University Honors Program is available to students who have completed AP or high school honors courses, rank near the top of their class, and/or score in top percentiles on the SAT or ACT. The program is also available to transfer students who complete at least 24 credits at an ABET certified college and earn at least a 3.5 GPA.

Mechanical Engineering Curriculum



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