

MECHANICAL ENGINEERING



Mechanical Engineering at Drexel

Mechanical engineers have traditionally been associated with the automotive, transportation, and power generation industries, but in recent years, growth and innovation in the technology sector have expanded the spectrum of opportunity. Today, mechanical engineers design, analyze, and manufacture new products in a wide range of fields.

Drexel at BCC's program in Mechanical Engineering will prepare you for a career in industry or government, as well as for graduate studies in engineering, medical sciences, law, business, information technology, and other disciplines in which technological and analytical skills play a significant role.

Drexel Co-op for Mechanical Engineering

Drexel's prestigious co-operative education program, in which students alternate between periods of classroom study and periods of professional work experience, is a key part of the major. Mechanical Engineering majors participate in one six-month period of full-time co-op employment.

Employers

Companies that have hired Drexel students include:

- Boeing
- General Motors
- Lockheed Martin
- NASA
- PECO Energy
- Rohm and Haas
- Sunoco

Potential Careers

Mechanical Engineer. Develops, designs, manufactures, and tests mechanical devices such as tools, engines, and machines. Works on power-producing machines (such as electric generators, internal combustion engines, and steam turbines) and on power-using machines (such as refrigeration and air-conditioning equipment, elevators and escalators, and production equipment). Designs engineering tools.

Nuclear Engineer. Develops the processes, systems, and instruments used to derive benefits from nuclear energy. Designs, develops, monitors, and operates nuclear power plants. May work on the nuclear fuel cycle — the production, handling, and use of nuclear fuel and the safe disposal of waste — or on developing fusion energy.

Aerospace Engineer. Designs, develops, and tests aircraft, spacecraft, and missiles, and supervises the manufacture of those products. Develops new technologies for use in aviation, defense systems, and space exploration. Often specializes in areas such as structural design, navigation and control, instrumentation and communication, or production methods.

Courses You'll Really Enjoy

Machine Design I. Covers static strength and fatigue theories of failure, fasteners, welded joints, springs, roller bearings, and lubricated spur gears.

Gas Turbines and Jet Propulsion. Covers fundamentals of thermodynamics and aerothermodynamics, and application to propulsion engines; thermodynamic cycles and performance analysis of gas turbines and air-breathing propulsion systems, turbojet, turboprop, ducted fan, ramjet, and ducted rocket; theory and design of ramjets, liquid and solid rockets, air-augmented rockets, and hybrid rockets; aerodynamics of flames, including the thermodynamics and kinetics of combustion reactions; supersonic combustion technology and zero-g propulsion systems; and propulsion systems comparison and evaluation for space missions.

Power Plant Design. Covers heat cycle arrangement, equipment selection, analysis of cost demands, and diversity factors. Includes economic studies of plant and cycle arrangements.

Intro Comp Aid Design/Mfg. Covers fundamental use of CAD/CAM systems for geometry definition, finite element applications, and introductory computer graphics concepts.

For More Information

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