Montgomery College

Mechanical Engineering

Careers
Mechanical engineers research, develop, design, manufacture, and test tools, engines, machines, and other mechanical devices. Many mechanical engineers work in the areas of heating and air conditioning, automotive, industrial, or manufacturing engineering.

Computers assist mechanical engineers by performing accurate and efficient computations. Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM) are used for design data processing and for developing alternative designs.

Salary
Median annual earnings of mechanical engineers were $66,320 in 2004. According to the National Association of Colleges and Employers, starting salaries for job candidates with a bachelor's degree in mechanical engineering averaged $50,236.

Job Outlook
Mechanical engineering occupations are projected to grow more slowly than the average through 2014. Employment will continue to be driven by an increasing demand for improved machinery and machine tools in manufacturing.

Education & Training Options
Montgomery College offers a mechanical engineering track in its engineering science A.S. curriculum. (*See reverse for electrical engineering curriculum*.)

■ Degree
This curriculum is designed to provide the first two years of a four-year program leading to the award of a B.S. in engineering. Students planning to transfer in mechanical engineering to:

- University of Maryland College Park—follow the curriculum as published in the *Montgomery College Catalog*.
- Johns Hopkins University—follow the general engineering track.
- another engineering school—consult with a Montgomery College adviser.

■ Transfer
Formal articulation agreements exist for effective transfer of MC credits to professional engineering programs at several upper-division schools, including University of Maryland (College Park) and Rensselear Polytechnic Institute (Troy, NY). Less formal arrangements, built on successful records of previous students, also exist with several schools nationwide, including the two private universities in Washington, D.C., that have engineering departments, Catholic and George Washington universities.

By far the largest proportion of Montgomery College engineering transfer students go to the ***University of Maryland*** system—and most of them to the Clark School of Engineering on the College Park campus. MC students have also transferred to well-known institutions, both public and private, including Cal. Tech, Cornell, Georgia Tech., MIT, Northwestern, Purdue, Stanford, Union, and Virginia Polytechnic Institute and State University (VPI/SU).

■ Faculty
Four full-time faculty serve as engineering advisers. All hold their advanced degrees in either physics or engineering and have extensive personal experience with direct application of their specialties in research and industry. Most retain some level of involve-ment in these areas even today. They share the classroom duties with a group of part-time faculty, who add their own special expertise on the world beyond academia.

Contact @ MC
Rockville Campus 240-567-5230
www.montgomerycollege.edu/Departments/phengrv

Mechanical Engineering Curricula

Degrees, Certificates, and Letters of Recognition

Montgomery College is authorized by the Maryland Higher Education Commission (MHEC) to offer four degrees (associate of arts, associate of science, associate of applied science, and associate of arts in teaching) and certificates. In addition, the College recognizes students who satisfactorily complete certain course sequences with letters of recognition.

Some curricula are offered at all campuses, whereas others are limited to one or two. When a curriculum is offered at a specific campus, it is indicated by G for Germantown, R for Rockville, or TP for Takoma Park/Silver Spring.

Admission to Montgomery College is open to all.

Math, English, and reading assessment tests are required prior to registering. (Some students may be exempt from assessment. Consult the *Montgomery College Catalog* for criteria.) Financial aid and scholarships are available to qualified candidates.

Take the next step.

Complete an Application for Admission form (online @ **www.montgomerycollege.edu/admissions/mcadmiss.htm**) or **call 240-567-5000** for information.

Mechanical Engineering: 404 Engineering Science A.S.

First Semester

CH	135	General Chemistry for Engineers*	4
EN	102	Techniques of Reading and Writing II	3
ES	100	Introduction to Engineering Design	3
		Health foundation	1
MA	181	Calculus I	4

Second Semester

ES	102	Statics	3
MA	182	Calculus II	4
PH	161	General Physics I	3
		Behavioral and social sciences distribution	3
		Humanities distribution	3

Third Semester

ES	221	Dynamics	3
MA	280	Multivariable Calculus	4
PH	262	General Physics II	4
		Behavioral and social sciences distribution	3

Fourth Semester

ES	232	Thermodynamics	3
ES	220	Mechanics of Materials	3
MA	282	Differential Equations	3
PH	263	General Physics III	4
		Arts distribution	3

Total credit hours 61

* Students may substitute CH 102.