

Careers

Aerospace engineering deals with the development, design, and testing of flight vehicles, spacecraft, and missiles. Subdivisions within this field include

- aerodynamics—the flow of air and the associated forces, pressures, etc; flight dynamics—trajectories, rotational dynamics, sensors and controls;
- propulsion systems—the design of engines and motors;
- structures—issue of weight, stress, strain, vibration, etc., that constrain the selection of materials; and
- design—the most interdisciplinary field, connected with overview of the design of a specific vehicle to meet its performance goals.

Aerospace engineering and operations technicians install, construct, maintain, and test systems used to test, launch, or track aircraft and space vehicles. They may calibrate test equipment and determine the cause of equipment malfunctions. Using computer and communications systems, aerospace engineering and operations technicians often record and interpret test data.

Salary

According to a 2005 salary survey by the National Association of Colleges and Employees, the median annual salary for aerospace/aeronautical/astronautical engineers with a bachelor's degree was \$50,993.

Job Outlook

As technology becomes more sophisticated, employers continue to look for technicians who are skilled in new technology and require a minimum of additional job training. Through 2014, employment outlook for aerospace engineers looks favorable.

Education & Training Options

Montgomery College offers an aerospace engineering track in its engineering science A.S. curriculum. This track prepares students to transfer to other aerospace engineering programs. (See reverse for aerospace 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. Specific requirements in colleges vary. Students planning to transfer in aerospace engineering to a specific institution should consult with an engineering adviser:

- 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.

■ 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 involvement 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.

■ Workforce Training

The College's Workforce Development & Continuing Education program offers related professional development courses. For information, call 240-567-5188 or visit www.montgomerycollege.edu/wdce.

Contact @ MC

Rockville Campus240-567-5230
[www.montgomerycollege.edu/Departments
phengrv](http://www.montgomerycollege.edu/Departments/phengrv)

Aerospace 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.

Aerospace Engineering: 408 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 240	Scientific and Engineering Computation	3
MA 280	Multivariable Calculus	4
PH 262	General Physics II	4
	Arts distribution	3

Fourth Semester

ES 221	Dynamics	3
ES 232	Thermodynamics	3
MA 282	Differential Equations	3
PH 263	General Physics III	4
	Behavioral and social sciences distribution	3

Total credit hours 61

* ENAE 283 Fundamentals of Aeronautical Systems should be taken at University of Maryland College Park in order to achieve full junior standing upon transfer.

† Students may substitute CH 102.