

Key Features of an Engineering Major

- Nationally-ranked program covering the broad spectrum of engineering disciplines
- Educational and research opportunities providing students with the ability to solve an array of engineering problems and to develop new techniques and technology
- Opportunities to work with students and faculty in other engineering disciplines to address engineering challenges
- Leadership, research and practice programs that allow students to gain experience outside the traditional classroom setting and to apply and develop engineering knowledge
- Relationships with corporate and government agencies which sponsor research and provide internship and career opportunities.

Career Options & Salaries with an Engineering Major

The School of Engineering includes a variety of disciplines which offer a range of career options. In general, engineers engage in design, development, analysis, testing, maintenance, and production.

In Engineering, you can major in one of the following disciplines at Maryland:

- *Aerospace Engineering* – design, develop, and test new technologies for use in aviation, defense systems, and space exploration. *Median Salary = \$107,830*
- *Bioengineering* – combine principles and applications embedded in engineering with sciences of biology, biosystems, medical research, clinical practice, and population studies in order to solve health-related issues, especially involving devices and technologies used within the health-care industry (MRIs, prosthetics, medical information systems, etc.). *Median Salary = \$86,220*
- *Chemical Engineering* – design and develop means of manufacturing, utilizing, and processing chemicals and biochemicals. *Median Salary = \$97,360*
- *Civil Engineering* – planning, design, construction and operation of large systems such as buildings and bridges; water purification and distribution systems; traffic and transportation systems; and water and land pollution treatment. *Median Salary = \$82,220*
- *Computer Engineering* – design, develop, test, and evaluate software and systems that enable computers to perform applications; integration of software and hardware. *Median Salary = \$111,730*
- *Electrical Engineering* – encompasses electronics, microelectronics, nanotechnology, communications and signal processing, power systems, computer architecture, circuits, antennas, and control systems. *Median Salary = \$95,230*
- *Fire Protection Engineering* – safeguard lives and property from fire through courses covering safety, suppression systems, and health and environmental issues. *Median Salary = \$63,200***
- *Materials Engineering* – develop, process, and test complex materials systems used in all products and technologies; leaders in the field of nanotechnology *Median Salary = \$91,310*

- *Mechanical Engineering* – design and build advanced products and systems that make lives easier and more productive, and help companies become more competitive and profitable; career paths include design and manufacturing, energy and environment, engineering management, micro-electro-mechanical systems, electronic packaging, automotive engineering, solid mechanics, and robotics and automation. *Median Salary = \$83,590*

**Information from Occupational Outlook Handbook, 2015-16 Edition (<http://stats.bls.gov/oco/>)*

***Salary is a compilation of responses to the May 2013 UMD Engineering Graduation Survey.*

Advising

If you are considering a major in the School of Engineering, there are a few different ways to learn more about Engineering and have your questions answered:

- Review information on the College’s website: <http://www.eng.umd.edu/advising/transfer#current>
- Consult with the LEP Coordinator at lep@umd.edu
- Email the School of Engineering Transfer Coordinator at transfer_engr@umd.edu

Declaring an Engineering Major

The School of Engineering and all of its majors are Limited Enrollment Programs (LEPs), which means that you must apply for admission after completing certain pre-requisites, or “gateway” courses. The gateways are as follows:

- Completion of MATH141 with a grade of B- or higher
- Completion of PHYS161 with a grade of B- or higher
- Completion of CHEM135 or CHEM271 or CHEM134 with a minimum grade of C- (Students who take CHEM134 must also have completed CHEM131 with a minimum grade of C-)
- Bioengineering students must also complete BIOE120 with a minimum grade of B-
- A minimum grade point average of 3.0 in all college level coursework is required

Please also note:

- Only one gateway or performance review course may be repeated and that course may only be repeated once. When more than one course can satisfy a gateway requirement, taking a second course from the list will count as a repeat. A “W” or withdrawal counts as one attempt at a course.
- Students may apply only once to an LEP. Students who are directly admitted and fail to meet the performance review criteria will be dismissed from the major and may not reapply.
- Any student denied admission or dismissed from the major may appeal in writing directly to the Assistant dean for student services of the College.
- Students must apply by the 5th business day of January for Spring semester admission, and the 5th business day of June for Fall semester admission. The application can be found at <http://www.admissions.umd.edu/apply/LEPApplication.php>.

If you have any questions, please contact the LEP coordinator (Admissions) at lep@umd.edu.

Four-Year Plans

To view sample “Four-Year Plans” for all of our Engineering majors, visit:

<http://www.eng.umd.edu/advising/four-year-plan>

FAQs

Is admission to the School of Engineering competitive?

As a Limited Enrollment Program (LEP), admission to the School of Engineering is indeed competitive. However, in general, space permitting, if you complete the required gateway courses for the School of Engineering, you can expect to transfer into this college.

Do I need to know what major I will be within the School of Engineering before I apply?

Yes, you must apply for a specific major within Engineering. You will not be accepted as an undecided engineering student. Visit the following websites to learn more about the different fields and specialties within Engineering: <http://www.eng.umd.edu/advising/majors> OR <http://www.onetonline.org/>

Can I meet with an advisor in Engineering to help me decide if this school is right for me?

Students interested in meeting with the Clark School’s Transfer Coordinator can do so during Transfer Info Sessions. Please visit this website to find the dates: <http://www.eng.umd.edu/advising/transfer>.

I am interested in Engineering, but haven’t been admitted to the program. May I still take a course to see if I’ll like it?

In general, Engineering courses are not available to students until they have been admitted into the program. However, occasionally when there is space available, courses are opened to non-majors. This typically happens right at the beginning of a semester. Empty seats are available on a first-come, first-served basis. All pre- and co-requisites must be met.

For ENES 100, 102, 220, or 201 courses, please complete the Permission to Enroll Form, found here:

<http://www.keystone.umd.edu/courses>

For Engineering departmental courses, please contact the specific department. Departmental contact information is listed here: <http://www.eng.umd.edu/advising/dept-contacts>

Are there any Engineering minors available?

There are currently 6 minors offered within the Clark School. Please visit the School’s minor website to learn more about these options: <http://www.eng.umd.edu/advising/minors>

- Engineering Leadership Development
- International Engineering
- Nanoscience and Technology
- Nuclear Engineering
- Project Management
- Technology Entrepreneurship

****Important note about minors in Engineering:*** All minors are all restricted to current Engineering majors, except for Nanoscience and Technology (which is open to Engineering, Physics, or Chemistry majors). In other words, you need to have a major in Engineering before pursuing one of these minors.

Have more questions?

Visit our Frequently Asked Questions webpage to find answers to the most common questions:

<http://www.eng.umd.edu/advising/faq>