Engineering

About the College
Justin Schwartz, Harold and Inge Marcus Dean of Engineering

For over a century, our college has been a leader in engineering education and research, preparing young people to become leaders within their professions and communities. Our faculty and students produce game-changing research that advances our society and solves global problems, creating jobs that grow our economy and inform policy to shape our world. Today we look forward, seeing endless possibilities ahead. We are driven to maintain an inclusive and diverse community where everyone thrives. We are driven to perform research that impacts the lives of people around the world. We are committed to impacting society and embracing the challenges ahead with a passion for a bright future for humankind. We invite you to join us and be part of this exciting future.

MORE INFORMATION ABOUT THE COLLEGE

Accreditation

All College of Engineering baccalaureate majors at University Park, with the exception of Computer Science, are accredited by the Engineering Accreditation Commission of ABET, Inc (http://www.abet.org).

Departments and Schools

Department of Acoustics

The Graduate Program in Acoustics is an interdisciplinary program that applies broad academic offerings to a variety of scientific and technological fields. Personalize your education by selecting from an array of courses such as physical acoustics, underwater acoustics, signal processing, medical ultrasonics, aeroacoustics, vibrations, wave propagation, physiological acoustics, and more.

MORE INFORMATION

Department of Aerospace Engineering

Aerospace engineering is the primary field of engineering concerned with the design, development, testing, and production of aircraft, spacecraft, and related systems and equipment. The field has traditionally focused on problems related to atmospheric and space flight, with two major and overlapping branches: aeronautical engineering and astronautical engineering.

MORE INFORMATION

Department of Agricultural and Biological Engineering

Department of Agricultural and Biological Engineering Biological and Agricultural Engineering is the integration of engineering fundamentals with biological, agricultural, and environmental sciences. A holistic approach is taken in studying agricultural production, processing of food and other bio-based materials, and natural resource protection, then applied to grand engineering challenges such as providing safe food and clean water.

MORE INFORMATION

Department of Architectural Engineering

Architectural Engineering focuses on the scientific and engineering aspects of planning, designing, constructing, and analyzing buildings. Architectural engineers focus on building structure, stability, and systems, including: “Planning, designing, and analyzing acoustics” “Building sustainability and safety aspects” “Construction management” “Heating, ventilating, and air conditioning systems” “Lighting and electrical systems”

MORE INFORMATION

Department of Biomedical Engineering

The Department of Biomedical Engineering is built upon the apex of engineering, medicine, healthcare policy and biological discovery. Biomedical Engineering prepares students to become future leaders in the areas of medical device design, instrumentation, medical imaging, healthcare management, biomedical research and academia.

MORE INFORMATION

Department of Chemical Engineering

Chemical Engineering combines the principles of chemistry, biology, mathematics and physics to solve some of today’s most pressing societal issues in human health, environmental sustainability, and energy.

MORE INFORMATION

Department of Civil and Environmental Engineering

Civil Engineering educates future engineers through solid science and engineering principles by identifying engineering challenges, creating pioneering solutions, and leading the industry with research discoveries and design innovations. We tackle some of the major problems facing society today in order to advance the fields of civil and environmental engineering.

MORE INFORMATION

School of Electrical Engineering and Computer Science

The School of Electrical Engineering and Computer Science (EECS) was created in 2015 to allow greater access to courses offered by both departments in exciting collaborative research in fields. EECS focuses on the convergence of technologies and disciplines to meet today’s industrial demands.

MORE INFORMATION

Department of Engineering Science and Mechanics

MORE INFORMATION

Department of Industrial and Manufacturing Engineering

Industrial Engineers (IEs) design systems and processes to eliminate wastefulness and improve efficiencies. IEs are trained to be problem solvers that have an eye toward innovation and sustainability. They work in a variety of fields to develop solutions for challenges in management, manufacturing, logistics, health systems, retail, service, and ergonomics.

MORE INFORMATION

Department of Mechanical and Nuclear Engineering

Mechanical engineering provides the foundation for almost all other engineering majors, designing everything from athletic equipment, medical devices, theme park rides, and personal computers to engines and powerplants. Nuclear engineers may apply skills to treat diseases, operate nuclear energy systems, develop regulations to ensure safety, or facilitate space exploration.
School of Engineering Design, Technology, and Professional Programs
The School of Engineering Design, Technology, and Professional Programs (SEDTAPP) delivers effective engineering education through active, collaborative, project-based, and professionally oriented classroom experiences. SEDTAPP offers a variety of programs that partner faculty, students, and industry in the study of real-life engineering problems and solve them with innovative, humanitarian solutions.

Baccalaureate Degrees
- Aerospace Engineering, B.S.
- Architectural Engineering, B.A.E.
- Biological Engineering, B.S.
- Biomedical Engineering, B.S.
- Chemical Engineering, B.S.
- Civil Engineering, B.S. (Engineering)
- Computer Engineering, B.S. (Engineering)
- Computer Science, B.S. (Engineering)
- Data Sciences, B.S. (Engineering)
- Electrical Engineering, B.S. (Engineering)
- Electro-Mechanical Engineering Technology, B.S.
- Engineering Science, B.S.
- Engineering, B.S.
- Industrial Engineering, B.S. (Engineering)
- Liberal Arts and Earth and Mineral Sciences Concurrent Degree; Liberal Arts and Engineering Concurrent Degree (Engineering)
- Mechanical Engineering, B.S. (Engineering)
- Nuclear Engineering, B.S.
- Surveying Engineering, B.S.

Associate Degrees
- Biomedical Engineering Technology, A.ENGT.
- Electrical Engineering Technology, A.ENGT.
- Mechanical Engineering Technology, A.ENGT.
- Surveying Engineering Technology, A.ENGT.

Minors
- Biological Engineering, Minor
- Biomedical Engineering, Minor
- Cybersecurity Computational Foundations, Minor
- Engineering Leadership Development, Minor
- Engineering Mechanics, Minor
- Environmental Engineering, Minor
- Information Sciences and Technology for Aerospace Engineering, Minor
- Information Sciences and Technology for Industrial Engineering, Minor
- International Engineering, Minor
- Nanotechnology, Minor
- Product Realization, Minor
- Residential Construction, Minor
- Service Enterprise Engineering, Minor
- Six Sigma, Minor

Certificates
- Engineering and Community Engagement, Certificate
- Engineering Design, Certificate
- Housing, Certificate
- International Engineering, Certificate
- Nanotechnology, Certificate
- Space Systems Engineering, Certificate

College Procedures
Academic Warning
A student who fails to earn a 2.00 cumulative grade-point average will be placed on academic warning. A student placed on academic warning will have a hold placed on registration and will be required to meet with an academic adviser in order for this registration hold to be removed. To remove academic warning, the cumulative grade-point average must be 2.00 or higher.

READ SENATE POLICY 54-20: ACADEMIC WARNING (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/54-00-academic-progress/#54-20)

Academic Suspension
A student in academic warning who fails to maintain a semester grade-point average of 2.00 or higher will be academically suspended. A student who has been academically suspended may not schedule courses at the University for two consecutive semesters. (Note: Summer session is equal to one semester.)

READ SENATE POLICY 54-40: ACADEMIC SUSPENSION (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/54-00-academic-progress/#54-40)

Administrative Enrollment Controls
Enrollment controlled majors in the College of Engineering must be declared when students are within the 40-59 credit window. For non-enrollment controlled majors, students should still be planning to enter into their major during this period and should be working with their respective academic departments if they will need additional time to enter their majors. To view the Entrance to Major (ETM) requirements for each College of Engineering major, please refer to the Entrance to Major website. Choose your requirements based on the semester that you entered Penn State. To be sure that you understand the academic requirements for the majors offered in the College, see a Commonwealth Campus College of Engineering Representative or, if you are at University Park, schedule an appointment with an adviser through Starfish or call the Engineering Advising Center at 814-863-1033.

MORE INFORMATION (http://advising.engr.psu.edu/advising/entrance-to-major)

Change of Campus
Students currently at a Commonwealth Campus are to stay at their location until they either officially enter a University Park major or until they are no longer able to make reasonable progress with their intended major at the campus they are currently attending.
Concurrent Major
A Concurrent Majors Program is one in which students take courses to concurrently meet the requirements of at least two majors, with graduation for all majors in the program occurring during the same semester.

READ SENATE POLICY 60-00: COMPLETING MORE THAN ONE UNDERGRADUATE MAJOR PROGRAM (http://senate.psu.edu/policies-and-rules-for-undergraduate-students/60-00-completing-more-than-one-undergraduate-program/#60-00)

Resources

Engineering Advising Center
The Engineering Advising Center is the source for information about scheduling, degree requirements, entrance-to-major, and so much more. We can also help students make big decisions when it comes to majors, study abroad options, internships, and so much more!

MORE INFORMATION (http://advising.engr.psu.edu)

Center for Engineering Outreach and Inclusion
The Center for Engineering Outreach and Inclusion assists women and multicultural students in the pursuit of their degrees, through support and student programs, scholarships, professional development, and academic assistance.

MORE INFORMATION (http://inclusion.engr.psu.edu)

Career Resources & Employer Relations
The Career Resources & Employer Relations provides career advising for all students pursuing majors within the College of Engineering. We also help connect students and employers at a wide variety of career events each academic year, including Career Fairs, information sessions, student envoy sessions, eCareer, and more.

MORE INFORMATION (http://career.engr.psu.edu)

Global Engineering Engagement
Engineering students at Penn State have so many options available to them - from semester-long programs to global experiences embedded in classes. Student Study Abroad representatives offer students peer-to-peer information, advice, and insight on the study abroad experience.

MORE INFORMATION (http://global.engr.psu.edu)

Honors Programs

Schreyer Honors College
The Schreyer Honors College, regarded as one of the nation's top programs of its kind, promotes achieving academic excellence with integrity, building a global perspective, and creating opportunities for leadership and civic engagement. Schreyer Scholars, including Gateway Scholars admitted after their first or second year of enrollment, are a diverse and motivated group of approximately 2,000 students at University Park and 20 Commonwealth campuses. The College strives to educate students who will have an important and ethical influence in the world, to improve educational practice, and to continue to be recognized as a leading force in honors education nationwide.

MORE INFORMATION (http://www.shc.psu.edu)

Honors in the College of Engineering
The Engineering Science major - also the College of Engineering's honors program - is a multidisciplinary honors program for engineering students who demonstrate superior academic potential or achievement. Students obtain depth of knowledge through technical electives and a capstone research and design project (senior honors thesis).

MORE INFORMATION (http://www.esm.psu.edu/academics/undergraduate/engineering-science-major.aspx)

Contact

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