

# 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 (<http://www.engr.psu.edu>)

## 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, aeroacoustics, vibrations, wave propagation, physiological acoustics, and more.

MORE INFORMATION (<http://www.acs.psu.edu/>)

### 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 (<https://www.aero.psu.edu/>)

### 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 (<https://abe.psu.edu/>)

### 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; and lighting and electrical systems.

MORE INFORMATION (<http://www.ae.psu.edu/>)

### 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 (<http://www.bme.psu.edu/>)

### 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 (<http://www.che.psu.edu/>)

### 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 (<http://www.cee.psu.edu/>)

### 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 (<http://www.eecs.psu.edu/>)

### Department of Engineering Science and Mechanics

The Penn State Department of Engineering Science and Mechanics (ESM) is an internationally distinguished department that is recognized for its globally competitive excellence in engineering and scientific accomplishments, research, and educational leadership.

Our engineering science program is the official undergraduate honors program of the College of Engineering, attracting the University's brightest engineering students. We also offer graduate degrees in ESM, engineering mechanics, engineering at the nano-scale, and an integrated undergraduate/graduate program.

MORE INFORMATION (<http://www.esm.psu.edu/>)

### 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 (<http://www.ime.psu.edu/>)

## 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.

MORE INFORMATION (<http://www.mne.psu.edu/>)

## 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.

MORE INFORMATION (<http://sedtapp.psu.edu/>)

## Resources

### 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.egr.psu.edu/>)

### Career Resources & Employer Relations

The Career Resources & Employer Relations provides career advising for all students 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 envoys, eCareer, and more.

MORE INFORMATION (<http://career.egr.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.egr.psu.edu/>)

## Contact

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