

EXPLORE

Engineering Science



PennState
College of Engineering

The engineering science program at Penn State is the official undergraduate honors program of the College of Engineering, attracting the University's brightest, most creative, and most ambitious engineering students.

The engineering science major is a unique, multidisciplinary program that encompasses and emphasizes enhanced understanding of engineering, scientific, mathematical, and statistical principles through coursework and research. Students are able to integrate these principles with the arts, humanities, and social sciences to tackle the most demanding challenges and to advance our global society, our environment and, as of yet, undiscovered future frontiers. This is embodied in an interdisciplinary honors research thesis prepared by all students in an area customized to their interests.

Our curriculum is designed for students who seek to link science with engineering disciplines such as electrical, mechanical, chemical, civil, and biomedical, and who want to gain a thorough understanding of the analytical, interpretive, and extrapolative aspects of engineering.

The courses provide a broad, yet solid, foundation in mathematics, chemistry, physics, mechanics, materials, electricity and magnetism, thermodynamics, wave phenomena, and computational analysis. The program is highly flexible, providing an excellent opportunity for students who are interested in interdisciplinary training.

Students can receive tailored, focused training in areas such as engineering mechanics, electrical science, solid state and materials science, computer science, and bioengineering, to name a few. Students can customize their programs to their individual engineering, science, and pre-med interests.

ESC

Hear from students and alumni by watching the Exposure to Major video series: bit.ly/PennStateEngineering



Engineering Ambassadors

Build leadership skills and gain communication experience through the

outreach program that seeks to motivate the next generation of engineers.

VIRTUALLY

90%



Job placement of undergraduate students by spring graduation

(Percentage derived from undergraduate students actively seeking employment)



Mentoring programs

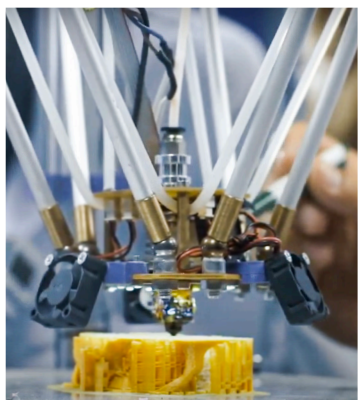
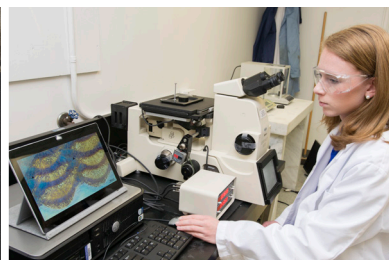
Tap into the extensive alumni network with connections and

professional development from the Penn State Engineering Science and Mechanics Alumni Society.

AVERAGE ENTRY-LEVEL
SALARY OF ENGINEERING
SCIENCE GRADUATES

\$74,500

bit.ly/engr-salaries



What is an engineering scientist?

Engineering scientists possess unique knowledge and an interdisciplinary skill set, allowing them to merge multidisciplinary resources to propose and develop innovative, enduring solutions to transform the latest scientific discoveries into enabling new technologies. Engineering scientists research, develop, and design new materials, devices, sensors, and processes for a diverse range of applications in a wide variety of fields and industries. They are prepared to cope with the complex, multi-faceted problems of technology in contemporary society.

Career opportunities for engineering science graduates are limited only by their imagination. Due to the breadth of their training, engineering scientists are well prepared to lead national and international interdisciplinary teams in a diverse array of science and engineering endeavors, including the legal profession, medicine, business, politics, and government service. Penn State engineering science and mechanics alumni are successful entrepreneurs, business executives, captains of industry, leaders in national laboratories, startup founders, physicians, professors, and academic officials.



Alayna Kennedy
Engineering Science
Class of 2018

"I chose the engineering science program because it gave me a large runway to pursue my genuine interests, instead of forcing me to take classes that wouldn't contribute to my intellectual goals. It has allowed me to pursue research in artificial intelligence and take classes in areas that I was fascinated with—from technology policy to quantum theory—and has provided academic rigor and flexibility, as well as a group of faculty, staff, and students that I consider family. The small size of the program encourages close friendships and mentor relationships."



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