

Materials Science and Engineering

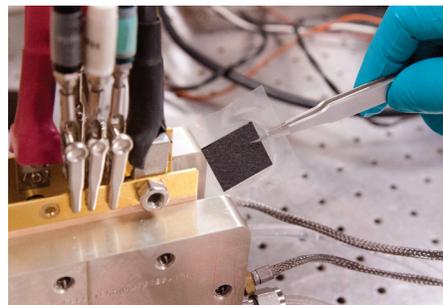
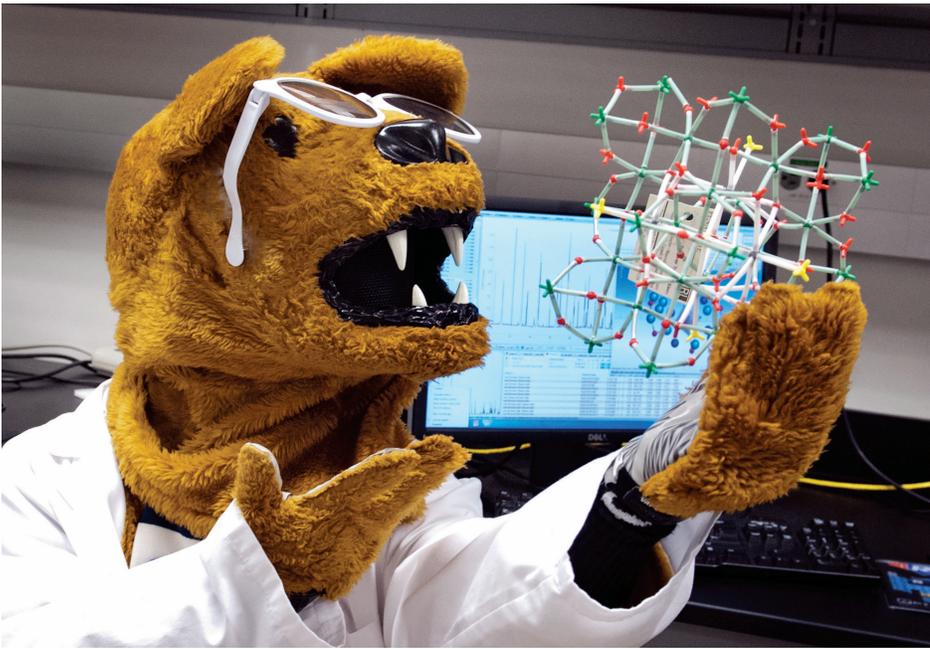
Department of Materials Science and Engineering



Our world is made of materials, and researchers in the department are furthering our understanding of how these materials work – and how we can use them more effectively. The interdisciplinary field draws on chemistry, mathematics, physics, computer science, and biology to pinpoint individual properties of materials at both the atomic level and the macroscopic level. Their research is helping to improve nuclear waste disposal, energy efficiency, new technologies such as 3D printing and 2D materials, and medicine.



PennState
College of Earth
and Mineral Sciences



I want to be a researcher working in the semiconductor/electronics industry. MatSE has been very helpful with letting me get involved in undergraduate research and making the whole process very easy. Many of the faculty have their own research groups so bouncing questions off your favorite professors after class is so helpful.

~ Michael Thomas

Overview

Materials, like ceramics, metals, polymers, and composites, are critical to the growth and success of many industries and key to most engineering disciplines. Graduates of Materials Science and Engineering are employed, or proceed to graduate studies, in many fields such as energy, medicine, sustainability, electronics, communications, transportation, aerospace, defense, and infrastructure industries.

You might be a good fit if ...

- ◆ You like some combination of chemistry, physics, and math and want to be an engineer.
- ◆ You would like to understand why a material is chosen for a specific use or why materials behave the way they do.

- ◆ You like problem solving by utilizing existing materials in new creative ways or creating new materials to solve unique engineering challenges.
- ◆ You want an engineering degree that can take you to any industry, anywhere in the world.

Internships and scholarships

The College of Earth and Mineral Sciences awards more than \$2.9 million annually, including more than \$300,000 exclusively for students interested in materials science and engineering.

Employment opportunities

- ◆ Boeing
- ◆ ExxonMobil
- ◆ Corning
- ◆ U.S. Steel
- ◆ GE
- ◆ DuPont
- ◆ Intel
- ◆ Apple

- ◆ General Motors
- ◆ PPG Industries
- ◆ NIST
- ◆ Sandia National Laboratory
- ◆ Honda
- ◆ Pratt & Whitney
- ◆ Bayer

Average starting salary

\$70,000+ with a bachelor's degree

Why choose Penn State?

Students graduate with a well-rounded engineering education, with specific emphasis on materials science and engineering in order to meet the needs of industry, academia, and government; to conduct research at the frontiers of the field; and to provide an integrating and leadership role to the broad multidisciplinary materials community.

9th U.S. News and World Reports rank

1st Materials research according to NSF

>90% Placement rate before graduation