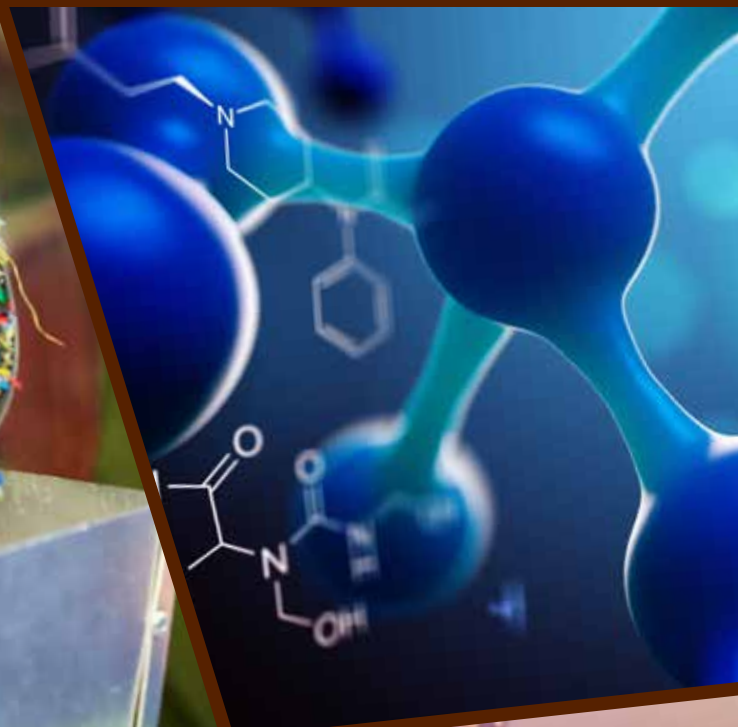




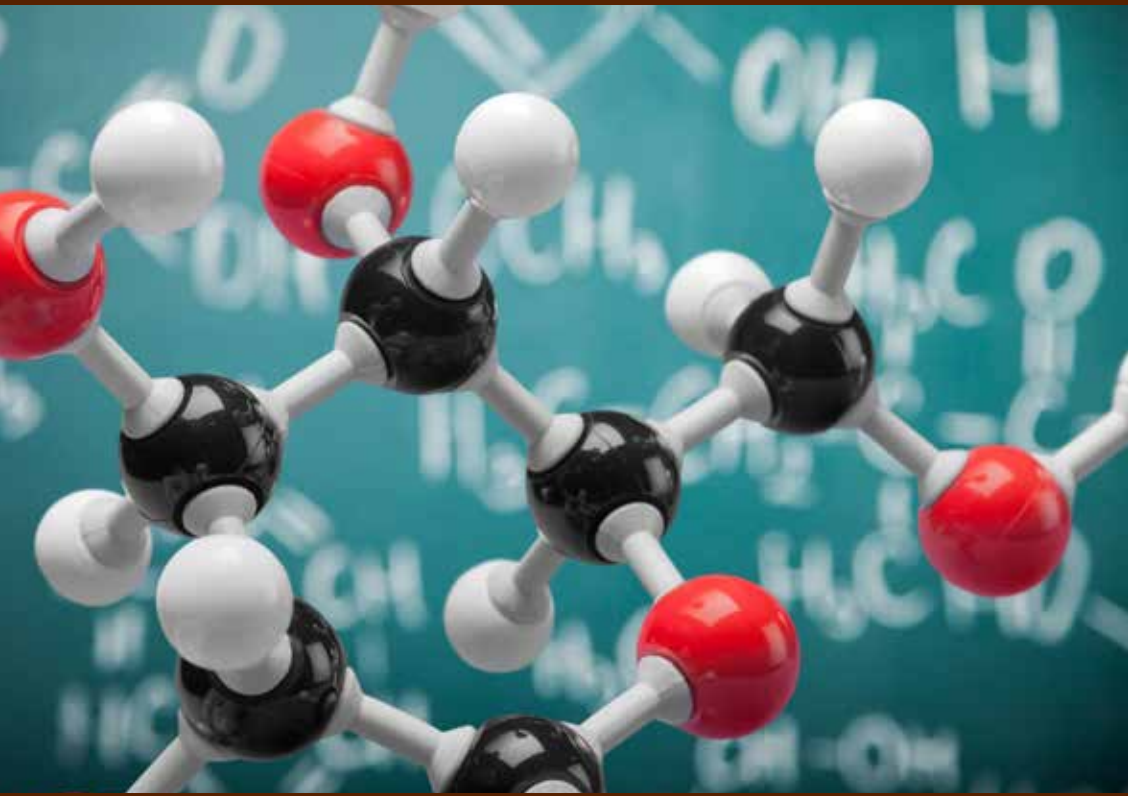
LEHIGH
UNIVERSITY

P.C. Rossin College of
Engineering and Applied Science



POLYMER SCIENCE AND ENGINEERING

Online Graduate Program



WHAT IS POLYMER SCIENCE AND ENGINEERING?

Polymer science and engineering (PSE) is an interdisciplinary field that integrates principles from engineering, chemistry, and physics to study polymers. The unique molecular structure of polymers gives them remarkable versatility, enabling them to be easily processed and shaped into complex forms. Their distinctive chemistry also allows for tunable functionality and properties, whether mechanical, chemical, optical, electronic, or otherwise. As a result, polymers are used in a vast array of products and are produced in large quantities, making them essential to our everyday lives. **For this reason, the PSE field is leading efforts to make plastics more sustainable by tackling challenges related to plastic waste accumulation, identifying renewable material sources, and reducing environmental impacts across all stages of the material life cycle.**



WHY PSE?

YOUR BACKGROUND

Engineering
Science
Technology
Chemistry
Physics
Environment
Sustainability

and numerous other technical backgrounds

YOUR PASSIONS

“Transforming polymeric materials into products is fascinating.”

“We need to develop different solutions to address plastic waste.”

“Establishing tunable polymer properties is essential for effective and rational product design.”

“Polymeric materials should be used consciously.”



MS in POLYMER SCIENCE AND ENGINEERING



Skills and Career Pathways

RECYCLING **NEW MATERIALS** **POLYMER**
RESEARCH & **PROCESSING**
DEVELOPMENT **MATERIAL**
CHARACTERIZATION
MANUFACTURING **ENGINEERING**
PRODUCT **BIODEGRADABLE POLYMERS**
DESIGN **INNOVATION**
NANOTECHNOLOGY **QUALITY CONTROL** **& ENTREPRENEURSHIP**

OUR PROGRAM

Master of Science (MS) in Polymer Science and Engineering

The program is offered in a completely online distance-learning format with the possibility of completing remote research for credit as part of the MS degree.

Total credits: 30

- ▶ Core course credits: 9
- ▶ Elective credits: 21

Note: 30 credits are equivalent to 10 courses.

Core courses

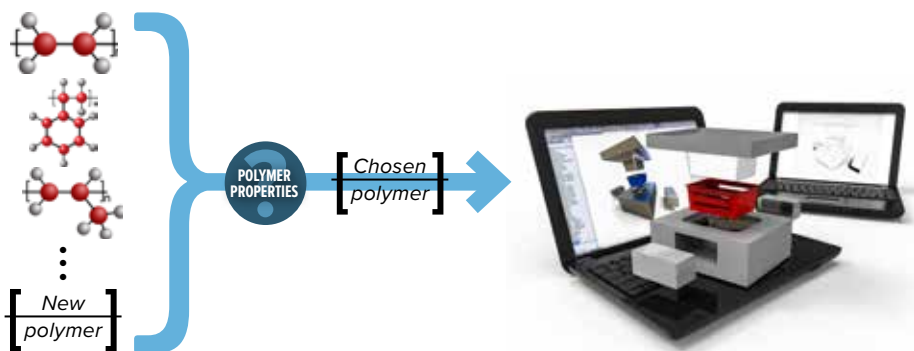
- ▶ Introduction to Polymers
- ▶ Physical Polymer Science
- ▶ Thermodynamics

Program options

- ▶ Thesis project (counts for up to 6 of the required 30 credits)
- ▶ Coursework only

Electives offered include

- ▶ Composites
- ▶ Polymer Sustainability and Recycling
- ▶ Soft Materials: Mechanics and Physics
- ▶ Mechanical Behavior of Polymers
- ▶ Biopolymers
- ▶ Polymer Processing
- ▶ Polymer Blends
- ▶ Polymer Nanocomposites
- ▶ Adhesion and Adhesives Technology
- ▶ And others



Join Us

Lehigh University's Polymer Science and Engineering program is among the few in the United States specializing in this dynamic field. Whether you're a recent college graduate or a seasoned professional seeking to deepen your expertise and earn a graduate degree, this program is designed to elevate your knowledge and advance your career in the polymer industry.



WHAT SETS US APART

Collaborative and Interdisciplinary Approach

The Polymer Science and Engineering (PSE) program at Lehigh University is an interdisciplinary graduate program within the P.C. Rossin College of Engineering and Applied Science. The program brings together faculty from departments such as chemical and biomolecular engineering, materials science and engineering, mechanical engineering and mechanics, and bioengineering, offering students a diverse and comprehensive curriculum.

Legacy of Innovation

Established in 1975, the program has evolved over the years to keep pace with advancements in the polymer field, particularly in the development of new materials and techniques, as well as in the critical area of material sustainability. Lehigh has made significant contributions to the field, including advances in biodegradable materials and high-performance polymers.

Leadership in Polymer Science

The university's strong emphasis on interdisciplinary research has fostered innovation, making it a leader in polymer science education and applications.

Powerful and Connected Alumni Network

Lehigh's global alumni network, spanning industries and research institutions, provides students with invaluable connections and opportunities to advance their careers in the rapidly evolving polymer field.





engineering.lehigh.edu/polymers

