



ROSE-HULMAN
INSTITUTE OF TECHNOLOGY



**Optical
Engineering**

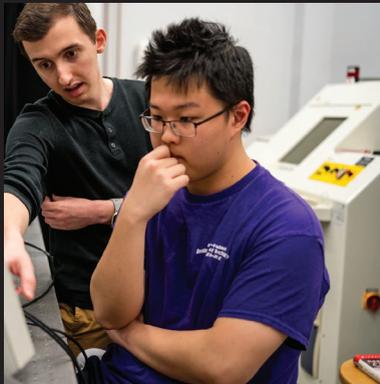
Shining a Light on Your Future

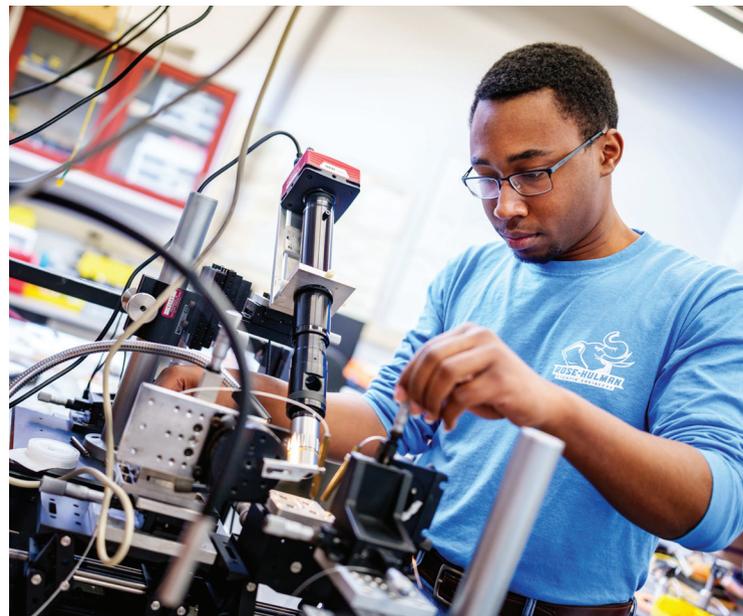
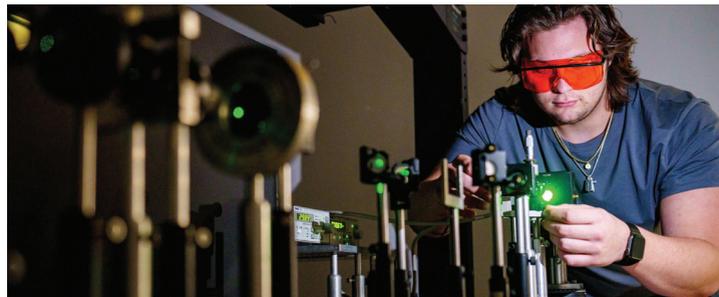
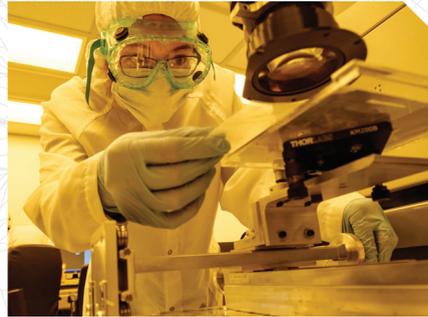
We're pioneers in optical engineering education

Optical Engineering (OE) has a wide range of applications like no other engineering field, ranging from developing nano-optical devices to be used in photonic integrated chips, to large-scale applications such as telescopes in satellite communications, to the automotive industry for autonomous navigation and advanced lighting.

The discipline allows students to solve complicated engineering problems and create a range of devices ranging from high-end cameras to complicated laser systems and day-to-day applications such as LED lighting and fiber-optic telecommunications. Optical engineers must be technically proficient and have a thorough understanding of the scientific and industrial uses of light-related applications.

Optical engineering education has been at Rose-Hulman since 1990 as an academic program. We have been at the leading edge of undergraduate optics education for the past 40 years. This provides unique opportunities for students to work with award-winning faculty to learn about laser systems, fiber optics, optical imaging, image processing, semiconductor devices, silicon photonics, and optical metrology.





Experiential Learning

Optical engineering students get the opportunity to explore their interests through a variety of hands-on academic and undergraduate research in state-of-the-art laboratories that attract interest from educators and scholars throughout the world:

- Physical Optics Lab
- Geometrical Optics Lab
- Linear Optical Systems
- Fiber Optics
- Laser Systems and Applications
- Optical Measurements
- Capstone Design Projects to develop products for the industry.

In addition, the department hosts several educational laboratory and research labs where students can do leading-edge research work:

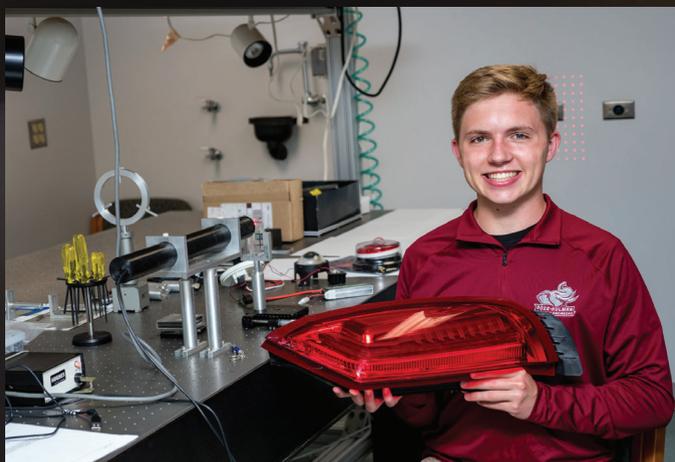
- Laser Interferometry
- Computational Optics
- Nonlinear Optics
- Silicon Photonics
- Optical Communications
- Optical Metamaterials
- Ultrafast Lasers
- Magneto Optics
- Scanning Electron Microscope and X-Ray Diffraction Lab
- Cleanroom fabrication and testing facility

"When (optical engineering professors) could see that I had an unusual idea, and a passion for making it happen, they didn't just tell me it was possible, their eyes lit up too, and they started exchanging ideas with me. That was when I knew the passion and inclusion that I would be able to be a part of here at Rose."

- Cody Brelage, Optical Engineering Student



Courses such as senior capstone design and automotive lighting have led student teams to design innovative products that have earned top honors in national and international optical design competitions.



Certificates

OE students can also earn certificates in semiconductor materials and devices, optical telecommunications, physics, and other engineering disciplines, which leads to having an industrial career or pursuing doctorate-degree programs in top universities nationally and internationally.



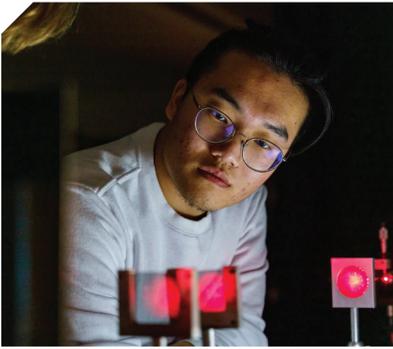
For more information on majors, minors and areas of concentration scan this code on your smart phone

Get in Touch!

**Department of Physics and
Optical Engineering**

812-877-8309

www.rose-hulman.edu/OE



Optical Engineering Students at Rose

100% Placement Rate

Our graduates are in demand by companies such as Intel, Raytheon, North American lighting, Lockheed Martin, MIT Lincoln Laboratories, NASA, Leidos Corporation, Ball Aerospace, Naval Surface Warfare Center - Crane, Optikos, and Sunex, to name a few.

Recent acceptances have been with leading graduate schools in the optics field, including the Massachusetts Institute of Technology, University of Central Florida, University of Arizona, University of Rochester, University of California, and University of North Carolina.



ABOUT ROSE-HULMAN

Rose-Hulman is the nation's top undergraduate engineering, science, and mathematics school. Our 1,300 acre scenic campus is home to 2,100 students with a passion for STEM and learning. We are consistently rated among the best colleges and universities in the country for return on investment, internships, and career placement.

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