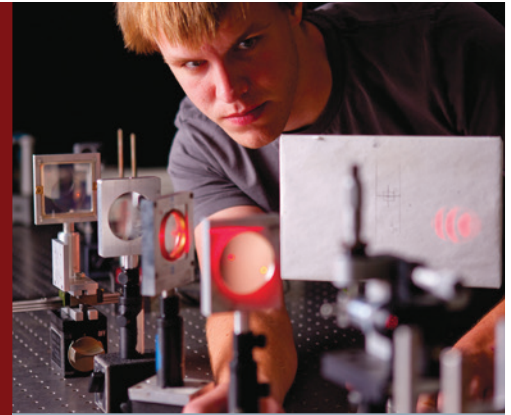


Master of Science Optical Engineering



GRADUATE STUDIES

THE SCIENCE OF LIGHT

Optics has found its way into everyday life. The applications of optics can be seen nearly everywhere, including laser printers, fiber optic communication, Internet switches, credit cards bearing holograms, grocery checkout scanners, computers, and eye surgery.

The field of optics is an enabling technology that's growing at a rapid pace. Optical techniques are found in a wide range of work experiences, such as surveying and construction, flow measurements, communications, machine vision, laser cutting, drilling and welding, and data storage.

Opportunities for graduates in optical engineering are available in many industries, including

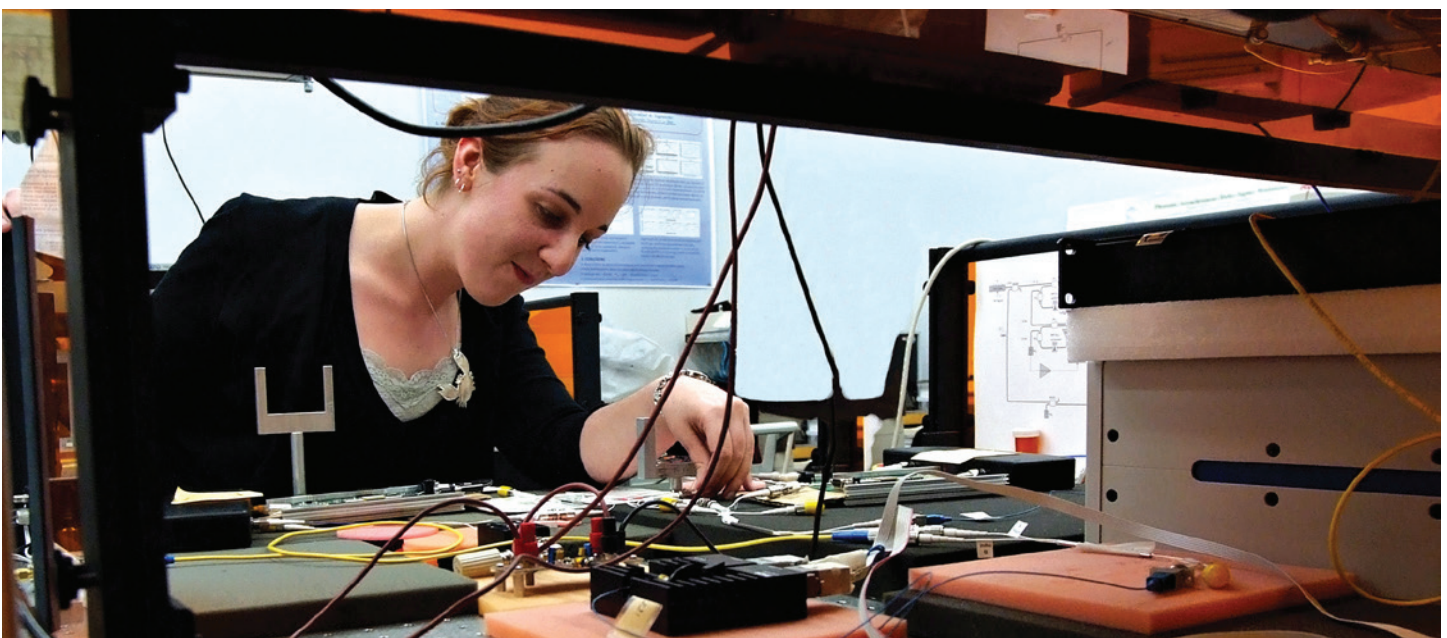
automated inspection, consumer electronics, fiber optic communications, optical instrumentation, laser devices, and radar systems.

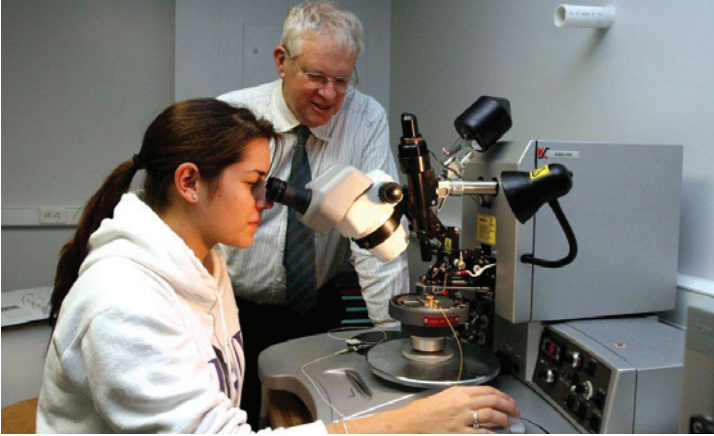
Program Requirements

- Five core courses in optical engineering
- Four elective courses
- Thesis project
- Oral thesis defense

The thesis project normally addresses a "real-world" problem of mutual interest to an industrial sponsor, the student, and the student's faculty advisor.

A bachelor's degree in science or engineering is a prerequisite to the program.





Research and Laboratories

We place emphasis on the hands-on approach to learning. Our teaching facilities include three state-of-the-art educational laboratories that are equipped with vibration-isolation tables and modern optical instrumentation.

Facilities also include nine laboratories dedicated to research in fiber optics, non-linear optics, optical communications, RF-photonics, holography, microfabrication, and ultra-short pulse lasers.

Major equipment includes:

- Argon lasers
- Femto-second ultra-short pulse laser
- Nd-YAG lasers, frequency doublers
- MTF measurement system
- Zygo NewView surface pro_ler
- Zygo PTI 250 interferometer
- Tabletop SEM.

Students perform the experimental part of their thesis projects in these labs and facilities.

Dual MS Program with Seoul National University of Science and Technology

The Department of Physics and Optical Engineering at Rose-Hulman and the Department of Mechanical Systems Design Engineering at SeoulTech offer a dual degree—a master of science in optical engineering and mechanical systems design engineering—with learning experiences in both South Korea and the United States.

The program includes seven required courses in optical engineering, most of which are offered at Rose-Hulman; three elective courses offered at SeoulTech; an internship with a company in Korea; and a thesis project.



At a Glance

Rose-Hulman's graduate programs have a strong focus on applied research involving excellent faculty, facilities, and flexibility in a student's plan of study to meet individual goals. The graduate studies programs at Rose-Hulman offer a supportive atmosphere focused on the growth and development of each student.

Satisfied Alumni

"My graduate degree from Rose-Hulman propelled me ahead in my field of optical engineering. The professors challenged me and helped me gain practical experience in a research lab environment."

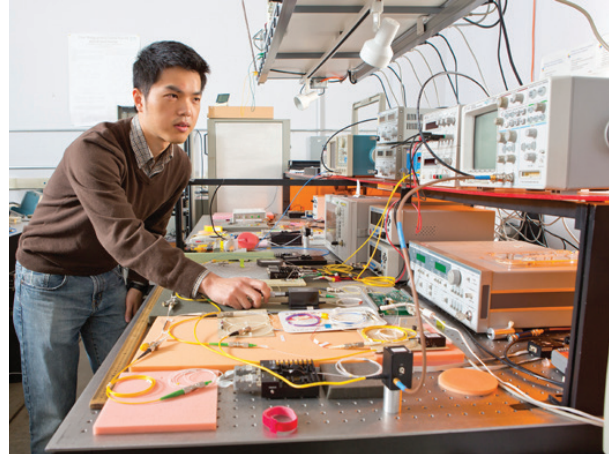
| Tyler Masterson, MS optical engineering, 2010,
infrared test engineer at SAIC, Dayton, Ohio

"The unique optical engineering program at Rose-Hulman and the faculty members associated with it have well prepared me for my PhD study in the semiconductor field."

| Huiyong Liu, MS optical engineering, 2007

"The professors get you to think outside the box through an emphasis on experience gained in research, presenting at conferences, and publishing work while at Rose-Hulman. This prepared me well for important and exciting work in photonics."

| Erin Reeves, MS Optical Engineering, 2011,
electrical engineer at the National Nuclear Security
Administration's Kansas City Plant operated by
Honeywell Federal Manufacturing &
Technologies, LLC



ROSE-HULMAN
INSTITUTE OF TECHNOLOGY

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