

LASER-TEC

College Profile

Monroe Community College Rochester, New York

LASER-TEC is the Center for Laser and Fiber Optics Education, founded in 2013 by the National Science Foundation (NSF) and headquartered at Indian River State College in Florida. It was established to help meet the goals of educating and sourcing domestic talent in the areas of optics and photonics. As a service to students, recent graduates, and prospective employers, Photonics Spectra runs a profile of one of the LASER-TEC colleges each month.

Employers have relied on Monroe Community College (MCC) since 1963 to educate generations of students to become optical technicians. Offering stackable certificate and associate degree programs, MCC is the only community college awarding an Associate of Applied Science degree in optical systems technology.

Since the program's inception, more than 800 students have earned optics credentials from MCC, preparing them for a wide variety of career paths in the global industries of optics, photonics, and imaging throughout the U.S. Companies that have hired students and graduates from MCC's program include Applied Image, Bausch + Lomb, Corning, Eastman Kodak, IDEX Health & Science, L3Harris Technologies, the Laboratory for Laser Energetics at the University of Rochester, Lockheed Martin, Lumetrics, MIT Lincoln Laboratory, Optimax Systems, OptiPro Systems, QED Optics, Rochester Precision Optics, Sydor Optics, Thorlabs, and Vertex Optics.

Programs

Optical Systems Technology Associate of Applied Science (AAS)

MCC's two-year degree program prepares students for a career in the field of optics. Students take courses that include content in optical fabrication and metrology, photonics, applied optical mathematics, optical elements and ray optics, wave optics, optical systems, lasers, and photo science. Students use state-of-the-art optics equipment that prepares them for immediate career placement. The optical systems technology program provides pathways to rewarding careers in companies that are critically important to our economic growth and national defense. Students in the program gain practical skills in advanced manufacturing areas such as lens assembly, metrology, computer numeric control (CNC) grinding, CNC polishing, conventional optical fabrication, and diamond turning. The degree is designed for students looking to enter the optics workforce as well as for those currently in the workforce seeking to advance their skills. Students who wish to continue their edu-



Polishing lenses is among the skills students learn in MCC's Optical Systems Technology associate degree program.

cation on a four-year pathway can transfer from the AAS degree to a variety of schools in the region, in New York state, or other states.

Graduates of the associate degree program will have the skills to:

- Evaluate an optical system using a variety of geometrical optics test procedures.
- Make standard electro-optic measurements and evaluate typical electro-optic configurations.
- Understand and perform the basic and advanced optical manufacturing techniques for today's precision optical components.

- Understand and perform the basic and advanced metrology techniques for testing optical systems and individual components.

Stackable Certificate in Optical Systems Technology

MCC's optical systems technology certificate program prepares students for a career in the field of optics. Students take courses in optical fabrication and metrology, applied optical mathematics, optical elements and ray optics, and photo science. Students use state-of-the-art optics equipment that prepares them for immediate career placement. The optical systems technology program provides pathways to rewarding careers in companies that are critically important to our economic growth and national defense.

Students in the program gain practical skills in advanced manufacturing areas such as metrology, computer numeric control (CNC) grinding, CNC polishing, conventional optical fabrication, and diamond turning. The certificate is designed for students seeking to quickly enter the optics workforce as well



Traditional and computer numeric control (CNC) polishing of lenses are among the skills students learn in MCC's optical systems technology associate degree program. An MCC student looks through the lens he manufactured.

as for those currently in the workforce seeking to advance their skills. All courses in the certificate program count toward the AAS degree in optical systems technology, creating a seamless transition for students interested in continuing their education.



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C-FLEX. Laser Combiners.



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