

Front Range Community College Longmont, Colorado

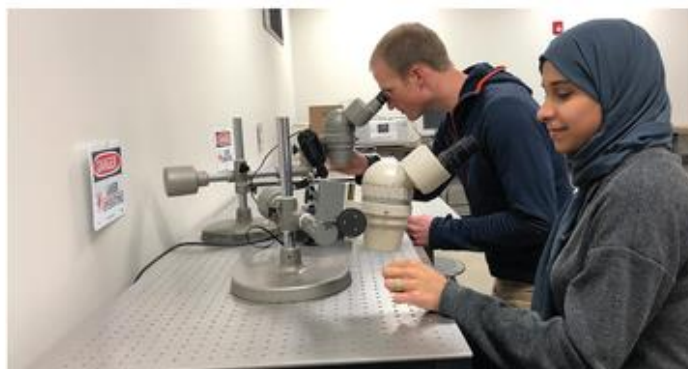
LASER-TEC is the Center for Laser and Fiber Optics Education, founded in 2013 by the National Science Foundation (NSF) and headquartered at Indian River State College in Florida. It was established to help meet the goals of educating and sourcing domestic talent in the areas of optics and photonics. As a service to students, recent graduates, and prospective employers, Photonics Spectra runs a profile of one of the 35 LASER-TEC colleges each month.

Front Range Community College (FRCC) offers a one-year certificate program in optics technology that was developed with the support of the Colorado Photonics Industry Association (CPIA). Companies that have provided input into the program's design include Ball Aerospace, Research Electro-Optics (now part of Excelitas Technologies), and Advanced Thin Films.

The optics technology program is offered at the college's Center for Integrated Manufacturing (CIM), which also hosts programs in precision machining, electronics engineering technology, and automation engineering.

Program

Students enrolling in FRCC's optics technology certificate program will earn 29 credits over two semesters. First-semester coursework includes technical mathematics, fundamentals of light and lasers, laboratory operations, an introduction to manufacturing technology, and optics and electronic instrumentation. Second-semester courses focus on quality assurance of precision optics, fabrication methods for optical systems, metrology of optical systems, and advanced studies in optics and photonics.



Among the many skills that graduates of the optics technology certificate program learn are the proper handling and operation of laboratory, optics fabrication, and test equipment.

Graduates of the program have the skills to:

- Demonstrate an understanding of the nature and properties of light, lasers, and basic geometrical optics.
- Demonstrate safe and proper handling and operation of laboratory, optics fabrication, and test equipment.
- Use tools and techniques to measure optical parameters and systems, and collect, organize, and interpret data to draw proper conclusions.
- Define the documentation of design intent using prints and the interpretation of tolerancing symbols.
- Apply written and verbal communication skills to effectively execute work instructions and report information.
- Understand, build, and learn about electrical and electronic instrumentation as it applies to optical and photonic systems.
- Define and demonstrate optics and thin-film coating manufacturing, fabrication, quality testing, and troubleshooting techniques.

- Explain how efficient manufacturing processes affect optics manufacturing.

How to recruit from this college

Send job postings to the contact person below. If possible, visit FRCC to present your company and employment opportunities to our students. We will make available, free of charge, a private room in which to interview interested students. Please contact the person below to make arrangements for a recruiting visit. Graduates are available every May.

Contact information

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Website

www.frontrange.edu/programs-and-courses/a-z-program-list/optics-technology