LASER-TEC College Profile

Springfield Technical Community College Springfield, Massachusetts

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.

pringfield Technical Community College (STCC) offers a one-year Optics and Photonics Technology certificate and a two-year Optics and Photonics Technology Associate of Science degree. The programs give engineering technicians knowledge of lasers and optics, and provide the electronics skills needed to design, test, and maintain complex optical and photonic systems. Graduates work side by side with engineers and scientists who are involved with cutting-edge applications in a wide variety of highly technical applications. Applications include laser materials processing, fiber optic communications, precision optical manufacturing and metrology, aerospace and defense, homeland security, medical device fabrication, nanotechnology, and integrated photonic devices. As the only program of its kind in New England, STCC's optics and photonics technology graduates are highly sought by industry and have enjoyed excellent job placement and salaries since 1976. Companies that hire STCC graduates include MIT Lincoln Lab, Northrop Grumman, Coherent, Lumentum, TRUMPF, OFS, IPG Photonics, Convergent Photonics, Viavi Solutions, II-VI Inc., L3 Technologies, and Zygo.



A Springfield Technical Community College (STCC) student measures laser beam characteristics.

Programs

One-year Optics and Photonics Technology certificate Two-year Optics and Photonics Associate of Science degree

These one- and two-year programs with strong interdisciplinary core curricula provide extensive hands-on training in state-of-the-art optics and photonics labs. The one-year certificate program, which serves as the first year of the associate degree program, provides students with extensive theoretical and hands-on training in lasers and laser systems, fiber

optics, geometric optics, electronics, and SolidWorks, along with other manufacturing essentials. The associate degree program builds on the certificate program by providing additional advanced coursework in industrial laser applications, wave optics, advanced topics, and a year-long senior capstone project. The curriculum is heavily project- and problem-based, and the majority of students have paid internship opportunities with local laser and optics companies. A new transfer option with Western New England University allows graduates of the associate degree program to complete a Bachelor of Science degree in electrical engineering in as little as two additional years.