The National Center for Optics and Photonics Education, OP-TEC, is a consortium of two-year colleges, high schools, universities, national laboratories, industry partners, and professional societies funded by the National Science Foundation’s Advanced Technological Education (ATE) program. The participating entities of OP-TEC have joined forces to create a secondary-to-postsecondary “pipeline” of highly qualified and strongly motivated students and to empower high schools and community colleges to meet the urgent need for technicians in optics and photonics.

Headquartered in Waco, Texas, OP-TEC serves secondary STEM programs and postsecondary programs devoted to lasers, optics, and photonics technology or technologies enabled by optics and photonics. In addition, OP-TEC provides support through curriculum, instructional materials, assessment, faculty development, recruiting, and support for institutional reform. OP-TEC serves as a national clearinghouse for teaching materials; encourages more schools and colleges to offer programs, courses, and career information; and helps high school teachers and community and technical college faculty members develop programs and prepare to teach optics and photonics courses and labs.

The Center has five goals: (1) Serve as the national center to advocate and support optics and photonics technician education. (2) Provide up-to-date, employer validated resources for teaching and learning in optics, lasers, and photonics education. (3) Expand the number of educational courses and programs in optics and photonics offered by colleges and high schools. (4) Provide education and training for administrators, counselors, high school teachers, and community college faculty members to prepare them to (a) design new photonics technology programs; (b) infuse photonics into programs in photonics-enabled technologies; and (c) teach optics, photonics, and laser courses. (5) Identify and support the emergence of new technologies, including alternative energy, that require technician knowledge and skills in optics and photonics.
OP-TEC has established a national infrastructure for developing and supporting widely-disseminated educational programs in cutting-edge, high-demand technologies that require photonics. This infrastructure encompasses both the secondary and postsecondary levels and involves collaboration between educators and industry personnel.

OP-TEC is also bridging the gap in the participation of women and minorities in technology, breaking down geographical and socioeconomic barriers, and making the study of technology more widely accessible. By providing career pathways in which students begin the pursuit of technical careers early and transition seamlessly into postsecondary programs, OP-TEC enables students to acquire the skills necessary to compete in the global marketplace.

To learn more, please visit our website at www.op-tec.org. Visitors can register for OP-TEC workshops and faculty development courses; access information on OP-TEC services, resources, and curriculum materials; and learn more about how OP-TEC can assist organizations in taking the first steps toward implementation of photonics programs that can ultimately provide students the opportunity to work in this high-demand, high-paying field.

For more information
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Industry and Technical Advisors (cont.)
Intelligent Epitaxy Technology, Inc. (Richardson, TX)
Lawrence Livermore Labs (Livermore, CA)
Mound Laser & Photonics Center (Miamisburg, OH)
New Mexico Optics Industry Association (Albuquerque, NM)
PI (Physik Instrumente) L.P. (Fullerton, CA)
Power Technology, Inc. (Alexander, AR)
Precision Laser Specialist, Inc. (West Berlin, NJ)
Raytheon Space & Airborne Systems (El Segundo, CA)
Rochester Regional Photonics Cluster (Rochester, NY)
Sandia National Laboratories (Albuquerque, NM)
Schott North America (Fullerton, CA)
Technology Ventures Corporation (Albuquerque, NM)
TLC Vision (Chesterfield, MO)
UC Davis – Center for Biophotonics (Davis, CA)
University of Arkansas (Fayetteville, AR)
US Army Research Lab (Adelphi, MD)
US Military Academy – Photonics Research Center (West Point, NY)
UTMB – Center for Biomedical Engineering (Galveston, TX)
Xstream Systems (Vero Beach, FL)

Educational Networks
American Association of Community Colleges (AACC)
National Coalition of Advanced Technology Centers (NCATC)
National Career Pathways Network (NCPN)

Professional Societies
International Society for Optical Engineering (SPIE)
Laser Institute of America (LIA)
Laser and Electro-Optics Society of the Institute of Electrical and Electronics Engineers (IEEE/LEOS)
Optical Society of America (OSA)