

# OP-TEC at Central Carolina Community College



Central Carolina Community College (CCCC) at Lillington, North Carolina, is a college partner in OP-TEC: The National Center for Optics and Photonics Education, a collaborative project funded through the National Science Foundation's Advanced Technological Education (ATE) program. The OP-TEC partners—two-year colleges, ATE grant recipients, high schools, universities, national laboratories, and professional societies—are committed to increasing the pool of well-trained technicians in optics and photonics by creating a secondary-to-postsecondary “pipeline” of highly qualified and strongly motivated students. OP-TEC will serve one- and two-year postsecondary programs devoted specifically to lasers, optics, and photonics technology as well as programs devoted to high-demand technologies that are *enabled* by optics and photonics, such as biomedicine, manufacturing, information technology, and engineering.

CCCC developed its laser and photonics technology (LPT) program in 1987. Upon successful completion of the program, graduates earn the associate in applied science (AAS) degree in LPT and a certificate in electronics engineering technology. The focus of the first year of study is in electronics technology. The focus of the second year is in photonics technology with a heavy emphasis on applications that include the following:

- HeNe lasers
- Argon lasers
- Argon-krypton lasers
- Nd:YAG lasers
- Semiconductor lasers
- CO<sub>2</sub> lasers
- Fiber optics
- Microscopes
- Spectroscopes
- Laser material processing
- Sensor technology

CCCC's LPT department is working to establish career pathways in which students at area secondary schools begin career exploration in the ninth grade; lay a strong foundation in academics and core technical and

employability skills; enroll in and graduate from the CCCC LPT program; and transition successfully to four-year colleges or employment or both. The intent is to enable

more students to earn high-quality AAS and/or bachelor of science degrees that will equip them to succeed in high-paying jobs in the numerous technical fields that are enabled by optics and photonics. Through a partnership between CCCC and the University of North Carolina at Charlotte, students can enter a bachelor's engineering technology program after completing the CCCC LPT program.

The CCCC LPT program works with an advisory committee whose purpose is to

## Area of Specialization

Electronics Engineering  
Technology

identify the knowledge and skills required for entry-level employees and to recommend programmatic revisions based on industry demands. The advisory committee includes representatives of the following companies and organizations:

- Centice (Durham, N.C.)
- Sumitomo Electric (Durham, N.C.)
- Sony Ericsson (Durham, N.C.)
- Lawrence Livermore National Lab (Livermore, California)
- DuPont Microcircuit Materials (Durham, N.C.)
- Triton HS (Erwin, N.C.)
- Western Harnett HS (Lillington, N.C.)
- North Carolina State University (Raleigh, N.C.)
- Duke University (Durham, N.C.)
- North Carolina Agriculture and Technologies University (Greensboro, N.C.)
- Smiths Aerospace, Electronics Systems (Hope Mills, N.C.)
- Static Control Components (Sanford, N.C.)
- Cree (Durham, N.C.)

The LPT program is located on the college's Harnett County campus in the Bob Etheridge High Technology Building at 1075 East Cornelius Harnett Boulevard in Lillington, North Carolina.



**For more information on OP-TEC at Central Carolina Community College**

Gary Beasley, Lead Instructor  
Central Carolina Community College  
1075 East Cornelius Harnett Blvd.  
Lillington, NC 27546  
910-814-8828  
gbeasley@cccc.edu.

Steve Lympny, Chair  
Engineering Technologies  
Central Carolina Community College  
1105 Kelly Drive  
Sanford, NC 27330  
919-718-7283  
slympny@cccc.edu

**For more information on OP-TEC**

Dan M. Hull, Director  
OP-TEC  
P.O. Box 21689  
Waco, TX 76702-1689  
254-741-8338  
fax 254-399-6581  
hull@cord.org

