

# OP-TEC at Indian River Community College



Indian River Community College (IRCC) 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.

IRCC was named the number one mid-sized community college in the nation for innovative use of technology in education by the American Association of Community Colleges (AACC) and the Center for Digital Education.

Based on Florida's east coast, IRCC opened the innovative Kight Center for Emerging Technologies in August 2005. One of the most technologically sophisticated educational facilities in the Southeast, the Kight Center serves as a catalyst for the development of

synergistic partnerships among educational, research, and science-based organizations in advanced technologies.

The IRCC Robotics and Photonics Institute enables students to obtain an associate in applied science degree in electronics engineering technology with a specialization in robotics and photonics. The institute provides students with a broad range of knowledge in manufacturing automation and robotics, laser technologies, photonics, optics, and programmable logic controllers, along with a strong academic core to support students' successful transition to four-year institutions.

As a partner in this national initiative, IRCC will work with high schools to facilitate articulation agreements that provide high

school students with a seamless transition from high school to college through dual enrollment and other articulation mechanisms. IRCC will work closely with middle and high school teachers and advisors to develop career pathways for students in photonics-related program areas and to implement optics/ photonics tracks.

As part of the college's ongoing dissemination campaign to increase interest in engineering careers, particularly in photonics and optics, summer workshops for teachers and summer academies for students are planned. The Summer Academies Series

## Areas of Specialization

Photonics

Robotics

Biomedical Devices

Telecommunications

Advanced Manufacturing

Micro Fabrication  
(starting in 2007)

will include an "Introduction to Emerging Technologies" and a Photonics and Optics Academy to promote careers in this industry. The academies will emphasize hands-on projects and the study of math and physics.

In partnership with OP-TEC, IRCC's photonics faculty will develop a 4+2 career pathway curriculum framework to infuse photonics into existing AAS programs in biomedicine and homeland security. This will include the development of learning modules in homeland security and biomedical specializations and a guidebook to assist other colleges around the country in developing programs for technicians in photonics and photonics-enabled fields.

IRCC faculty will serve as part of an internal evaluation team to support the development of additional learning modules by partner educational institutions and businesses and will provide technical assistance to other colleges planning to develop an associate in applied science degree in photonics.

To support the dissemination of all findings, IRCC will develop a "best practice" module to illustrate step-by-step workshop materials and objectives for use by other colleges supported by OP-TEC.

The contextual integration of academic activities and real-life applications will be achieved in partnership with local industries and through the articulation of supervised internships, helping students earn college credit while giving them the opportunity to apply their newly acquired knowledge for commercial purposes.

IRCC will strengthen articulation agreements with the University of Central Florida and develop new agreements with the University of South Florida and the Florida Institute of Technology.



**For more information on OP-TEC at Indian River Community College**

Jose Farinos  
Dean of Advanced Technology  
772- 462-7575  
jfarinos@ircc.edu

Dr. Chrys Panayiotou  
Professor of Advanced Technology  
772- 462-7621  
cpanayio@ircc.edu

Indian River Community College  
Kight Center for Emerging Technologies  
3209 Virginia Avenue  
Fort Pierce, FL 34981  
866-866-4722  
www.ircc.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

