

JEP Notes from meeting on Photonics Technician Training

11/7/08 at CREOL, The College of Optics & Photonics

Sponsors: Florida High Tech Corridor Council (FHTCC), Florida Photonics Cluster (FPC),
CREOL

Valencia Community College (VCC)

- Speakers: Nasser Hedayat & Ali Notash
- VCC's photonics program is a Laser & Photonics certificate option (12 course credits) within their Electronics Engineering Technology AS degree program
- VCC will customize courses for companies if there is sufficient enrollment expected. They have done this in lasers and electro-optics for Northrop Grumman Laser Systems in Apopka.
- VCC has a "dual enrollment" arrangement with some Orlando area high schools. Students during their Junior and Senior years in high school enroll also in VCC courses, and are able to get their high school diploma and AS degree at the same time
- VCC has an internship program in place, but right now it is operating only with Northrop Grumman Laser Systems
- VCC would like to increase the enrollment in the Laser & Photonics certificate option and will welcome help from companies in promoting this career option to new VCC EET students as well as to high schools.
- Program information on the web at <http://valenciacc.edu/asdegrees/engineering/eet.cfm> or <http://www.valenciacc.edu/asdegrees/engineering/documents/ElectronicsEngineeringTech.pdf>

Indian River State College

- Speaker: Chrys Panayiotou
- IRSC's photonics program is a Laser-Photonics certificate option (12 course credits) within their Applied Science AS degree program
- IRSC has an evening program for specialized laser/photonics training for currently employed technicians
- Almost all graduates (one class of 18 so far in laser/photonics) have been hired within the 4-county primary service area of IRSC
- A very effective tool that IRSC has used to recruit students into their program has been the hiring of a part-time person as a recruiter who goes to area high schools. This has resulted in getting a large number of applicants, even beyond the 24 per class that they can currently admit.
- Program information on the web at <http://faculty.ircc.edu/dept/advancedTechnology/ee/course.htm#CerLasPhot>

OP-TEC

- Speaker: Dan Hull
- OP-TEC is an NSF-funded center: The National Center for Optics and Photonics Education, started in September 2006.
- The Center has a number of partner organizations, including Indian River State College in Florida
- Among the roles of OP-TEC are to determine the national needs, and the needed national educational capacity, for optics/photonics technicians; to create model curricula; and to promote the development of needed educational and training programs in photonics.
- An issue noted: low math skills for high school grads is the biggest cause of drop-outs from technician programs
- OP-TEC just received an add-on to their NSF contract for a planning task to add "Precision Optics Technician (POT)" training to their curricula and other studies.

- OP-TEC wants to work closely with photonics clusters like the FPC to meet the Center’s goals, and needs immediate help with the POT planning work.
- Program information, including skill standards and other resources, on the web at www.OP-TEC-org

NOTE: speaker presentations will be available on the CREOL website (look under “Academics” and “Partnerships” menus) and also on the FPC website (look under “Education”)

Q&A

1. What would help increase enrollment in photonics tech programs? Responses:
 - Increase the information availability and visibility on photonics careers, particularly to high school students and entering students at the community colleges where there are photonics programs
 - Really need industry help to send representatives to the schools to talk about technology careers in general, and photonics careers in particular, to help create interest. Earlier in the student’s school life is better – at least high school, but junior high and even later grades also helps.
 - A recruiter going to high schools like what IRSC has used is a great asset. The person does not need to be an engineer or technical person. IRSC found that their person did great after just two initial school visits when she would bring questions she couldn’t answer back to IRSC for answers. After this “training”, she was able to answer all the questions she got in subsequent school visits.
2. What are some of the issues the schools with technician programs are seeing? Responses:
 - Cost of equipment for labs
 - Lack of career and specific job opportunity information for photonics. This is a key area for help from companies.
3. How important is certification of graduates? Responses:
 - a) For most companies, very important. Such certification of the programs allows companies to have high confidence in the skills/knowledge of the graduates, and also allows them to send HR personnel to interview and recruit graduates rather than technical personnel
 - b) Idea for building certification: OP-TEC, working with Workforce Florida, may be able to set up a “certification center” to establish any needed standards and perhaps conduct program certifications. This could use skill standards that OP-TEC has now, or will develop. May also be able to get additional NSF funding, if needed, for such a center addition to OP-TEC.

Ideas & Actions:

1. Workforce Florida has a “New Initiatives” program (Randy Berridge, FHTCC President, is leading it). Through this program, may be able to do some of the following things (ACTION: Randy Berridge to determine can be done and what is needed to be done by whom):
 - a) Conduct “Needs Surveys” for photonics and other technical specialties.
 - b) Perhaps get funds, or matching funds, for photonics recruiters at the colleges
 - c) Help with establishing a “certification center”
 - d) Help develop internship programs at companies
2. OP-TEC wants to work with the FPC and Florida companies to have some focus meetings to help define what is needed for the new “Precision Optics Technician (POT)” training skill standards. (ACTION: Dan Hull to work with Jim Pearson to determine what companies to invite to these meetings. Lockheed and Northrop Grumman have said they are interested.)

Participating companies and organizations:

Companies and organizations

Ray Williamson Consulting
Metro Orlando EDC
L-3/ALST
Harris Corp
Optronic Labs
LightPath Technologies
Northrop Grumman - Laser Systems
Lockheed Martin Missiles & Fire Control - LMMFC
UCF- Economic Development
UCF- CREOL
Florida Photonics Cluster - FPC
Workforce Florida
Univ of South FL
Workforce Central Florida
Florida High Tech Corridor Council

Education Institutions

Valencia CC - West Campus
Seminole CC
OP-TEC
Indian River SC
Devry University
Keiser University