

# Report of the National Visiting Committee

## **LASER-TEC: Center for Laser and Fiber Optic Education**

**Meeting Date: May 17<sup>th</sup> and 18<sup>th</sup>, 2018**

### ***NVC Members***

1. M.J. Soileau, Founder of CREOL, University of Central Florida, FL
2. Don Hawkins, Vice President, Precision Contracting Services, Inc. (PCS)
3. Yvette Mattley, Principal Applications Scientist, Ocean Optics, FL
4. Glenn Rustay, Principal, Northport K-8 School, FL
5. Frank Caimi, Chief Scientist, SkyCross USA, FL
6. Justin Jensen, Project Engineer, Laser Components Pyro Group, FL
7. Brian Farnell, Facility Service Manager, CVS/Caremark, FL
8. John Van Dusen (Not Attending), Vice President, Jenoptik Optical Systems, FL
9. Nat Quick (Not Attending), Executive Director, Laser Institute of America, FL
10. Martin Richardson (Not Attending), Professor of Optics, CREOL, University of Central Florida, FL

### ***Guests***

Ed Massey, President, IRSC

Kevin Cooper, Dean of Advanced Technology, IRSC

Moamer Hasanovic, Professor of Electronics Engineering Technology, IRSC

Paul Godfrey, Professor of Electronics Engineering Technology, IRSC

### ***LASER-TEC PI's***

Chrys Panayiotou, PI, Director LASER-TEC, Indian River State College, Ft. Pierce, FL

Gary Beasley, CoPI, Lead Photonics Instructor, Central Carolina CC, NC

James Pearson, CoPI, Executive Director, FL Photonics Cluster, FL

### ***Center Personnel***

Natalia Chekhovskaya, Program Manager, LASER-TEC, IRSC

Lauren Hays, Program Coordinator, LASER-TEC, IRSC

William Keiser, Photonics Technologist, LASER-TEC, IRSC

Heather Hunt-Gonzalez, RPI Program Specialist, LASER-TEC, IRSC

### ***Evaluator***

Fraser Dagleish, Senior Scientist, Harris Corporation, FL

## ***Executive Summary***

Dr. Chrys Panayiotou and his team has continued to excel and is to be congratulated for a very successful, well-run National Science Foundation Regional Center, for its training of optics, lasers, and photonics technicians.

Again this year, the team has done an excellent job of summarizing the progress in the previous phases of the program as is evidenced in the growth in enrollment, an increase in student credit hour generation, an increase in the total number of courses offered, and student success as measured by graduation and job placement of students. The visiting committee would also like to recognize the growing number of graduates being hired into industry related companies as a prime indicator of the success this program accomplished.

This committee would also like to highlight the continued efforts by LASER-TEC to the member companies, through field trips and related efforts, as an effective method of allowing the industry and the student to interact throughout the training process as it pertains to specific tasks in a given career field.

This committee also recognizes the efforts made this year in reaching the K-12 students, with specific attention to women in the fields of photonics and opto-electronics.

The additional efforts this year to seek out new and innovative way of reaching this countries veteran population is also to be commended and encouraged.

## ***Specific Commendations***

- President Massey, administrators, faculty and staff at Indian River State College are to be commended for their strong commitment and support of LASER-TEC and the programs supported through the NSF funding.
- LASER-TEC is to be commended for the commitment and involvement of the management staff involved in the project and the administration and staff involved in each partner college.
- Military flyers and handouts have been implemented and should continue with a two-fold increase in the levels of veteran involvement.
- LASER-TEC is to be commended for the work that has been accomplished to date.
- LASER-TEC is to be commended for being part of the ASPEN top 10 accreditation, and now awarded a top 3 spot on that same list of distinguished colleges.
- LASER-TEC is to be commended for the establishment and continued involvement with the industry partnerships.
- LASER-TEC is to be commended for their efforts in aligning the various programs to the State and National standards.

### ***Specific Commendations (continued)***

- LASTER-TEC is to be commended for assisting and mentoring other colleges in the Southeast.
- LASER-TEC is to be commended for the various conferences and exhibitions hosted throughout this past year.
- LASER\_TEC is to be commended for the “Tech like a Girl” program, highlighting the access for women in industry related programs.
- LASER-TEC is to be commended for the outreach efforts and recruitment to veterans and for the continued efforts for awarding academic credits military service applied to the various programs.

### ***Recommendations by the NVC***

- Create YouTube video for students that are appropriate, and designed for Teachers – counselors – parents, not just students.
- Offer Continuing education credits for teachers to attend the workshops, and identify what is available for teachers in the form of field trips
- Create an impact presentation for counselors.
- Parents hearing from local media and feedback from field trips. Create a program that the school system can hand out to be given to the parents.
- Promote the program through administrators: top down approach.
- Explore other opportunities outside the normal education stream to promote the programs both at the high school level and marketing to the new colleges.
  - Look at avenues to find county funding to help younger students at the higher education level.
  - For example - hybrid AS degree program.
  - Continue to focus and expand the outreach at the high school level, in the areas where students are least likely to seek four year degrees.
- Work on defining “LFO” (perhaps “LASER and Fiber Optics”) in real-world terminology (not using the word photonics).
  - For example - optics are the eyes of the robot. This would connect robotics to the optics / lasers / photonics side of the existing degree programs.
  - Define the real-world applications of the LFO industry.
  - Re-Branding. For example - “think like a Ninja”

## ***Recommendations by the NVC (Continued)***

- Prepare a marketing approach that leads the initial contacts with new schools, beginning with creating an industrial supported group (similar to what LASER-TEC has done at IRSC) that presents the need for hiring before the college is approached – approach the schools from the top rather than the department head level.
  - “Letter from the president about the success of the project.”
  - Look into a fast-track project approach. Regional approaches and research.
  
- Continue the “Tech-like-a-girl” program. Second phase it to make it “real-world”. “Tech-Like a Girl 2.0”? Marketing ideas? Scholarship program for lower-income groups. 4<sup>th</sup> item on a standard Google search – need to head in this direction. What are the total costs of a workshop?
  - Sponsorship from the industry will help create a sustainability model.
  - Invite more female influence to the NVC membership. Specifically the head of the women in Optics program, or the head of the S.O.S. program.
  
- Create a profile of qualifications or aptitude for the transition office to “pre-qualify” military exit candidates.
  - Reach out to the elected people at the local level
  - Direct contact at the transition offices at major military installations
  - Continue to tailor marketing literature to the individual branches of the military

## **Conclusion**

The National Science Foundation, National Visiting Committee continues to be impressed by LASER-TEC's commitment to excellence as they continue to expand and apply their programs and initiatives. Specifically, the NVC is excited about the ASPEN award and the new top 3 placement of Indian River State College and the part that LASER-TEC has played in that recognition. The NVC is looking forward to watching LASER-TEC throughout this next year as they continue to advance educational opportunities in the industry.

The NVC continues to have a very high level of confidence in LASER-TEC, and based on this committee's observations and interaction, believe that LASER-TEC will continue to be a strong and valuable contributor to the industry as a whole.



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