Program Highlights for the Month of February 2003

NMT Partnership Winter 2003 Partners Meeting
The 2003 NMT Winter Partners Meeting was held at the Penn Stater Conference Center Hotel on February 23rd–25th with over 50 attendees. The meeting included presentations and discussions with the National Visiting Committee (NVC) of the Advanced Technology Education (ATE) Regional Center for Nanofabrication Manufacturing Education. Reports on the Penn State Nanofabrication Facility, the NMT Partnership, and the Capstone Semester Curriculum provided a general overview of the Center. Panel presentations followed with detailed topics such as new nanofabrication associate degree programs, new and revised courses, new nanofabrication associate degree tracks, student recruitment, and program assessment activities. A presentation was made by NVC member, Phil Jones on Nanotechnology and the Clay Industry. Discussions were plentiful with partner members and NVC members with a resultant report from the NVC on recommendations.

NMT Partnership Awareness
• The NMT Partnership participated in the PDE Bureau of Career and Technical Education’s Career and Technical Education Week on February 11th–12th at the State Capital Rotunda in Harrisburg.
• Ms. Phi-Oanh Pham and Mr. Mark Rutkowski of Luzerne County Community College made presentations on the NMT Partnership at Crestwood Middle and High School in Mountain Top, PA. Over 500 students were in attendance at the February 19th event.
• There were five visits to the Penn State Nanofabrication Facility by students and teachers to learn about nanotechnology and the NMT Partnership and to tour the facility.

Up-coming Activities

NSF Research Experience for Teachers (RET) Project
This NSF RET project will provide a three-day hands-on nanotechnology training and research experience for 20 high school science teachers from Virginia at the Penn State Nanofabrication Facility in late March. This project builds upon and expands the components of the Pennsylvania NMT Partnership associated with professional development of educators and will take the NMT Partnership beyond the boundaries of Pennsylvania through an alliance with the Initiative for Nanotechnology in Virginia (INanoVA). INanoVA is a statewide initiative involving higher education, national laboratories, state and local education, economic development organizations and private industry.

May 5-7
Hands-on Nanofabrication Workshop for Educators
This workshop will be a “hands-on” exploration of the world of nanotechnology. Participants will learn about the growing applications of nanotechnology in many industries including the biotechnology, MEMS, optoelectronics, chemical, and nanoelectronics industries. The fundamentals of nanofabrication processes and tools will be covered and practiced through hands-on processing labs in the class 10 cleanrooms of the Penn State Nanofabrication Facility. This three-day workshop is broken down to daily morning lectures by nationally recognized Penn State researchers and engineering staff and afternoon lab sessions in nanofabrication. Further information and registration will be available on the website link http://www.nanofab.psu.edu/events/default.htm

Nanotech Camps
Nanotech Camps are opportunities for secondary school students to learn about nanotechnology and nanofabrication. Students participate in classroom and cleanroom lab activities exploring the aspects of nanotechnology including nano-electronics, nanobiotechnology, and nano-optics. Students are introduced to the nanofabrication processes and to the tools used in these processes in the Penn State Nanofabrication Facility. Career opportunities are explored, and educational pathways to nanofabrication careers are discussed.

There are one-day Nanotech Camp opportunities for students in 7th grade and above throughout the year. These one-day camps are focused on introducing nanotechnology to students and on increasing student awareness of the impact of this technology and its career opportunities. There are also three-day Nanotech Camp opportunities only offered during the summer for 9th grade and above students. The three-day camps are focused on a more detailed look at nanotechnology, nanofabrication, career opportunities and educational pathways. Further information is available at the website link http://www.nanofab.psu.edu/ATE/Education_Programs/k12.prog.htm.

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