Mission Statement: The PSU Nanofabrication Facility is dedicated to research, development and education across all aspects of micro- and nanotechnology. Its Nanofabrication Manufacturing Technology (NMT) Partnership is a National Science Foundation and Commonwealth funded initiative based on sharing the Penn State Nanofabrication Facility across Pennsylvania. Using the resource-sharing approach, the NMT Partnership addresses the tasks of (1) enhancing workforce development, (2) improving K-12 science and technology education, (3) increasing educators’ awareness of Micro- and Nanofabrication-based technologies, and (4) providing training, research and development assistance to Pennsylvania industry. The NMT Partnership has the goals of increasing job opportunities for Pennsylvanians and of nurturing and growing microfabrication-based, nanofabrication-based, semiconductor, and semiconductor-supplier industries in the Commonwealth.

Program Highlights
November 2003

K-12 Nanotechnology Education Initiatives
Because of its cross-disciplinary nature, nanotechnology is increasingly viewed by education leaders as an ideal vehicle for better integrating and improving STEM (science, technology, engineering, and mathematics) education, particularly at the secondary level. The NMT Partnership has thus placed Pennsylvania at the forefront of a national movement to incorporate nanotechnology into secondary STEM curricula in ways that improve STEM teaching and learning. Accordingly, the NMT Partnership is now expanding K-12 educational efforts. With existing NSF funding, the NMT Partnership is now developing a 400-level undergraduate course on nanotechnology for pre-service secondary education students. The course will also be available to education graduate students, including in-service teachers pursuing graduate degrees on a part-time basis. The goal of the course, entitled Integrative Nanoscale Science and Engineering for Educators, is to demonstrate to pre-service and in-service teachers how STEM teaching and learning can be improved through incorporation of an emerging, cross-disciplinary field like nanotechnology. In addition, Penn State submitted three proposals to the NSF in November to support a national research center on nanotechnology learning and teaching ($30 million over ten years), nanotechnology instructional materials development ($1,250,000 over five years), and continued development of baccalaureate-level programs in partnership with the SSHE ($100,00 for one year).

Winter Meeting - March 8-9, 2004
The Winter Partners Meeting/NSF National Visiting Committee Meeting is scheduled for March 8-9, 2004 at the Penn Stater Conference Center Hotel. All funded NMT Partnership organizations are expected to attend. Hotel information and meeting agenda will be forthcoming.

NMT Partnership Activities:
- Visits were made to seventeen NMT Partnership institutions during the months of October and November and presentations on Nanofabrication and Nanofabrication Careers were made by either Dr. Stephen J. Fonash or William Mahoney. Attendance for all of the sessions exceeded 400 participants.
- One day Nanotech Camps were conducted at the Nanofabrication Facility during the month of November for the following schools: Galeton High School, Reading Area Community College and Reading Central Catholic High School, Susquehanna High School and the Carlisle Area School District.
- Other visitors to the Nanofabrication Facility who were hosted by the NMT Partnership included: Penn State New Kensington Biomedical Engineering Technology students, two administrators from the Precision Manufacturing Institute and three students and a faculty member from Kent State University.

Spring 2004 Term and Summer 2004 Term Dates
Spring Term 04 begins on January 12th and ends May 3rd. Spring break dates are: March 8-12
Summer Term 04 begins on May 17th and ends on August 11th.

For further information on these Highlights or the NMT Partnership, contact:
- Doug Fenwick    (717) 866-9659 dfenwick@engr.psu.edu
- Lisa Daub    (814) 865-9635 ldaub@engr.psu.edu