

Introduction to the NEATEC Center

Micro Nano Tech Conference 1
Educating and Preparing the Emerging Technology Workforce

Albuquerque, NM, May 9 – 11, 2011



NEATEC – Northeast Advanced Technological Education Center

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NEATEC – NSF Grant

Welcome!



NEATEC

Northeast Advanced Technological Education Center

What We Do

Abraham Michelen
Principal Investigator – NEATEC
Professor – Hudson Valley Community College
Troy, New York

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Outline

- Mission
- Goals of NEATEC
- How these Goals will be fulfilled?
- Who will fulfill these Goals?

Mission

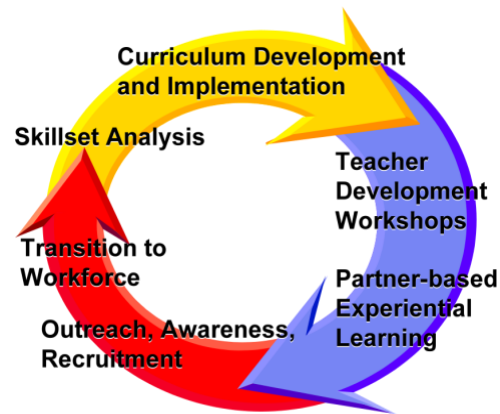
"The Northeast Advanced Technological Education Center (NEATEC) – an NSF Regional ATE Center – will serve as a critical, sustainable resource to create and maintain a skilled technical workforce for the semiconductor and nanotechnology industries in New York State and Western New England."

How? Through

- **An extensive network of Community Colleges**
- **Universities**
- **High-School Partners**
- **Industrial Partners**

Goals of NEATEC

1. Industrial Workforce Skill set Analysis
2. Curriculum Development and Implementation
3. Teacher Development
4. Experiential Learning
5. Outreach and Public Awareness
6. STEM Career Encouragement and Recruitment



How these Goals will be fulfilled?

- Identify and document specific, quantitative skill sets for technicians
- Develop new course content, curricula
- NEATEC partners and other ATE partners will help make available existing educational materials
- Promote articulation agreements between high schools, partner community colleges, and 4-year educational institutions to create viable and coherent 2+2+2 degree and training program
- Faculty Development: Workshops, Conferences
- Co-op, Shadowing, Internships
- Implement a program of public awareness about STEM-related career opportunities in semiconductor and nanotechnology fields.

Who will fulfill these Goals?

- **Hudson Valley Community College**
 - Module Development
 - Workshops
 - Facilities
- **College of Nanoscale Science and Engineering (CNSE – UAlbany)**
 - will develop an on-site 'Capstone Semester' experience offered to community college students in the last semester of relevant A.A.S./A.S programs
 - Internships at 300 mm cleanroom
- **Rensselaer Polytechnic Institute**
 - Will create a Nanotechnology and Semiconductor Camp for high school students during summer
 - Will expand its Summer Institute Nanotechnology Program to include an additional 40 high school teachers per year
 - Curriculum development: three courses will be developed
- **Mohawk Valley Community College**
 - Will re-activate its SMT program
 - Develop a Vacuum Course
 - Provide workshops in Automation

Who will fulfill these Goals? (cont.)

- **Penn State – NACK Center**

- Will offer hands-on nanotechnology workshop per year for educators and administrators
- Provide licenses to CC and High-Schools to access remote tools

- **MATEC**

- Will provide a license to specific community college partners of the center to access the current MATEC module

- **General Electric**

- Co-Ops for students and faculty
- Shadowing
- Internships: 8 per year; 2 – 4 month duration
- Will offer a one-day course in semiconductor fabrication to 5 educators per year

- **RIT**

- Two workshops to faculty in north west New York
- Develop masks for manufacturing processes

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Thanks!

