Widening Access to the STEM Pipeline

Delaware’s Community College – University Partnership

PRESENTER: Stephanie Smith,
Vice President for Academic Affairs
A Shortage of STEM Professionals

- 2,000,000 Number of new professionals needed in STEM fields by 2010 just to replace the retiring baby boomers

- 12% The total percentage of Hispanics and African Americans in the U.S. STEM workforce

- 1/2 The fraction of high school graduates in the U.S. who choose community college as their access point to higher education
A Nine-Year Collaborative Effort

EPSCoR

Delaware Tech

Universities
Delaware’s Collaborative Story

A NEW BIOTECHNOLOGY CAREER PATHWAY
FROM
THE COMMUNITY COLLEGE
FOR
UNDERSERVED STUDENTS
4 Ingredients for a Successful Partnership

- A Vision
- A Suite of Grants
- A CC Committed to Excellence
- Program Transfer Agreements
4 Ingredients for a Successful Partnership

A Vision

A Successful Partnership

A CC Committed to Excellence

A Suite of Grants

Program Transfer Agreements
Delaware Biotechnology Institute

MISSION: Facilitate a biotechnology network of people and facilities to:
• enhance existing academic and private-sector research,
• catalyze unique cross-disciplinary research and education initiatives, and
• foster the entrepreneurship that creates high-quality jobs.

THREE TYPES OF PARTNERS:
• biotech business leaders and entrepreneurs
• government agencies
• academic institutions

Delaware Tech’s New Associate Degree Program in Biotechnology
4 Ingredients for a Successful Partnership

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A Higher Ed Collaboration

- UNIVERSITY of DELAWARE
- Delaware State University
- Wesley College

DELTAWARE TECH
Grant Programs That Spurred Dialogue

- NSF EPSCoR
- NSF ATE
- NIH BRIN
- NIH Bridges
- NIH INBRE
Grant Outcomes

- Funding for new instrumentation and upgraded labs at the community college
- Integration of research into the community college curriculum
- Internships for community college students
Grant Outcomes

- Funding for new instrumentation and upgraded labs at the community college
- Integration of research into the community college curriculum
- Internships for community college students
- Articulation agreements
4 Ingredients for a Successful Partnership

- A Vision
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Program Transfer Agreement Benefits

Connected Degrees eliminate:

- Redundancy
- Loss of Credit
- Confusion
- Wasted time
4 Ingredients for a Successful Partnership

- A Vision
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- Program Transfer Agreements
- A CC Committed to Excellence
A Community College Committed to Excellence

- 60 Advisory Committees with more than 1,000 members from business and industry
- National program accreditation
- High licensure and national exam pass rates
- Solid job placement
- Academic success at senior institutions
- Dedicated and enthusiastic faculty
4 Ingredients for a Successful Partnership

A Vision
A CC Committed to Excellence
A Suite of Grants
Program Transfer Agreements

A Successful Partnership
Results

- The associate degree program began in 1999 with 94 students; this fall 2011, 267 students are enrolled.
- 46% of the current students initially needed developmental education.
- About half are First Generation College.
- 34% are minority.

54% of the 1,354 enrolled since the program’s inception has either earned their associate degree, transferred or are still enrolled.
Results

These non-traditional students:

- Have transferred to 4-year institutions

- Are working as lab technicians or assistants in research-based businesses

- Contribute to the qualified workforce the biotech industry needs to thrive
Delaware’s Center of Excellence

- Based on California model
- Conducts primary research that doesn’t replace, but builds upon exiting secondary sources
- Validates workforce needs through business and industry
- Identifies industry conditions, drivers, and competitive context
- Reveals emerging occupations not yet classified
- Explains regional nuances
- Produces both a supply and demand analysis
Thank you!

PRESENTER: Stephanie Smith,
Vice President for Academic Affairs