

# NCBW TIMELINE

September 2011

**BCC Informatics**

Life Science skill standards approved by industry

Click in dashed-line areas for more info

At the IT Convergence Zone: A Rapid Development Model for Skill Standards and Curriculum published

Co-hosted 78 state high school and community college educators at Washington Community College Allied Health Center of Excellence Summit

Informatics Overview: A Program Building Resource for Community and Technical Colleges published

Microsoft designates BCC as its second IT Showcase School in the nation

Program featured in the industry journal: BIO-IT World

Completion of Life Science Informatics Prior Learning Assessment Module applicable across all life science sectors and a first in the nation for community colleges

Originated committee, set mission, goals and agenda for first meeting of the Washington Life Science Industry Education Council.

Mike Fino presents at Bio-Link National Fellows Conference in Berkeley

College adopts two new positions: a bioprocessing faculty position and a full-time instructional associate

Teacher Fly-In Follow-up Study shows flying in teachers from around the country to Forsyth Tech's 2007 program helped increase overall student interest in biotechnology.

August 2011 NCBW presents posters at national conference in San Francisco

Graduate Tracking Study analyzes responses of Forsyth Tech biotech graduates to reveal how feelings for science help motivate efforts to succeed. Communication skills may be a most significant factor.

August 2011 NCBW Follow-Up Study from 2004 to 2007, Forsyth Tech administered the NCBW partnership with four other community colleges across the nation. This follow-up study calculates how the synchronized network enhanced capabilities for providing biotech training and faculty development. The colleges' resources and leadership continue today.

June 2011 8th Annual Community College Program Day at BIO - Washington, DC Presented by Bio-Link, NBC2 and the NCBW, representatives of the nation's community colleges, funding agencies and corporations gathered to experience best practices in biotechnology training and education today. BIO recognizes community colleges and their training as "creating a continuing climate for bioscience industry creation even in this challenging economic environment." Panels addressed many issues during the day-long event.

Sept to April 2011 NCBW activities in pictures

May 2011 Forsyth Tech biotech graduates

May 2011 The SciTech story - NCBW hosts science lecture series on Forsyth Tech campus

Winter 2011 edition Tech Quarterly, magazine of FT, recognizes innovative biotech teamwork and Kathy Proctor, the student President Obama invited to be in his State of the Union address.

NCBW hosts President Obama's Visit to Forsyth Tech

February 2011 report on President's endorsement of core best training practices, biotech economic impacts, more

December 2010 On a tour of Forsyth Tech, President Barack Obama praises North Carolina's leadership, calls for renewing American scientific education, training and skilled workforce superiority.

BioNetwork supports the mission of the North Carolina Community College System aligning world class workforce training and education to biotechnology, pharmaceutical and life science industries.

**MCC Bioprocessing**

Biogen Idec, Genentech recognize MCC's dedicated, immersive environment for training and support new faculty and remodel of facility

International Society of Pharmaceutical Engineers supports design, construction of 3500-square foot facility - opens to classes in November 2005 with more than \$1 million in state-of-the-art equipment

Materials Resource Program established for biotech companies to donate unused equipment for use in high schools

Selected as national model for community college - industry partnerships in biotechnology by the US Dept of Education

Innovative 3-D virtual reality system for people to experience process of fermentation debuts at Iowa State Fair

Mike Urbach conducts lab tours for high schools, prepares demonstrations for elementary and middle schools, promotes biotechnology at the MiraCosta Math and Science Fair

New Certificate programs developed

Development of the International Biofuel Training Iowa initiative

Pilot facility grows with Cargill donation of two new 80L fermenters, up from existing 13L

**IHCC Biofuels, Agbio**

Bioreactors purchased through grant, begin to be used for training, pilot projects needed by industry

Bio-fuel laboratory techniques and fundamental scientific processes developed for teachers

Science Education Mobile Instruction Lab visits schools; more than 30 school districts experience the use of SEM!

Summer biotech teacher professional development

Video, multi-media online course delivery

2004

2005

2006

2007

2008

2009

2010

2011

**NHCTC Biomanufacturing**

Jan. 31, 2005 Northeast Biopharmaceutical Manufacturing Industry Skill Standards finalized in consensus with industry

Northeast Biomanufacturing Institute begins with short courses for incumbent workers

First in the nation Biomanufacturing Apprenticeship program begins

First BIOMAN 06 national conference organized by Dr. Sonia Wallman at NHCTC July 24-28!

Deb Audino and Bob O'Brien give Lonza trainees Aseptic Awareness course w/ behavioral videotaping

First Biomanufacturing Apprentices complete program, hired by biotechnology companies

Two students go to work with Tengion, finish in-house training program in three months instead of usual six

New Recombinant DNA Technology course developed for R&D labs experimenting in nucleic acids, cloning, stem cell research

Ten short courses developed- can be delivered on campus, in the classroom, or in a biotech company lab facility

June 2008 In house Pilot Research Internship Model

October 2008 Agreement with the North Carolina Community College System establishes NCBW as one of seven BioNetwork centers.

April 2010 MetLife recognizes NCBW - Forsyth Tech partnership, named finalist in National Community College Excellence competition, with \$20,000 award.

September 2010 NCBW creates a partnership with the national Manufacturing Institute to benefit students, workers and the North Carolina manufacturing industry.

March 2011 Tracking graduates third report; prominent graduates' characteristics in the Piedmont Triad cluster show how graduates achieve success, encourage others, and raise program levels.

**Forsyth Tech R&D**

March, 2006 North Carolina Governor Michael Easley opens new technology building at Forsyth Tech, new biotechnology lab space, state-of-the-art equipment

Lab animal handling course developed

Wake Forest Institute of Regenerative Medicine recruits three students for internships and "hands on experience"

An automated DNA Sequencer acquired to train techniques and skills on DNA/RNA sequencing, mapping and fingerprinting

July 2007 Profile on consortium of eight community colleges with Forsyth Tech published.

June 2010 Presentation to Northwest Piedmont Workforce Board shows strength of biotechnology industry growth, need for workers.

May 2010 Six page PDF report on the Community College Program at the Biotechnology Industry Organization event in Chicago, themes include importance of graduates as Faces of Success, emerging innovative programs and questions of certification.

January 2010 Biotech Workforce report on Piedmont Triad BioNight highlights results, challenges ahead; pdf includes quotes from participants, awards, and photos.

April 2010 Second tracking graduates report, with recommendations.

**NCBW**

Strategic plan for the National Center created

Web site created, [www.biotechworkforce.org](http://www.biotechworkforce.org) by Tim Dubuque

Articulation Agreement with North Carolina Central University!

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June 28, 2004 President's High-Growth Job Training Initiative \$5 million grant for Forsyth Technical Community College in partnership with four other community colleges around the nation to develop the National Center for the Biotechnology Workforce (NCBW) across a three year period.

Series of nine Demand-Driven Workforce Training Videos begins

June 19, 2005 NCBW presentation at BIO 05 in Philadelphia, Dr. Sonia Wallman co-chair with Elaine Johnson, NSF Bio-Link director.

January 2006 NCBW team meets at Salt Lake City Community College

February, 2006 NCBW team presents at symposium on Bio-processing & Bio-manufacturing Training in partnership with BioNetwork NC community college biotech training system. Focus for first Resource Line -Tracking Trends in Biotechnology Workforce.

March 2006 NCBW team presents at League for Innovations conference in Atlanta

April 9, 2006 Community College Program at BIO2006 in Chicago

May 1, 2006 NCBW presents to North Louisiana Partnership for Innovation at Shreveport

July 11-13, 2006 NCBW team presents at DOL Workforce Innovations Conference, Anaheim. Honorable Mention award to NCBW.

October 2006 Five profiles published by consultant John Grady, one on each Center of Expertise; capture and document best biotech training practices, serve as replicable models and resources for community colleges nationwide.

January 10, 2007 Biotech Resource Line on Best Practices produced from a seminar with five college partners and Tengion.

Feb 2007 Profile on National Center Office published.

March 1, 2007 Piedmont Triad BioNight recognizes NCBW and Russ Read for excellence in community service.

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