

NCBW TIMELINE

July 2013 [Click dashed-line entries for more info](#)

Bellevue CC Informatics

At the IT Convergence Zone: A Rapid Development Model for Skill Standards and Curriculum published 2005

MiraCosta Bioprocessing

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

Indian Hills CC Biofuels, Agbio

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

Great Bay CC Biomanufacturing

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

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

NCBW National Center for the Biotechnology Workforce

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)

www.biotechworkforce.org

Co-hosted 78 state high school and community college educators at Washington Community College Summit 2006

Program featured in the industry journal: BIO-IT World

Informatics Overview: A Program Building Resource for Community and Technical Colleges published 2006

International Society of Pharmaceutical Engineers supports design, construction of 3500-sq-ft. 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 school

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

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

First in the nation Biomanufacturing Apprenticeship program begins 2005

First BIOMAN 06 national conference organized by Dr. Sonia Wallman July 24-28, 2006

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

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

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

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

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

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.

February 5-6, 2008 NCBW hosts nationwide DOL bioscience WIRED - Workforce Innovation in Regional Economic Development - conference in Winston Salem.

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

May 6-9, 2007 NCBW presents "Faces of Success" at Community College Program at BIO 07 Boston; subject for Biotech Resource Line.

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

2008 final report on first three years of NCBW (pdf)

October 2008 Biotech Student Tracking program begins. a series of phases to locate, track, analyze and keep graduates connected.

October 17-19, 2007 Piedmont Triad Fly-In hosts 24 high school biotech teachers from around the country, tours of Biogen Idec, Targacept, Tengion, Wake Forest Institute in partnership with Alamance Community College and Bio-Link.

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

April 9, 2006 Community College Program at BIO2006 in Chicago

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

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

NCBW hosts President Obama's Visit to Forsyth Tech

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.

October 2012 NCBW at Forsyth Tech receives a Department of Labor grant of nearly \$15 million to unite twelve high-performing colleges in a consortium, working with 45 companies and employers to develop core, industry-recognized skill sets in bioscience and produce standard, "industry-recognized," credentials. High-growth industries are ever-changing and require clearly defined skills to keep up.

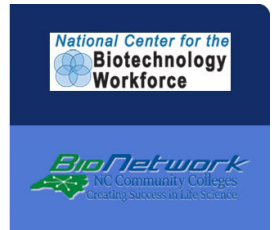
December 2011 National Meeting between Manufacturing Institute and NCBW with Bio-Link, NBC2, PhRMA and BIO

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

March 2012 National Meeting with Manufacturing Institute, Bio-Link, NBC2, Medical Devices Educational Consortium, industry, college reps

SciTech Lecture Series NCBW presents:

- Sept 2012 "Career Success in Life Sciences" Doug Drabble, Director of BioNetwork
- March 2012 "An Eye Toward Innovation" by cornea transplant expert Jerry Barker
- February 2012 "Vaccines: Why and How" Steve Mizel and Bruce Kaylos, Wake Forest University School of Medicine faculty
- January 2012 Dr. Tim Bertram on regenerative medicine
- September 2011 Executive Director of the NC Biotechnology Center's Piedmont and Regional Office Nancy Johnston on "Catalyzing Regional Strengths to Support Bioscience Job Growth."
- October 2011 by Morris J. Clarke, PhD, personal experiences in process of drug discovery
- October 2012 "The Changing Landscape of Intellectual Property Protection for Biotechnology Inventions" Charles W. Calkins, Attorney and Partner Kilpatrick, Townsend & Stockton, LLP
- November 2012 "From Forsyth Tech to Medical School and Beyond" Adesanmi Ojo, M.D.
- March 2013 "My Journey as an Entrepreneurial Scientist, CEO and Investor" with Dr. Christy Shaffer, Venture Partner and Managing Director of Hatteras Discovery with Hatteras Venture Partners. With a focus on biopharmaceuticals, medical devices, diagnostics, and related opportunities in human medicine. and with more than \$200 million under management, Shaffer spoke about her mission and belief that entrepreneurial innovation will create new products that will transform the practice of medicine and create value for investors.



The Trade Adjustment Assistance Community College Career Training (TAACCCT) program launched at a meeting January 14 - 16 2013 at Biotech Place in Winston-Salem. Goals - funded by the DOL grant - are to: improve workplace training through recruitment testing, aptitude assessment, course redesigns, better outreach and more retention; introduce portable, industry-recognized credentials into training; build community college capacity for education that meets employer needs: add infrastructure and build internships. To move the nation forward with technician training the twelve partners are concentrating in four areas:

Learning Technologies Hub

Accelerate completion time through improved prior learning assessment, removal of institutional barriers and new, technology enhanced instructional materials

Forsyth Technical (Hub lead institution, will pilot a modular learning lab, with assessments conducted and duplicated nationally.)

Alamance

Rowan Cabarrus

Lab Skills Hub

New courses and credentials will be developed in the Biosciences with revised laboratory skills standards

City College of San Francisco (Hub lead institution, also home of the NSF national Bio-Link center, addresses lack of industry-recognized credentials, works to harmonize skill standards)

Madison Area

Austin

Biomanufacturing Hub

Montgomery County (Hub lead institution, also home of NSF biomanufacturing center NBC2, develops new biomanufacturing courses in partnership with industry, leading to stacked credentials and local career paths.)

Los Angeles Valley

Bucks County

Medical Devices Hub

New skill standards will be created; introduce stackable, latticed credentials, help trade-impacted workers get new high-wage, high-skill jobs

Ivy Tech (Hub lead institution hosted 42 representatives from Medical Device companies, trade organizations, community colleges in March, 2013 to develop skill set matrices in five functional areas. Each college has an industry employer partner. Also in Hub: College of the Canyons, CA; Moorpark College, CA; Southern California Biomedical Council, CA, Mount Wachusett Community College, MA; William Moor College of Technology, TN)

St. Petersburg

Salt Lake

June 2013 The NCBW/Forsyth Tech won its first National Science Foundation (NSF) grant, a three-year, \$490,568 Bioscience Industry Fellowship Project to improve the quality and relevance of community college bioscience