

PtP AGRISCIENCE/ BIOTECHNOLOGY CAREER PATHWAYS



Northeastern NC
Pathways to
Prosperity

Strategic Planning Committee Report
May 31, 2014

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Introduction


In the summer of 2012 four school districts in the northeast region of North Carolina (Beaufort, Halifax, Martin and Washington) volunteered to participate in a pilot project to develop career pathways that align with high growth business sectors using the Pathways to Prosperity (PtP) model developed through the partnership of the Harvard School of Education and Jobs for the Future.


In July of 2013 the three workforce development boards (Region Q, Turning Point and Northeast) that serve the northeast region agreed to be the lead intermediaries for the regional PtP work.


In September of 2013 a regional PtP Leadership Council (LC) was established. The LC selected health care as the first business sector to develop pathways. From September through October, employers and key stakeholders from each of the pilot units collaborated in organizing and conducting a series of activities and strategic planning meetings that resulted in the development of three Health Care Career Pathways. These pathways were officially approved by the PtP Leadership Council in January 2014.


In January 2014 the LC approved the recommendation to authorize a strategic planning committee to commence work on developing pathways that address the agriscience/biotechnology business sector. In March and April of 2014 a diverse group of stakeholders representing business/industry, workforce development boards, economic developers, teachers, counselors, career development coordinators, curriculum specialists, and community college faculty contributed to the development of the pathways, implementation strategies and recommendations that are detailed in this publication. It is the hope of the strategic planning committee that this work will enhance the preparation of students for successful careers in agriscience and biotechnology.


Gratitude is extended to everyone who participated in this project with special thanks to the CTE Program Directors from Currituck, Gates, Pitt, Northampton and Weldon City for their leadership in chairing the strategic planning subcommittees.

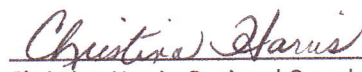

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NC Northeast PtP Leadership Council



Angie Jenkins
Northampton County CTE



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Greg Smith <i>NC BioNetwork</i>	Bruce Boller <i>Bertie Early College</i>	Marchelle Homer <i>NC Dept. Public Instruction</i>
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Julie Gurganus <i>NE Reg. School Biotech/Agriscience</i>	Ann Harrell <i>Gates County Schools</i>	Rob Boyce <i>NC NE Region PtP Facilitator</i>



Student Name _____
Student ID Number _____

Agriculture, Food and Natural Resources: Agribusiness Systems

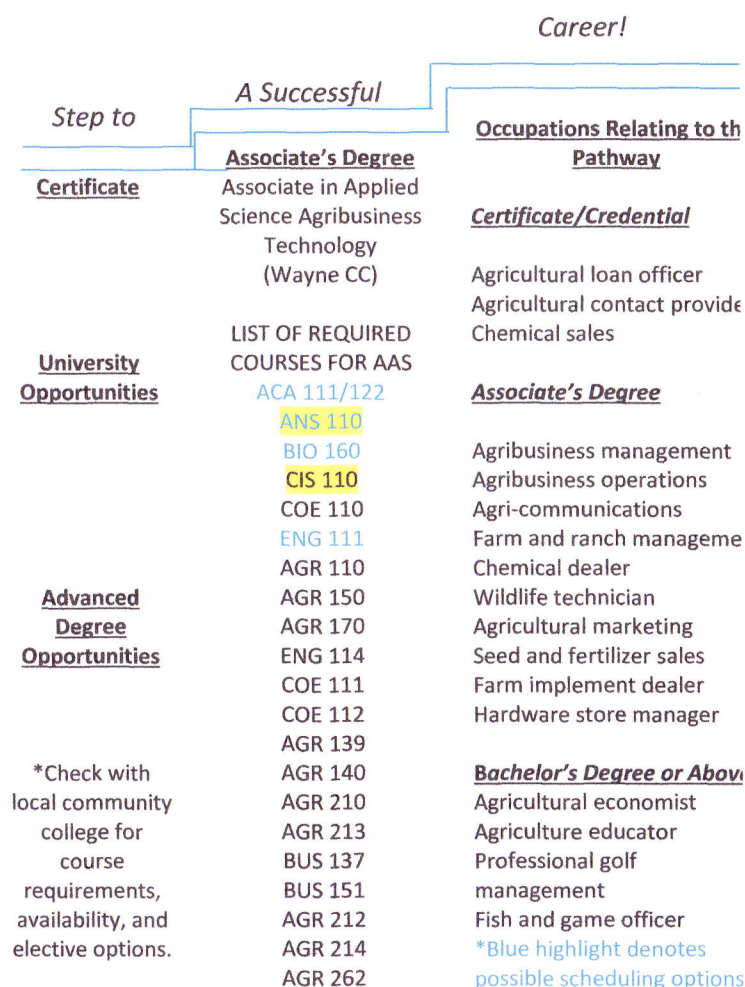
Career Pathway Plan of Study for ▶ Students ▶ Parents ▶ Counselors ▶ Teachers/Faculty

This Career Pathway Plan of Study can serve as a guide, along with other career planning materials, as students continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each student's educational and career goals. **Students are strongly encouraged to participate in honors, advanced placement, or Career & College Promise courses.**

		8	9	10	11	12
ACADEMIC	ENGLISH/ LANGUAGE ARTS		English I	English II	English III	English 111 and 112 or Engl. IV
	MATH		Math I	Math II	Math III	Math IV or MAT 171 or MAT 143
	SCIENCE		An Earth Science course	Biology	Chemistry or Physical Science	BIO 160
	SOCIAL STUDIES		World History	Civics	American History I/II	ACA 111 or ACA 122
	HEALTH/PE		Health/PE			
TECHNICAL	CAREER & TECHNICAL EDUCATION OPTIONS	Exploring Agricultural Science Exploring Biotechnology in Agriculture	Agriscience Applications MSITA Principles of Business and Finance	Agribusiness Management I/ Project Management I/ Traditional ag sequence I	Agribusiness Management II/ Project Management II/traditional ag sequence II	Project Management III Advanced Studies Entrepreneurship I
COLLEGE	CAREER & COLLEGE PROMISE					
CAREER DEVELOPMENT	CAREER COUNSELING AND ADVISING	Career Counseling Plans 8 – 14+ →				
		ACT EXPLORE	NC Career Cluster Guide Activities	ACT PLAN	ACT College Readiness Assessment	ACT Workplace Readiness Assessment (WorkKeys)
WORK-BASED	WORK-BASED LEARNING OPPORTUNITIES		Classroom Speaker Field Trip	Classroom Speaker Job Shadow	Career Day Field Trip to Local Industry	Internship (Academic or Cluster)
	CTSOs (Career Technical Student Org.)		Participate in Student FFA org.	Participate in Student FFA org.	Participate in Student FFA org.	Participate in Student FFA org.
CREDENTIALS	STACKABLE CREDENTIALS		MOS in Word/PP/Publisher Hunter Safety	NC Beef Quality Assurance and NC Port Quality Assurance		Career Readiness Credential (WorkKeys) EverFi

*Colored boxes present possible articulation opportunities in courses.

Articulation can be earned by scoring a 93 or better on the final exam with a minimum of a B as the final grade. Two foreign languages are needed to transfer to a 4 year college.



Agriculture, Food and Natural Resources: Agricultural Research and Biotechnology Pathway

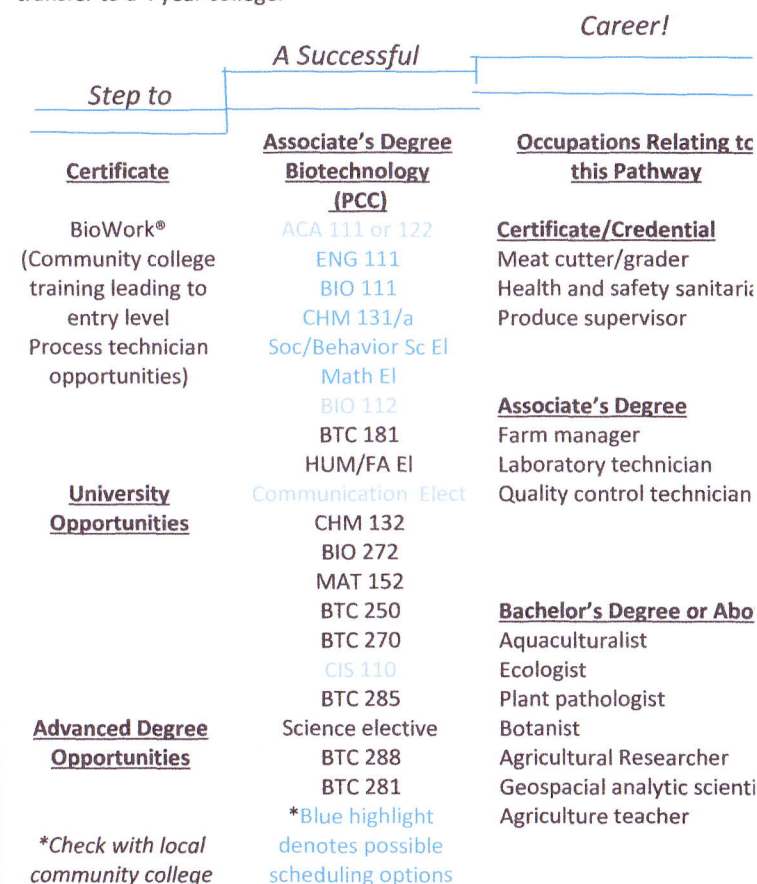
Career Pathway Plan of Study for ▶ Students ▶ Parents ▶ Counselors ▶ Teachers/Faculty

This Career Pathway Plan of Study can serve as a guide, along with other career planning materials, as students continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each student's educational and career goals. Students are strongly encouraged to participate in honors, advanced placement, or Career & College Promise courses. Highly recommended courses include Advanced/AP Biology and Chemistry.

		8	9	10	11	12
ACADEMIC	ENGLISH/ LANGUAGE ARTS		English I	English II	English III	English 111 and 112
	MATH		Math I	Math II	Math III	Math Elect or MAT 171 Or MAT 143
	SCIENCE		An Earth Science course Agricultural Ecology (NCSSM)	Biology Agricultural Genetics (NCSSM)	Chemistry Agricultural Biotechnology (NCSSM)	BIO 111/112 Agricultural Solutions (NCSSM)
	SOCIAL STUDIES		World History	Civics	American History I/II	Soc/Behavioral Science Elect
	HEALTH/PE		Health/PE			
TECHNICAL	CAREER & TECHNICAL EDUCATION OPTIONS	Exploring Agriculture Science Exploring Biotechnology in Agriculture	Agriscience Applications	Environmental and Natural Resources I (SAE) Traditional Ag Sequence I	Environmental and Natural Resources II/ (SAE) Biotechnology and Agriscience Research I / Traditional Ag Sequence II	(SAE) Biotechnology and Agriscience Research II
COLLEGE	CAREER & COLLEGE PROMISE				CIS 110 ACA 111 or 122	CHM 131/A
CAREER DEVELOPMENT	CAREER COUNSELING AND ADVISING	Career Counseling Plans 8 – 14+ →				
		ACT EXPLORE	NC Career Cluster Guide Activities	ACT PLAN	ACT College Readiness Assessment	ACT Workplace Readiness Assessment (WorkKeys)
WORK-BASED	WORK-BASED LEARNING OPPORTUNITIES		Classroom Speaker Field Trip	Classroom Speaker Job Shadow	Career Day Field Trip to Local Industry	Internship (Academic or Cluster)
	CTSOs (Career Technical Student Org.)		Participate in Student FFA org.	Participate in Student FFA org.	Participate in Student FFA org.	Participate in Student FFA org./Envirothon
CREDENTIALS	STACKABLE CREDENTIALS			Local credential options based on CTE courses	Local credential options based on CTE courses/Hunter Safety	Career Readiness Credential (WorkKeys)

*Colored boxes present possible articulation opportunities in courses.

Articulation can be earned by scoring a 93 or better on the final exam with a minimum of a B as the final grade. Two foreign languages are needed to transfer to a 4 year college.



*Check with local community college for course requirements, availability, and elective options.

See www.ohlone.edu/institute/biotech/career.html for career educational requirements

NC Northeast Agriscience/Biotechnology Careers Pathways

Implementation Strategies Endorsed by

The Northeast PtP Agriscience/Biotechnology Careers Pathways

Strategic Planning Committee (SPC)

Strategy	Implementation Leader(s)
Skill Development	
1. Each LEA that has a CTE agriculture program will implement one or more of the Agriscience/Biotechnology pathways developed by the NC Northeast PtP Strategic Planning Committee (SPC) (by September 1, 2015)	CTE Directors
2. The northeast region will partner with BioNetwork to gain state approval for a BioWork credential applicable to high school students	Regional CTE Coordinator and BioWork curriculum specialists from BioNetwork (Greg Smith)
3. Each Agriscience/Biotechnology pathway will be reviewed and updated on an annual basis	Regional CTE Coordinator, Chairperson of NC Northeast PtP Leadership Council and recruited industry leaders
4. The SPC endorsed metrics will be collected, reviewed annually and shared with the NC Northeast PtP Leadership Council to determine implementation progress – See Appendix E - Pathways to Prosperity Progress Measures	Regional CTE Coordinator and CTE Directors
Employer Engagement	
1. The northeast region agriscience and biotechnology employers and resource providers, under the direction of the PtP Leadership Council, will host an annual regional Agriscience/Biotechnology Fair that focuses on career opportunities as well as the academic and soft skills needed for career success in agriscience and biotechnology (by April 30, 2015)	Regional CTE Coordinator; Chairperson of the PtP Leadership Council; and employer, community college, resource organization and LEA representatives recruited from the Agriscience/Biotechnology Strategic Planning Committee
2. Each LEA will have at least one active CTE employer engagement committee that includes agriscience/biotechnology employers to support the implementation of the Agriscience/ Biotechnology Pathways strategies (up and running by October 1, 2014)	CTE Directors, Ondrea Austin, NC New Schools
3. In an effort to define <i>essential</i> employment “soft skills” and <i>target</i> instruction that can be addressed <i>jointly</i> by school personnel and employers, a survey developed by the Agriscience/Biotechnology Strategic Planning Committee (See Appendix D – Critical Soft Skills Survey) will be distributed to specifically identified employers in the northeast (by December 1, 2014)	Committee established by the Chairperson of the NC Northeast PtP Leadership Council
Career Development	
1. On an annual basis each LEA will develop a seamless middle school/high school comprehensive career development plan that systematically addresses the career counseling essential standards – See Appendix A, Career Guidance and Counseling Worksheets and Sample Career Planning Tool	CTE Directors, Career Development Coordinators, Bruce Boller
2. The region will develop a website to provide access to career guidance resources to teachers, parents, and students with links to NCWORKS.GOV (by October 1, 2014)	CTE Regional Coordinator
3. Career guidance professional development for counselors and teachers will be offered in conjunction with local employers, e.g. PD could take the form of teacher externships, learning to use virtual resources, etc. (by December 1, 2014)	Workforce Development Directors working with Regional CTE Coordinator, Ondrea Austin, Bruce Boller

**NC Northeast Agriscience/Biotechnology Pathways
Strategic Planning Committee
Endorsed Recommendations**

Skill Development

1. In addition to the two endorsed Health Career Pathway templates that are the focus of this work, see the four implementation strategies listed at the beginning of this report.
2. Recommend combining career fair efforts to have one regional career fair that covers all of the regionally developed career pathways.
3. The agriculture program includes many career development events (CDEs) that support the pathways. Students pursuing agriscience/biotechnology pathways should be supported and encouraged to participate in all CDEs related to their career pathway.
4. Further investigation to be made in investigating ways to organize shadowing, internships and other work-based learning to maximize access and meet needs.
5. Local employers should be included in CDEs.
6. LEAs should consider organizing business/employer recruitment more effectively by developing/implementing surveys (**see Appendix B – Employer Engagement Recruitment Survey Instrument**) and developing data bases focused on how businesses/employers would like to support and participate in career education. Consideration should be given to how chambers of commerce and other employer groups can be used more effectively in facilitating connections.
7. Investigate incentives for business participation in work-based learning activities.
8. Recommend continued state financial support for career development coordination and facilitator work.
9. For annual pathway reviews, non CTE district personnel should be included in reviewing, editing and developing pathway implementation strategies.

Career Development

In addition to the three implementation strategies listed at the beginning of the report, following are strategic planning committee endorsed career development recommendations:

1. Additional middle school teachers and councilors need to be recruited to provide input on the career development plans with a focus on building stronger middle school career guidance programs.
2. There are numerous resources available from groups and organizations such as NC Biotech and the NC Association for Biomedical Research to inform career decision making (**See Appendix F - Resources**).

Employer Engagement

In addition to the three implementation strategies listed at the beginning of this report, following are strategic planning committee endorsed employer engagement recommendations:

1. Stress with the students the multiple career opportunities within each of the pathways.
2. Stress to students and teachers that the Career Readiness Certificate is heavily recognized by business and industry.
3. Use every opportunity to engage employers in all facets of the educational process.
4. Schools and employers can effectively team together in the following ways to improve soft skills –

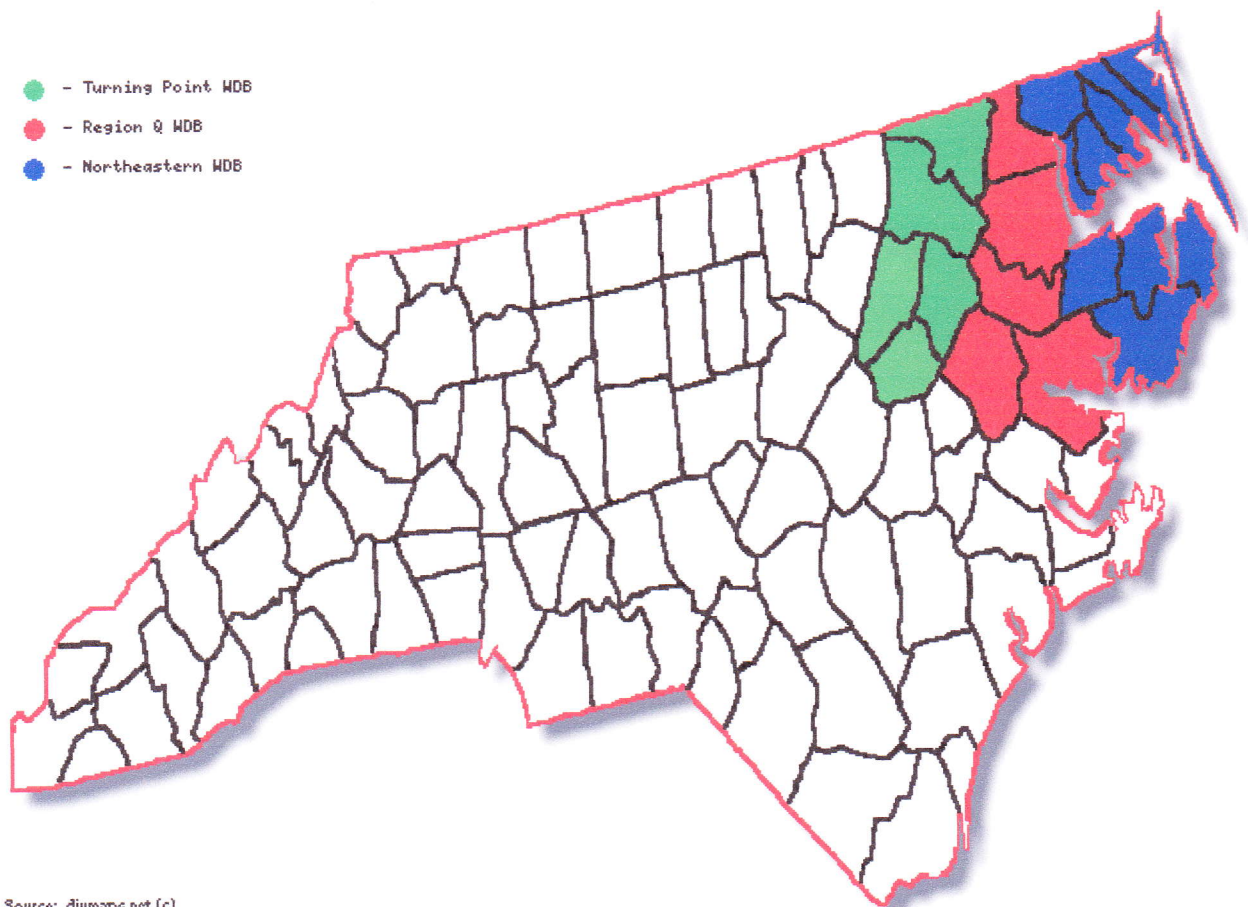
Schools	Business/Industry
Incorporate professional etiquette modules within pathway courses	Cooperate with schools in providing school based and field based cooperation in working with students
Model classroom practices that mirror the workplace. Reinforce the classroom as a workplace and the connection between consequences/rewards and workplace behavior	Team with schools in identifying and reinforcing critical employability skills that can be jointly emphasized in school and in the workplace
Invite industry representatives into the classroom to serve as mentors	Participate in co-teaching activities to reinforce soft skills in the work place
	Stronger employer involvement in CTE advisory councils

5. Schools and employers can effectively team together in the follows ways to improve and increase the work based learning opportunities for students and teachers --

Schools	Business/Industry
Bring hands-on activities to the students to provide a feel of real world work-based experiences	Co-teaching – Industry and business representatives co-teaching with an educator to show the application of classroom learning to job skills and tasks in the workplace. The establishment of a coordinator is necessary to ensure a smooth successful internship process
Establish a structured process of work-based learning experiences to ensure year-to-year sustainability, i.e. clear guidelines that define roles, rules and responsibilities (See Appendix C – Continuum of Work Based Learning Components With Agriculture/Biotechnology Pathways Focus)	Internships – CTE supervised internships providing students with specific training in a career field of interest. Business/industry representative supervises the intern to ensure skill development. Students required to produce deliverable at the end of the internship such as reports, products, presentations, etc. Integral to this process is an outside source that can assist with getting employers engaged with providing students with these types of opportunities

The Northeast PtP Leadership Council – A Partnership between Northeast Career and Technical Education and the Local Workforce Development Boards

As indicated on the map below, there are three workforce development boards (WDBs) that serve the Northeast -- Turning Point, Region Q, and Northeastern. The Career and Technical Education (CTE) Region that serves the school districts in the Northeast includes all of the counties in the three northeastern workforce development board regions except Nash and Wilson. The WDBs and the school districts that make up the Northeast CTE Region have created a partnership to develop career pathways using the Pathways to Prosperity model. The three WDB directors have agreed to serve as lead intermediaries for the PtP efforts. One of the first efforts of the WDBs in their intermediary function was to establish the Northeast PtP Leadership Council. **The roles and responsibilities of the Leadership Council are outlined in the pages that follow.**



NC Northeast Pathways to Prosperity Leadership Council (Ne-PtP-LC)

Purpose -- The purpose of the NC Ne-PtP-LC is to align with the North Carolina Pathway to Prosperity Leadership Council in developing “a business-led education innovation effort designed to build a seamless career pathway system that meets the workforce development needs of regional economies across the state. It works to combine rigorous academics with powerful technical education.”

The PtP work focuses on five areas

1. Career information and advising systems
2. Employer engagement
3. Intermediaries
4. State and local policies
5. Teacher effectiveness

The desired outcomes for the PtP work include:

- A clear system (pathway) for students from school to career
- More closely aligned secondary school innovation with readiness for careers and college
- Deepened ties between public schools, community college and business/industry

Intermediaries – The leadership and lead intermediary function for the NC Ne-PtP-LC is provided by the three Workforce Development Boards (WDBs) that serve the Northeast (Region Q, Northeast, and Turning Point). As intermediaries the three workforce development boards serve as conveners, brokers, and technical assistance providers to schools, community colleges and employers engaged in building and sustaining pathways. Serving as intermediaries, the WDBs recruit business, nonprofit and public employers and ensure that participating leaders understand and support the vision.

The WDB Directors appoint one WDB Director to serve as the lead coordinator of the NC Ne-PtP-LC.

NC Ne-PtP-LC Membership -- Council members are recruited from each of the three workforce development board service areas and will include:

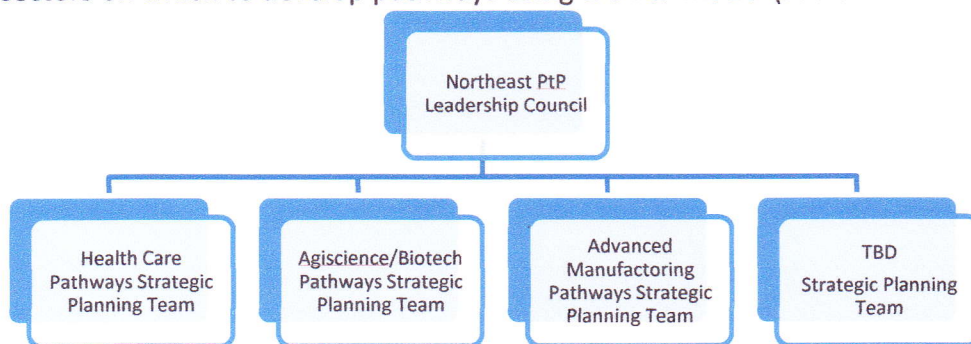
Workforce Development Board Directors and key staff
Workforce Development Board members
Key employers
Chamber of Commerce representatives
Northeast Commission President and key staff
CTE Directors
CTE Regional Coordinator
Community College Presidents and key staff
High school/community college counselors/career development coordinators
CTE teachers

PtP Pilot Counties – The counties of Beaufort, Martin, Halifax and Washington were selected to pilot the PtP model in the northeast region. Once the pilot work was completed, each of the twenty school districts that make up the Northeast Career and Technical Education Region agreed to form a partnership to develop/enhance business sector pathways that impact their counties.

Organization – The NC Ne-PtP-LC council oversees the development of pathways identified as focus business sectors based on current, emerging and predicted future employment opportunities. Key leadership groups identified Health Care and Agriscience/Biotechnology as the two initial priority business sectors to focus pathway development. Once pathways are developed, the Council holds periodic meetings (once or twice per year) to approve pathways, assess implementation and develop strategies to strengthen and enhance:

- Employer engagement;
- Career and College Promise opportunities;
- Career guidance and counseling strategies;
- CTE course/concentration sequences; and
- Teacher development.

Additionally, the council will use market data research to identify two other business sectors on which to develop pathways using the PtP model (see chart below).



Pathway Development – The publication, *Developing High Quality CTE Programs Through Business Engagement: Facilitators Guide*, developed by the NC Department of Public Instruction, is used by the Council to structure the pathway development work. The Council will modify the guidelines as needed to meet local needs.

The Council will oversee the selection of key stakeholders (i.e. focus business sector employers, workforce development board staff and members, community college representatives, local CTE directors, regional CTE coordinator, school system administrators/educators/counselors, representatives from chamber of commerce, Northeast Commission, and local government, etc.) in forming pathway strategic planning committees that address the five PtP levers in developing the focused business sector career pathways.

NC Northeast Pathways to Prosperity Leadership Council

Lisa Lassiter
Vidant

Kim Toler
Potash Corp. Aurora

Samuel Tynch
Avoca

Danelle Barco
Camden County Ag Extension

Joe Landino
Blackland Farm, Retired

Walter Fuldner
Carver Machine Works

Tracie Asby
NE Regional School of Biotech/Agscience

Brian Bush
Martin Community College

Catherine Glover
*Washington-Beaufort Chamber
of Commerce*

Joshua Singleton
Beaufort County Schools

Tara Parker
Pitt Health Science Academy

Walter Dorsey
Region Q Workforce Dev. Board

Lee O'Neal
Washington County Schools

Patrick Glace
Washington County Schools

Becky Edwards
Martin General Hospital

Nettie Evans
Vidant Foundation for Nursing Foundation

Tim Barrett
Couer Medical

Hal Burns
Jimbo's Jumbos

Josie Bowman
East Carolina University

Penny Coltrain
Vidant Health – Beaufort

Ondrea Austin
NC New Schools

Carisa L. Rudd
Turning Point Workforce Dev. Board

Christy Harris
Department of Public Instruction

Kathleen Sitzman
East Carolina University

Stacey Gerard
Beaufort County Schools

Wayne Rollins
Region Q Workforce Dev. Board

Natalie Rountree
Northeast Workforce Dev. Board

Bob Heuts
Beaufort County Economic Development

Pamela Chamblee
Halifax County Schools

Stacy Leggett
Martin County Schools

David Whitmer
Northeast Workforce Dev. Board

Bill Cooper
NC BioNetwork

Buffy Everett
NE Regional School of Biotech/Agscience

Julie Guganus
NE Regional School of Biotech/Agscience

Michelle Waters
College of the Albemarle

Renee Dowdy
Currituck County Schools

Steve Biggs
Bertie Economic Development

Kirk Divine
Northeast Workforce Development Board

Tammi Ward
Gates County Schools

Michael Williams
Turning Point Workforce Dev. Board

Alton Wadford
Pitt Community College

Beth Ann Trueblood
Pitt County Schools

Brittany Mishler
Camden County Schools

Christina Weeks
Pitt Community College

Mark Phillips
NC Biotech Center

Missy Swain
Currituck County Schools

Shannon Stanton
Martin Community College

Tim Ivey
Northeast Regional Economic Development

Steve Smith
Beaufort Community College

Appendices

Appendix A
Career Development Strategies Worksheets and Planning Tool

Appendix B
Employer Engagement Recruitment Survey Instrument

Appendix C
Continuum of Key Work Based Learning Components
With Agriculture/Biotechnology Pathways Focus

Appendix D
Critical Soft Skills Survey

Appendix E
PtP Progress Measures

Appendix F
Resources

Middle School Career Development Plan

School _____ School Year _____ Date Plan Submitted _____ Date Activity Documentation Submitted _____

Focus		Planned Activities	Activities Completed			
	Gr.	Activity	Gr.	Activities completed by at least 75% of the students at a grade level	No. Participated	Date Completed
Self-Awareness						
				Activities completed by less than 75% of grade level		
Career Awareness, Exploration, and Goal Setting						
				Activities completed by less than 75% of grade level		
High School Course Selection and Post-Secondary Planning						
				Activities completed by less than 75% of grade level		
Personal and Employability Skills Development						
				Activities completed by less than 75% of grade level		

Counselor signature Plan - _____ Date _____

Counselor signature Documentation - _____ Date _____

High School Career Development Plan

Appendix A

School _____ School Year _____ Date Plan Submitted _____ Date Activity Documentation Submitted _____

Focus		Planned Activities	Activities Completed			
	Gr.	Activity	Gr.	Activities completed by at least 75% of the students at a grade level	No. Participated	Date Completed
Self-Awareness						
				Activities completed by less than 75% of grade level		
Career Awareness, Exploration, and Goal Setting						
				Activities completed by less than 75% of grade level		
High School Course Selection and Post-Secondary Planning						
				Activities completed by less than 75% of grade level		
Personal and Employability Skills Development						
				Activities completed by less than 75% of grade level		

Counselor signature Plan - _____ Date _____

Counselor signature Documentation - _____ Date _____

Career Guidance and Counseling Strategies Worksheet (Middle School)

Self-Awareness

1. Investigate self-awareness activities in "Making Tracks" career magazine. (6-8)
2. Conduct role playing scenarios (e.g. personality type, values, conflict management/bullying) (6-8)
3. Use the "Skills to Pay the Bills" lessons (6 lessons, perhaps two lessons per grade level) (6-8)
4. Use the "Who Am I" lessons from the middle school career development course (8)
5. Have personal conversations with students to link academic and aptitude strengths and challenges with future career interests/goals (8)
6. Print student interests responses in ACT EXPLORE and go to CFNC to research learning styles. (8)
7. Administer a learning style inventory (8)

Career Awareness/Exploration/Goal Setting

1. Hold a career fair (6-8)
2. Encourage membership in CTSO's (6-8)
3. Set up web based accounts (i.e. CFNC) (7-8)
4. Provide career based field trips/virtual field trips (7-8)
5. Invite business/industry guest speakers (7-8)
6. Invite post-secondary education guest speakers (7-8)
7. Discuss the results of the ACT EXPLORE Assessment(8)
8. Initiate individual career development plans (8)
9. Initiate High School CFNC Portfolio (cluster/course selection) (8)
10. Conduct career counseling lessons (e.g. goal setting, importance of staying in school, links between course selection and career interests, etc.) (8)
11. Explore careers through websites like Bigfuture and Career Cruising—F4k (8)
12. Participate in shadowing experiences like Groundhog Shadowing or go to work for a day (8)

Career Guidance and Counseling Strategies Worksheet (Middle School)

High School Course Selection/Post-Secondary Planning

1. Link activities in the **self-awareness** and **exploration** sections above to H.S. and post-secondary planning (CFNC, job fairs/career expos, EXPLORE, etc.) **(6-8)**
2. High school tours **(8)**
3. Initiate H.S. course selection work with Career Development Plan **(8)**
4. Use the ACT EXPLORE assessment report to guide H.S. course selection **(8)**
5. Team Career Development Coordinators with counselors in conducting the H.S. course registration process **(8)**
6. Assist in planning and encourage participation in high school orientations, parent nights, CTE displays, etc.) **(8)**

Personal/Employability Skills Development

1. Conduct ethics sessions (i.e. desired character traits, team building, problem solving, etc.) using role playing, simulations and guest speakers **(6-8)**
2. Develop assessment rubrics to provide students feedback on "soft" skills related to assigned projects, presentations, mock interviews and work-based learning experiences (i.e. speaking, team work, pride in outcome, being prepared, punctuality, etc.) **(7-8)**
3. Prepare students for work based learning explorations (shadowing, lunch/learn, field trips, guest speakers) through role scenarios. **(7-8)**

Career Guidance and Counseling Strategies Worksheet (High School)

Self-Awareness

1. Use personality assessments and inventories to explore self-awareness (9-10)
2. Use the interest inventory from the ACT PLAN assessment (10)
3. Use the interest inventory from CFNC (9-12)
4. Conduct role playing scenarios (e.g. personality type, values, conflict management/bullying, team building and reality check activities) (9-12)
5. Use class meetings (where available) or other counseling sessions to emphasize the link between academic and aptitude strengths, and challenges with future career interests/goals (e.g. GPA) (9-12)
6. Provide CTE specific training (clusters, poverty, curriculum, concentrator) for counselors and CDCs (9-12)
7. Conduct a session with students to explore self-awareness using the results of the ASVAB (11-12)

Career Awareness/Exploration/ Goal Setting

1. Visit all English classes (9-12) or other subjects in which the entire grade level can be exposed, and work with students on the following: update CFNC accounts; update career development plans; LSI update; take a career interest inventory; portfolio updates (e.g. awards, test scores, community service); and match "Career to College to Degrees" to Job Outlook (9-12)
2. Organize cluster based career fairs (9-12)
3. Involve students in industry internships as well as community volunteering and service projects (9-12)
4. Organize virtual/face-to-face college tours (2yr/4yr) (9-12)
5. Coordinate with local community college for college fair and college reps in classrooms (9-12)
6. Establish a career awareness Speakers Bureau (9-12)
7. Utilize O*Net (9-12)
8. Partner with Community College in sponsoring a learning about careers event for students and parents (9-12)
9. Encourage membership in CTSO's (9-12)
10. Provide virtual and face-to-face job shadowing opportunities (10-12)
11. Begin college application process (11-12)
12. Host financial aid workshops (11-12)

Career Guidance and Counseling Strategies Worksheet (High School)

High School Course Selection/Post-Secondary Planning

1. Use the "A Look at Me" lessons in the Career Management Course Bureau (9-10)
2. Develop and utilize career cluster commitment letters and contracts (9-10)
3. Use ACT PLAN assessments and questionnaires in the planning process (10)
4. Student-parent meetings to discuss the link between course selection, assessment results, college articulation, post-secondary planning and career interests. (9-12)
5. CDC and counselors work as a team to establish one-to-one guidance relationships with students-review and discuss post secondary opportunities, ASVAB, PSAT, SAT, ASSET, Work Keys, ACT (9-12)
6. Use related tools in CFNC and F4k (Career Cruising) (9-12)
7. Sponsor Lunch and Learn Lab and/or Power Lunches—focus on "soft" and "technical" skills (9-12)
8. Organize Career Fairs, Curriculum Fairs, College Days and College Weeks (involving all teachers/ staff) (9-12)
9. Expand certification programs (9-12)
10. Prepare a "College Articulation" lesson to be taught by all CTE teachers the first week of school (9-12)
11. Hold encouragement rallies (guest speakers, pep rallies) (9-12)
12. Develop a mentoring program (9-12)
13. Plan multilingual awareness advertising campaign with supportive media strategies (9-12)
14. Develop strategies that encourage and recognize credentials (9-12)
15. Institute an upper class mentor program (11-12)
16. Expand job shadowing and internship programs (11-12)
17. Assist students with registering CRC credential (12)

(See next page for High School
Personal/Employability Skills
Development Strategies)

Career Guidance and Counseling Strategies Worksheet (High School)

Personal/Employability Skills Development

1. Develop assessment rubrics to provide students feedback on "soft" skills related to assigned projects, presentations, mock interviews and work-based learning experiences (i.e. speaking, team work, pride in outcome, being prepared, punctuality, etc.) (9-12)
2. Encourage membership in CTSO's (9-12)
3. Organize a school-wide "Work Day" where students come in professional dress, learn about careers, focus on soft skills, resume writing, job applications and interviewing skills. (9-12)
4. Provide mini lessons on workplace responsibility, e.g. on time, bring prepared, pride in outcome, etc. (9-12)
5. Organize a full range of work based learning experiences providing specific instruction and feedback on personal and employability skills, e.g. guest speakers, lunch/learn sessions, field trips, job shadows, internships, apprenticeships, entrepreneurial workshops. (9-12)
6. Utilize KeyTrain/Workkeys soft skills assessments, and NC-Net Employability Skills Resource Tool Kit (free) (9-12)
7. Provide workshops/sessions on job readiness and "soft" skills, e.g. resume writing, cover letters, mock job interviews, workplace ethics scenarios. (11-12)
8. Define and target emphasis on specific locally identified high need soft skills, e.g. workplace responsibility, teamwork public speaking, etc. (11-12)
9. Require students to make professional presentations, e.g. Graduation Projects (11-12)
10. Utilize employability skills instructional materials from NC REAK 9. Involve students in industry internships as well as community volunteering and service projects. (11-12)

Career and Technical Education Employer Engagement Recruitment Survey

First Name: _____
 Last Name: _____
 Title: _____
 Email: _____
 Phone: _____

Industry: _____
 Company: _____
 Address: _____
 City: _____
 State/Zip: _____

Contact Preference:
 ___ Phone
 ___ Email
 ___ No Preference

Check all the ways that you are willing to help

<u>Share Interests:</u> <ul style="list-style-type: none"> <input type="checkbox"/> Speak in classroom about your field <input type="checkbox"/> Chaperone field trip to college/worksite <input type="checkbox"/> Mock interviews/resume review at school <input type="checkbox"/> Lead workshops <input type="checkbox"/> Sponsor a campus student organization <input type="checkbox"/> Host information session with students <input type="checkbox"/> Host job shadow days for students <input type="checkbox"/> Host tours of workplace for groups 	<u>Mentor Interests:</u> <ul style="list-style-type: none"> <input type="checkbox"/> Work with students on industry standards <input type="checkbox"/> Offer summer externships for pathway teachers <input type="checkbox"/> Host a field trip at your worksite <input type="checkbox"/> Provide unpaid internships for students <input type="checkbox"/> Provide paid internships for students
<u>Advice Interests:</u> <ul style="list-style-type: none"> <input type="checkbox"/> Work on CTE advisory board/committee <input type="checkbox"/> Advise teachers about curriculum development <input type="checkbox"/> Serve as an industry expert for projects <input type="checkbox"/> Engage students in industry <input type="checkbox"/> Share your industry contacts 	<u>Contribution Interests:</u> <ul style="list-style-type: none"> <input type="checkbox"/> Donate equipment <input type="checkbox"/> Donate literature <input type="checkbox"/> Offer scholarships for students <input type="checkbox"/> Other
	<u>Other Interests:</u> _____

Comments:

Continuum of Key Work Based Learning Components With Agriscience/Biotechnology Pathways Focus

X denotes the suggested specified grade level to begin the work based experience

Grade Levels	→ Middle School	9 th	10 th	11 th	12 th
Focus	→ Explore	Expose	Enhance	Experience	Empower & Employ
Key Work Based Learning Components					
Job Shadows	X				
Guest Speakers	X				
Co-Teaching	X				
Career Fairs/Expos	X				
Career Focused Field Trips		X			
Service Learning Projects		X			
Work Based Learning Projects				X	
Career based graduation projects				X	
Capstone Class Projects				X	
Internships				X	

Entry Level Critical Employability Soft Skills as Defined by Northeast NC Employers

Employer Survey -- What business sector do you represent? _____ Date: _____

Examples of jobs you are considering as you respond to this survey _____

Soft Skills	How important? Please circle -- 0= not important; 5 = critical	Suggested wording that clarifies or strengthens the description of the skill	Rank the top 5 from all skills listed in terms of deficit between skill level needed and skill level of typical entry level employee
Basic Career Readiness Cognitive Skills – Applied Mathematics, Locating information and Reading for information as measured by the Career Readiness Certificate (CRC)			
Platinum Level CRC	0 1 2 3 4 5		
Gold Level CRC	0 1 2 3 4 5		
Silver Level CRC	0 1 2 3 4 5		
Bronze Level CRC	0 1 2 3 4 5		
Other <i>Basic Cognitive</i> skills related to your specific business sector	0 1 2 3 4 5		
	0 1 2 3 4 5		
	0 1 2 3 4 5		

Communication Skills			
Effective telephone communication skills	0 1 2 3 4 5		
Ability to explain something to a person with a more limited understanding of the topic	0 1 2 3 4 5		
Effective skills to make presentations to a group	0 1 2 3 4 5		
A good listener	0 1 2 3 4 5		
Effective in writing clear messages and explanations	0 1 2 3 4 5		
Can effectively decipher and respond appropriately to emails and other electronic communication tools	0 1 2 3 4 5		
Uses effective communication skills in resolving conflicts	0 1 2 3 4 5		
Uses courteous and sensitive language in dealing with customer concerns and building positive customer relations	0 1 2 3 4 5		
Other <i>Communication</i> skills related to your specific business sector	0 1 2 3 4 5		

Personal Skills			
Neat and well organized	0 1 2 3 4 5		
Maintains composure and rationality in situations of actual or perceived stress	0 1 2 3 4 5		
Always honest and work is characterized by integrity	0 1 2 3 4 5		
Flexible – adapts effectively to changing situations	0 1 2 3 4 5		
Other <i>Personal</i> skills related to your specific business sector	0 1 2 3 4 5		
	0 1 2 3 4 5		

Work Attitude			
Always conscientious about completing work on time	0 1 2 3 4 5		
Makes appropriate use of company assets	0 1 2 3 4 5		
Consistently thinks and plans carefully before acting or speaking	0 1 2 3 4 5		
Consistently has high aspiration levels and works hard to achieve goals	0 1 2 3 4 5		
Optimism—tendency toward having a positive outlook and confidence in successful outcomes	0 1 2 3 4 5		
Tendency to be imaginative and to think “outside the box”	0 1 2 3 4 5		
Discipline—tendency to be responsible, dependable, and follow through with tasks without becoming distracted or bored	0 1 2 3 4 5		
Attendance—Understands work expectations for attendance and adheres to them. Notifies supervisor in advance in case of absence	0 1 2 3 4 5		
Punctuality—Understands work expectations for punctuality. Arriving on time for work, taking and returning from breaks on time, and calling supervisor prior to being late	0 1 2 3 4 5		
Initiative – takes initiative in problem solving and uses critical thinking skills in carrying out assignments in a timely manner	0 1 2 3 4 5		
Consistently follows directions the first time given	0 1 2 3 4 5		
Takes pride in outcome and demonstrates loyalty to the business	0 1 2 3 4 5		
Other <i>Work Attitude</i> skills related to your specific business sector	0 1 2 3 4 5		

Interpersonal Skills			
Teamwork – Works productively with supervisors, colleagues and teams	0 1 2 3 4 5		
Refrains from engaging in inappropriate interpersonal behaviors such as aggression and hostility	0 1 2 3 4 5		
Tendency to be forgiving and to believe that others are well intentioned	0 1 2 3 4 5		
Accepting of differences. Respects diversity in race, gender and culture.	0 1 2 3 4 5		
Practices conflict resolution skills	0 1 2 3 4 5		
Other <i>Interpersonal</i> skills related to your specific business sector	0 1 2 3 4 5		
	0 1 2 3 4 5		
	0 1 2 3 4 5		

Healthy Lifestyle and Risk Behaviors			
Consistently follows safety rules and procedures	0 1 2 3 4 5		
Consistently alert to job risks	0 1 2 3 4 5		
Practices personal hygiene appropriate for position and duties	0 1 2 3 4 5		
Other <i>Healthy Lifestyle and Risk Behavior</i> skills related to your specific business sector	0 1 2 3 4 5		
	0 1 2 3 4 5		
	0 1 2 3 4 5		

Pathways to Prosperity Progress Measures

[illegible]

Credentialed		2012-2013 (Baseline)
Career Readiness Credential		
Total number of students in grade 12 that have achieved a CRC	Total	
	Bronze	
	Silver	
	Gold	
	Platinum	
Total CRCs earned by students in grade 12		
Total number of students in grades 9-11 that have achieved a CRC		
	Bronze	
	Silver	
	Gold	
	Platinum	
Total CRCs earned by students in grades 9-11		
Industry Credentials Achieved (list each credential on a separate line with the number achieved this school year)		Total
Total industry credentials earned		

Business Engagement		2012-2013 (Baseline)					
Program or Industry Advisory Group(s)		Health Focus	Ag/Biotech Focus	Multiple Program Focus	Total		
Total number of business advisory groups							
Total number of businesses involved							
Total number of meetings held							
Business Engagement in Guidance and Classroom Activities							
Enter total number of businesses engaged in first column and number of students in second column		No. Bus. Engaged Health Focus	No. Students Health Focus	No. Bus. Engaged Ag/Biotech Focus	No. Students Ag/Biotech Focus	Other Program Areas	No. Students
Career Fairs/Expos							
Career speakers							
Career project/contest judges or advisors							
STEM activities							
Other (please list)							
Total business engagements in guidance and classroom activities							
Work-based Learning Experiences							
Enter total businesses engaged in first column and number of students in second column		No. Bus. Engaged Health Focus	No. Students Health Focus	No. Bus. Engaged Ag/Biotech Focus	No. Students Ag/Biotech Focus	Other Program Areas	No. Students
Field Trips							
Job Shadows							
Clinical experiences tied to career pathway							
Co-op tied to career pathway							
Non-paid internship							
Paid internship							
Apprenticeship							
Other (please list on separate lines)							
Total work-based learning experiences							

Career Pathway Concentrators		2012-2013 (Baseline)
Number of Concentrators - A CTE concentrator is a student that takes at least four technical credits from among courses listed in one of 16 Career Clusters; at least one of the courses must be a second-level sequenced class. List each Career Cluster in which your school/system had concentrators on a separate line with the number of students who were concentrators.	Total	
Total number of concentrators		

North Carolina Career and College Promise		2012-2013 (Baseline)
Number of Career and College Promise (CCP) courses successfully completed - List each CCP course offered on a separate line with the number of students who successfully completed the course this school year.	Total	
Total number of Career and College Promise courses successfully completed		

Resources

1. NC Association for Biomedical Research (NCABR) www.ncbr.org

- **“Heal, Feed, Sustain” video** – an excellent short film for middle school students that looks at biotech careers. The film was shot on location at three major NC companies and the interviewers are middle school kids. Location – on home page to “K-12, then click on “Biotech Short Film” tab
- **“Mapping Your Future”** - This 92-page supplemental curriculum manual focuses on the wide range of career prospects offered by the fast-growing field of biomanufacturing. Location – click on “Curriculum Materials” tab.
- **Biotech Career Profiles** – click on the link to aboutbioscience.org for numerous biotech career profiles

2. NC Biotechnology Center www.ncbiotech.org

- **K-12 Lesson plans, biotech career information and a variety of publications related to biotechnology instruction and information.** Location – on home page click on “Workforce-Education”, then K-12