



Career and Technical Education Career Pathways

Presentation to
State Board of Community Colleges
November 17, 2016



Agenda

- Perkins team
- Perkins activities
- Review of Career Pathways
- Future activities
- Discussion



The Perkins Team

- Ashley Bowling – Admin Support
- Chris Droessler – CTE Coordinator
- Julia Hamilton- CTE Coordinator
- Tony Reggi - CTE Coordinator
- Bob Witchger – CTE Director



Perkins Mission

- Enhance Career and Technical Education (CTE) Programs of Study
- Support CTE at our 58 Colleges
- Provide the *Spice* and *Spark* through funding
- Emphasis
 - Strengthening CTE curriculum programs
 - Infusing technology
 - Fund faculty professional development
 - Encourage teaching All Aspects of Industry
 - Work-based learning



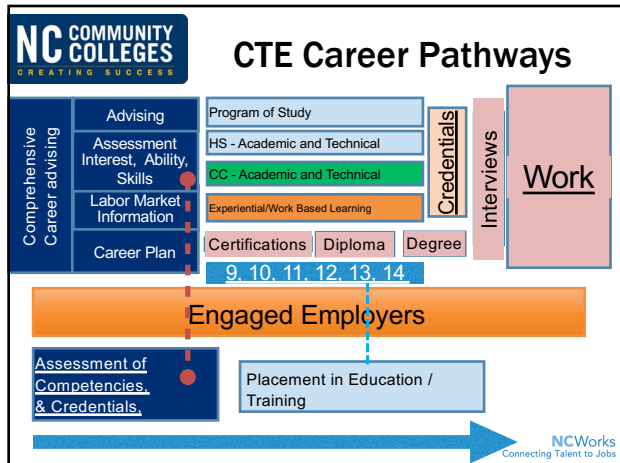
Perkins Support of NCCCS Strategic Plan

- Employer engagement
- Career awareness
- Work-based learning
- Career Pathways that connect students to jobs and careers



Grants to North Carolina Community Colleges

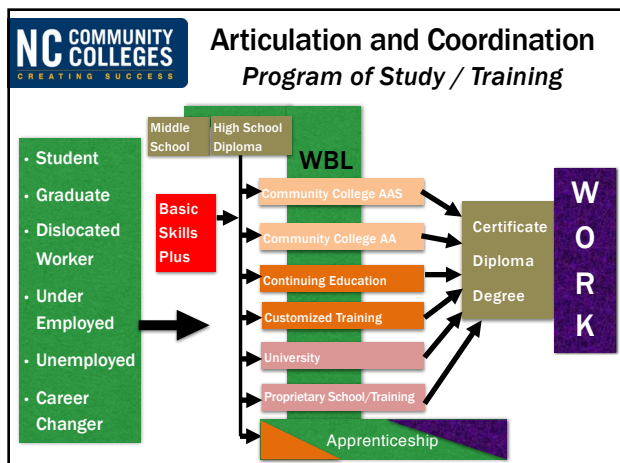
- Basic Grant to Colleges – 58 colleges
 - \$10 Million to support college CTE work
- Leadership Grants – To promote innovation
 - On-line staff development – Center for Occupational Research and Development (CORD)
 - Curriculum enhancement – Accounting and Finance Alignment Project, Competence-Based Education Project, ADN to BSN (Winston-Salem State) Articulation Project, Automotive – Supplemental Interactive Curriculum
 - **Career Pathways**



NC COMMUNITY COLLEGES
CREATING SUCCESS

Sample CTE Program of Study with CCP Pathway

Grade	Math	English	HS Graduation Requirements	Science	Electives (Articulation)	Credentials	
9	Math	English	Social Studies	Science	CTE Elective Excel and Access	Certification	
10	Math	English	Social Studies	Science	CTE Elective Excel and Access	Certification	
11	Math	English	Social Studies	Science	CTE Elective Excel and Access		
12	Math	English	Physical Science	World Language	CCP	Certificate	13cr Jobs \$
13	NOS - 110 CET - 110	NET - 225 NET - 226	ENG - 111 HUM - 115	NET - 125 NET - 126	SEC - 110	DIPLOMA	27cr Jobs \$\$
14	ENG - 112 ECO - 251	MAT - 143 ECO - 251	CIS - 115 CET - 111	NOS - 130 NOS - 230	DBA - 110	DEGREE	27cr Jobs \$\$\$






Career Pathways

- Asheville-Buncombe Technical Community College
- Fayetteville Technical Community College
- Catawba Valley Community College



Learning to Earn!

Asheville-Buncombe Technical Community College
A-B Tech



Our Presenters:

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Vernon Daugherty	Dean, Engineering and Applied Technology	vernondougherty@abtech.edu	(828) 398-7220
Debbie Cromwell	Workplace Learning Coordinator	debbiecromwell@abtech.edu	(828) 398-7603



Pathways to Employment

Vision

All students attending Asheville City Schools, Buncombe County Schools and Madison County Schools will graduate with a high school diploma **AND** an industry recognized licensure/certification **AND/OR** a postsecondary certificate, diploma, degree or significant hours of transfer credit!





Madison County
4 + 1: High School to College Pathway:
Information Technology/Information Systems Associate in Applied Science Degree

Grade Level	English	Mathematics	Science	Social Studies	Required/Recommended Elective Courses
9	English I	Math I	Earth/Environmental	World History	Health/PE
10	English II	Math II	Biology, Chemistry, or Physical Science	US History I or US History II	*CIS 110: Success and Study Skills (3 SHC) Fall or Spring *WEB 115: Web Introduction to Computers (3 SHC) *CIS 120: Network and Sec Foundation (3 SHC)
11	English III	Math III	Biology, Chemistry, or Physical Science	Other Social Studies Course	*WEB 115: Web Introduction to Computers (3 SHC) *CIS 120: Network and Sec Foundation (3 SHC)
12	English IV	Math IV	CIS 115: Introduction to Programming and Logic (3 SHC) HUM 115: Critical Thinking (3 SHC)	CIS 120: Hardware/Software Support (3 SHC) CIS 125: Info Systems Business Concepts (3 SHC)	*CIS 125: Network Administration I (3 SHC) *CIS 130: Network Administration II (3 SHC) *CIS 135: Linux/UNIX Single User Programming (3 SHC) *CIS 140: Linux/UNIX Server Programming (3 SHC)

*Taught by high school faculty
Results in completion of 27 SHC, and the Information Technology Pathway




Madison High School
4 + 1: High School to College Pathway: AAS Computer-Integrated Machining

Grade Level	English	Mathematics	Science	Social Studies	Required/Recommended Elective Courses
9	English I	Math I	Earth/Environmental	World History	Health/PE
10	English II	Math II	Biology, Chemistry, or Physical Science	US History I or US History II	*CIS 110: Success and Study Skills (3 SHC) Fall or Spring *CIS 120: Network and Sec Foundation (3 SHC) *CIS 130: Linux/UNIX Single User Programming (3 SHC)
11	English III	Math III	Biology, Chemistry, or Physical Science	Other Social Studies Course	*CIS 125: Network Administration I (3 SHC) *CIS 130: Network Administration II (3 SHC) *CIS 135: Linux/UNIX Single User Programming (3 SHC)
12	English IV	Math IV	*CIS 115: Introduction to Programming and Logic (3 SHC) *CIS 120: Hardware/Software Support (3 SHC) *CIS 125: Info Systems Business Concepts (3 SHC)	*CIS 120: Network Administration I (3 SHC) *CIS 125: Network Administration II (3 SHC) *CIS 130: Linux/UNIX Single User Programming (3 SHC)	*CIS 135: Linux/UNIX Single User Programming (3 SHC) *CIS 140: Linux/UNIX Server Programming (3 SHC)

*Taught by high school faculty
Results in completion of 30 SHC, and completion of the Computer-Integrated Machining Certificate


6





Marissa Dowers

- Mechanical Engineering student, holds a certificate in CNC Programming and Architectural Drafting
- 1st time recipient of scholarship provided by Advanced SuperAbrasives (ASI) in Mars Hill
- Internship at ASI summer 2016 where she proved to be a superstar!
- Offered fulltime work at ASI as an Engineering Technician Rover while completing her studies



Joel Luczak

- Recent graduate earning an Associates Degree in Computer Integrated Machining
- Interned with GE Aviation for six months, internship subsequently extended three times in three month intervals
- Upon graduation, Joel was offered a fulltime position as a Machinist in the Rotating Parts Division



Evan Capps

- Recent graduate earning an Associates in Industrial Systems Technology, Certificate in Industrial Automation, Certificate in CNC Machining
- Accepted as an Apprentice (non-registered) with Atlas Precision
- Began training and working as a Design Engineer on projects from day one
- Upon graduation was offered a fulltime position as an Engineering Apprentice

Thank You!

ABTech Community College

<https://mountains.com/foodin-photos-a-b-tech-baking-and-pastry-arts-graduates-present-senior-capstone-projects/>

COLLISIONU
FTCC POST COLLISION REMANUFACTURING...

**Reshaping the Collision Repair Industry
One Student at a Time**

FTCC FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

Grand Opening



ETCC FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

How Do You Engage An Industry?

- Understand the industry need
- Work with industry to create the solution
- Keep industry engaged before, during and after
- Leverage the industry

ETCC FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

Understanding an Industry Need

- Industry has to tell you how the need should be met
- Industry has to tell you what an employable graduate looks like
 - Credentials
 - Don't forget soft skills
- You are not just providing an education, you are providing CAREER TRAINING

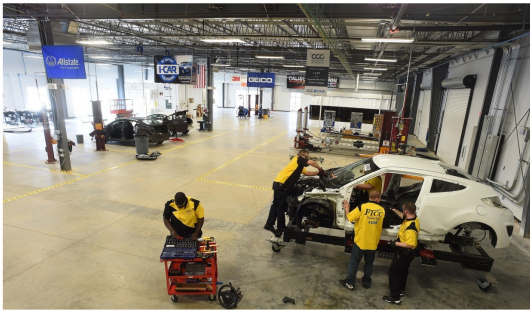
ETCC FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

Working with Industry to Create Solutions

- Bringing industry to the table
 - “If you build it...” they probably won’t come
- Be a business partner - become an education distribution center
- Speak the industry language
 - Credibility
- Look like the businesses you serve
- Be responsive – don’t delay!

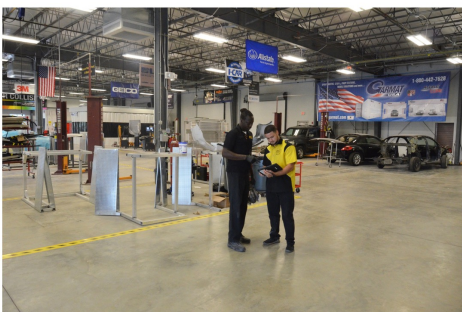
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CollisionU Facility



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CollisionU Facility



ETCC FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

CollisionU Facility



FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

Keeping Industry Engaged

- Go where they are
 - Conferences
- Give them a reason to come to you
 - Draft Days
 - Guest Speakers
- Find out what other needs you can meet for them
 - Corporate Training



FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

Draft Days



FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

Draft Days



ETCC FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

Draft Days



ETCC FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE

Leveraging an Industry

- Resources
- Job Placement & Experience
 - Internships & Apprenticeships
- Tools/Equipment
 - Grant opportunities
- Keeping curriculum current

ETCC FAYETTEVILLE TECHNICAL COMMUNITY COLLEGE



Catawba and Alexander Advanced Manufacturing Pathways Project



Starting the Process

Secondary and Postsecondary CTE Career Pathways joined efforts with the Department of Commerce in order to address regional economic and workforce needs while incorporating various educational and workforce strategies to streamline the pipeline to work.

*NCWorks Career Pathway Update



Advanced Manufacturing Pathway Partners



Aptar
Continental
GKN Driveline
Technibilt
Tenowo
Sarstedt
ZF Chassis

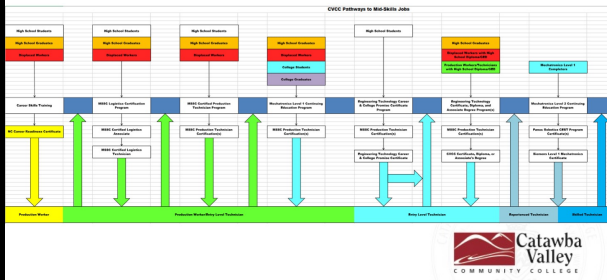
Alexander County Schools
Catawba County Schools
Hickory Public Schools
Newton-Conover City Schools
Western Piedmont Workforce
Development Board
Catawba Valley Community
College



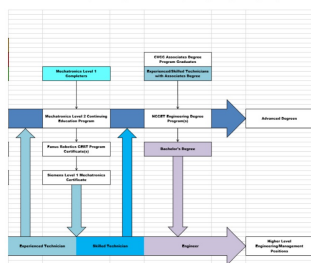
The Mechatronics Pathway includes entry and exit points in high school, continuing education, and curriculum. Industry recognized credentials are available for continuing education and curriculum.



CVCC Pathways to Mid-Skills Jobs



CVCC Pathways to Mid-Skills Jobs



Employer Engagement



Employer Engagement



12-18 apprentices that will provide seamless transitions from high school to community college.
31 apprentices to date
2 apprentices graduated August 2016
10-20 pre-apprentices/summer

Fall 2016/Spring 2017

October/November recruitment process with high school juniors and seniors
December/January Open Houses will start at partner companies
March/April Orientation Week
June Pre-Apprenticeship (6 weeks)
August Signing Ceremony and beginning of apprenticeship








What does the **FUTURE** of apprenticeship look like at CVCC?


Along with its partners, CVCC has readied the area to grow and sustain apprenticeships for post-secondary students in CTE programs of study.

The Catawba Valley Community College Advancing Post-Secondary Apprenticeship Project will concentrate on developing a statewide model for advancing and supporting apprenticeships for post-secondary students.




What does the **FUTURE** of apprenticeship look like at CVCC?


Develop a model post-secondary apprenticeship program that can be replicated statewide

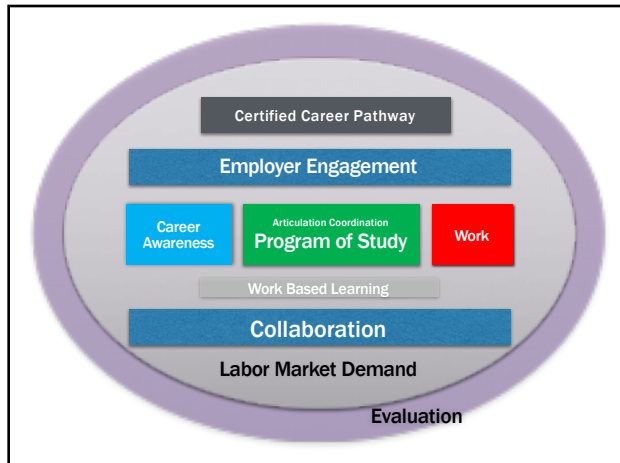


Pilot the model by establishing individual Apprenticeships for post-secondary students in two academic schools at CVCC



Deliver a statewide training session introducing the model for advancing and sustaining apprenticeships to post-secondary students







Perkins 2017-2018

- Emphasize work-based learning
- Encourage faculty professional development
- Work with stakeholders to improve pathway elements:
 - Employer engagement
 - Career awareness
 - Programs of study
 - Work-based learning
- Build on promising practices



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