



NORTH FLORIDA  
COLLEGE



# Manufacturing Certifications for Rural High School Students through Community College Dual Enrollment

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# Overview

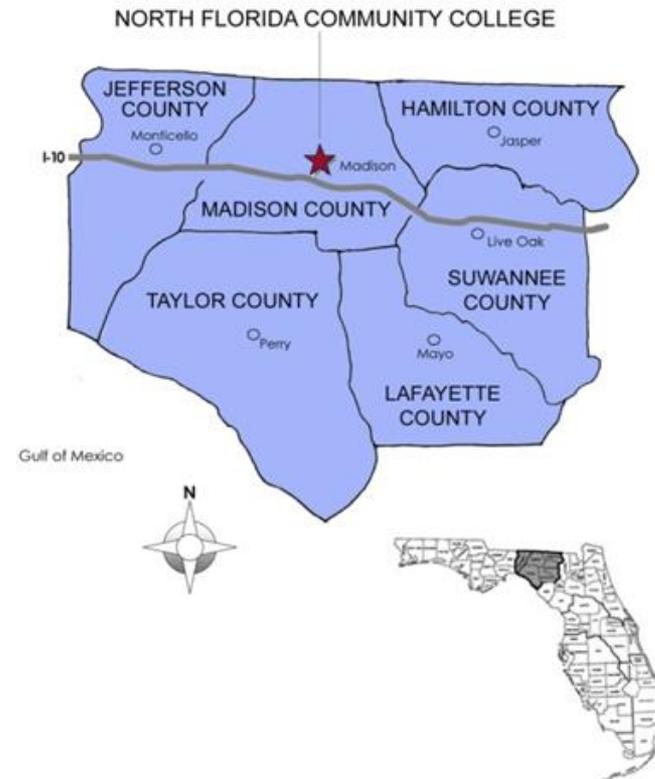
- ▶ College Service District Demographics
- ▶ Programmatic History
- ▶ Grant Objectives / Accomplishments
- ▶ Lessons Learned



# Service District Demographics

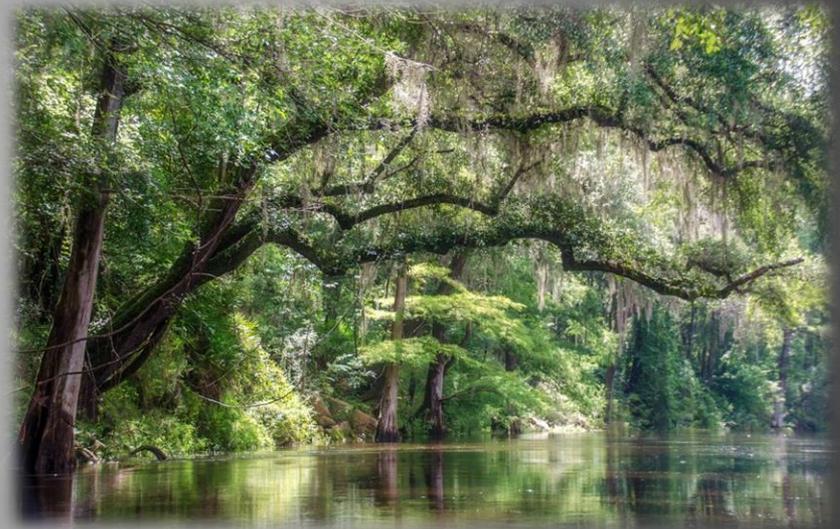
## Rural north-central Florida

- North Florida College located in Madison County
- Serves Hamilton, Jefferson, Lafayette, Madison, Suwannee, Taylor Counties
- Largest geographical service district in the state



# Demographics

- ▶ North Florida Community College is the smallest of Florida's state colleges yet serves the largest geographical area at 4,092 square miles.
- ▶ According to the 2010 U.S. Census, the population of the six-county service district is 121,775 residents.



# Demographics

- ▶ The 2012–2016 Regional Workforce Board Strategic and Operating Plan identified manufacturing as one of three leading industries that benefit this region, the other two being transportation/logistics and healthcare
- ▶ The manufacturing industry is the second largest sector in the workforce region served by the College. There are approximately 80 manufacturing sites in the region with roughly 4500 employees

Chemring  
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# Program History

Fall–2014: Advanced Manufacturing and Production Technology Postsecondary certificate program implemented through a Department of Labor grant

600 clock hours–four 150 hour courses

- Entry–Level Production Worker
- Production Quality and Assurance
- Manufacturing and Production Processes
- Manufacturing and Production Maintenance



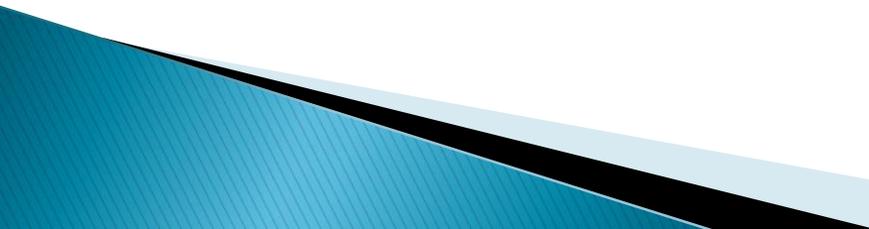
# Advanced Manufacturing and Production Technology

Program is tied to Manufacturing Skills Standards Council–Certified Production Technician credential

- Safety
- Quality Practices & Measurement
- Manufacturing Processes & Production
- Maintenance Awareness



# Challenges to Include Dual Enrolled Secondary Students

- ▶ Certification costs /funding for summer camps
  - ▶ High School and community buy-in
  - ▶ Career Technical programs at the College at the time were primarily centered on adult learners
    - Law Enforcement Academy
    - EMT/Paramedic
    - Allied Health (PCT/LPN/RN)
  - ▶ Manufacturing Stigma
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# Grant Objectives / Accomplishments

In addition to the overall goal, the intent of the project is to:

- ▶ help influence community perceptions relating to the manufacturing industry.
  - ▶ create a pathway with multiple exit points that lead students to gainful employment
  - ▶ supply industry partners with skilled technicians with strong employability skills.
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# Grant

## Objectives / Accomplishments

Objective 1: Develop a dual enrollment Advanced Manufacturing and Production Technology (AMPT) career pathway model for junior and senior high school students.

Extent to which Objective 1 has been achieved:  
100%

Articulation agreements were created and information pertaining to dual enrollment opportunities in the Advanced Manufacturing and Production Technology program was disseminated to high school guidance counselors and administrators within the service district.

Dissemination of information and recruiting efforts are ongoing.

# Important results for Objective 1

The pathway was extended in January 2018 with the addition of the A.S. degree program in Engineering Technology. This is a 60 credit hour program of which 15 credits can be articulated through the MSSC CPT credential.



# Grant

## Objectives / Accomplishments

Objective 2: Recruit 40 junior and senior high school students to participate in the project which includes CTE dual enrollment, summer workshops, soft skills development, and workforce experiences

Extent to which Objective 2 has been achieved:  
Twenty-nine students have dual enrolled into AMPT program (72.5%)

# Summer Camps

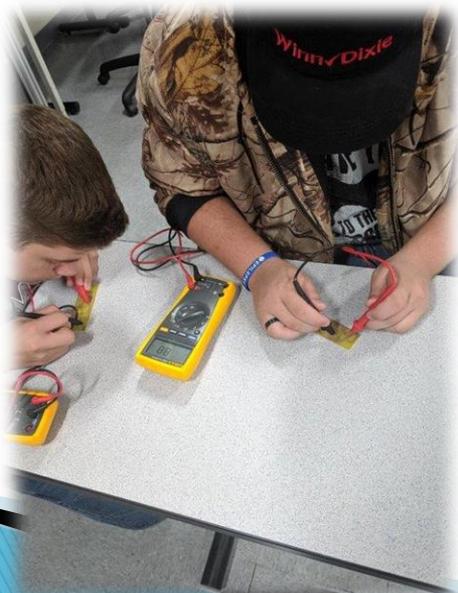
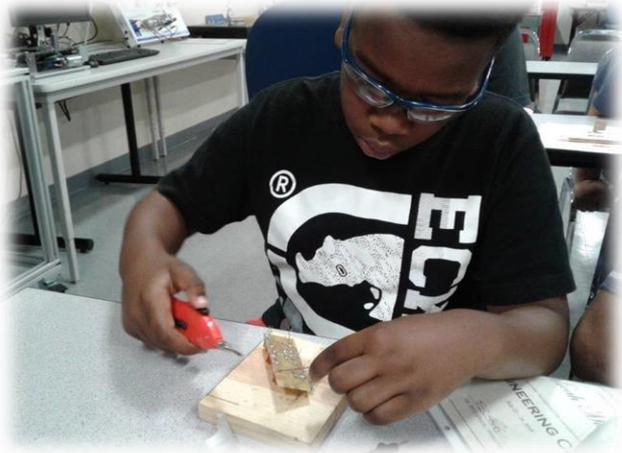
2016: Robotics (12 high school students)

2017: two separate summer camps– Engineering Technology (10 high school students) and Robotics (14 middle school students)

2018: three separate summer camps– Mechatronics (8 high school students), Engineering Technology (7 high school students), and Robotics (8 middle school students)

2019: three separate summer camps– Engineering Technology (8 high school and 1 middle school student), Mechatronics (14 high school and 1 middle school student), Robotics (15 middle school)

# Almost 100 Campers!!!



# Summer Camps

All summer camps yielded significant results with regard to pre-camp to post-camp changes in familiarity with science, technology, engineering/robotics, mathematics (STEM) courses needed in middle and high school in order to prepare for careers in engineering and advanced technology college programs.



# Grant

## Objectives / Accomplishments

Objective 3: Seventy-five percent (75%) of the project participants (30) will matriculate through the project and ultimately complete AMPT and earn their MSSC-CPT certification.

Extent to which Objective 3 has been achieved:

19 project participants before this school year

1 student returned this year to complete

10 new students this term

7 completed the APT course and earned their MSSC CPT certification (38%)

# Grant

## Objectives / Accomplishments

Objective 4: Seventy-five percent (75%) of the project participants (30) will demonstrate mastery of soft skills.

Extent to which Objective 4 has been achieved:

- ▶ 100% of students participated in soft skills training workshops provided by the local workforce development agency, but the workshops did not provide pretests and posttests to measure mastery of learning.
- ▶ With grant funds, a rigorous soft skills training program developed by WIN Learning was procured that included four modules: Communicating Effectively, Conveying Professionalism, Promoting Teamwork and Collaboration, and Thinking Critically and Solving Problems.
- ▶ Of the 5 students who have so far completed the more rigorous soft skills program so far with pretest and posttest assessments, 100% demonstrated mastery of soft skills.

# Grant

## Objectives / Accomplishments

Objective 5: Fifty percent (50%) of the project participants (20) will obtain employment in local industries after successfully completing the project.

Extent to which Objective 5 has been achieved:

Of the 19 students who entered the program and can be included (10 new students entered this fall term and are not included) 10 students (53%) are either working or attending school and plan to work in the field after completion of their education. Eight students are continuing their education in STEM related fields, one of which is also working in field as he attends school, and another is working in the field as a welder. One student is enlisting in the military, and his MSSC CPT credential will enable him to earn an increased rank upon completion of boot camp.

# Conclusion–Lessons Learned

- ▶ School administrators and teachers may not be the same year to year
  - ▶ Letters of support are not binding, don't count on them
  - ▶ Set realistic goals and make sure they are easily measurable
  - ▶ Never turn down an invitation
  - ▶ Be realistic with your industry partner's time and their strengths
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