Learning that works for America

CTE™

Area 18-Advanced Manufacturing @ Norwell High School

Two-Year Advanced Manufacturing Program
recommended for 11th and 12th grade students

Talk to you Guidance Counselor Today - Start Your Career Now!

① **Learn technologies used in manufacturing today from local professionals**

② **Visit the many manufacturing facilities in the area that employ thousands**

③ **Earn a recoginzed industry certification while in high school (MSSC).**

④ **Participate in Work-Based Learning (WBL) experiences.**

⑤ **This class meets at Norwell High School from 7:40 to 9:25 daily.**

⑥ **This class is endorsed by the Adams / Wells Manufactruing Alliance.**

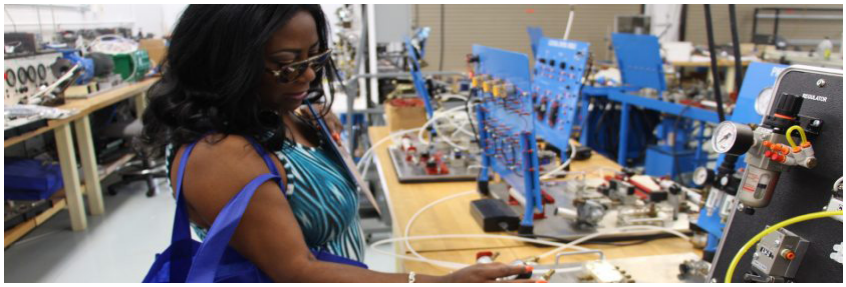
Don't miss this exciting opportunity to begin working on your career. Start by talking with your guidance counselor and letting them know that you are interested in enrolling in this new Career and Technical Education (CTE) program.

Upon completing year I and II of the Norwell Advanced Manufacturing program, students will have had the opportunity to earn :

✔9 hrs of IVY Tech dual credit
✔MSSC (CPT) Industry Cert.
✔Related Work-Based Learning

Show me the money... Adv. Manufacturing

Median Pay: $35,000 - $40,000 (with CPT Certification)
Entry-Level Education: High school diploma or equivalent
On-the-Job-Training: Long-term on-the-job training.
Youth Apprenticeships: Pending
Workforce Development Category: High Value
Local Job Outlook for 2020: High Demand
National Job Outlook for 2020: High Demand



Area 18 Shared Program Povides Students
High Demand - High Wage Skills Training

Many people have an outdated understanding of what kind of jobs exist in manufacturing. Today's manufacturing environment is filled with new technologies that require a special skillset. It is not the dark, greasy, monotonous factory floor of yesteryear. It is truely an applied STEM (science, technology, engineering, math) career.

Keeping the modern manufacturing floor running requires an enthusiastic professional that understands basic mechanical principals and possesses the ability to solve problems. Employees must also accept the ever changing role of automation and robotics in manufacturing processes and consider themselves as continuous learners througout their career.

The new Area 18 – Advanced Manufacturing program at Norwell High School is preparing students with an awareness and understanding of manufacturing methods, processes, and technologies. Although this program is designed to prepare students for entry to the modern manufacturing floor, students may also choose to continue education in engineering, management and supervision, and distribution

Regardless of a student's goals after high school; the Area 18 Advanced Manufacturing program will prepare students with the knowledge, attitudes, and skills necessary to continue their education and/or enter into a high-demand, high-wage career opportuniteies in the manufacturing sector.

Men and women are required to help in the design, implementation, upkeep, and maintenance of Advanced Manufacturing Technologies in today's modern factories; locally and nationally.

For more information:
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Manufacturing Skill Standards Council **(MSSC)**
Certified Production Technician **(CPT)**

The purpose of the Certified Production Technician (CPT) program is to recognize through certification, individuals who demonstrate mastery of the core competencies of manufactuing production at the front-line through successful completion of certification assessments. The goal of the CPT certificaiton program is to raise the level of performance of production workers both to assist the individuals in finding high-wage jobs and to help employers ensure their workforce increases the company's productivity and competitiveness.

The CPT program consists of four individual certificate modules (✱Safety ✱Quality Practices and Measurement ✱Manufacturing Processes & Production ✱Maintenance Awareness). Students will be tested over each area at the most appropirate time.

For more information about the MSSC CPT industry certification, visit:
https://www.msscusa.org/certification/production-certification-cpt/

CPT™ MSSC™

CERTIFIED PRODUCTION TECHNICIAN

CRITICAL PRODUCTION FUNCTIONS COVERED BY MSSC COURSES AND ASSESSMENTS:

The Manufacturing Skill Standards Council (MSSC) credentialing system leading to a CPT covers the four critical production functions, as defined by MSSC's industry-led, nationally validated skills standards, common to all sectors of manufacturing: Safety, Quality & Continuous Improvement, Manufacturing Processes & Production, and Maintenance Awareness. Each area is addressed with a separate assessment. MSSC training and assessments are organized around those four modules. An individual can earn a "Certificate" if they pass one or more assessments. However, they must pass all four assessments to earn the full "CPT" certification. MSSC strongly recommends that individuals be at the 9th grade level of math and 10th grade level of English before attempting MSSC courses and assessments. The four critical functions and their related key activities are described below:

SAFETY

1. Work in a Safe and Productive Manufacturing Workplace
2. Perform safety and environmental inspections
3. Perform emergency drills and participate in emergency teams
4. Identify unsafe conditions and take corrective action
5. Provide safety orientation for all employees
6. Train personnel to use equipment safely
7. Suggest processes and procedures that support safety of work environment
8. Fulfill safety and health requirements for maintenance, installation, and repair
9. Monitor safe equipment and operator performance
10. Utilize effective, safety-enhancing workplace practices

QUALITY PRACTICES & MEASUREMENT

1. Participate in periodic internal quality audit activities
2. Check calibration of gages and other data collection equipment
3. Suggest continuous improvements
4. Inspect materials and product/process at all stages to ensure they meet specifications
5. Document the results of quality tests
6. Communicate quality problems.
7. Take corrective actions to restore or maintain quality
8. Record process outcomes and trends
9. Identify fundamentals of blueprint reading
10. Use common measurement systems and precision measurement tools

MANUFACTURING PROCESSES & PRODUCTION

1. Identify customer needs
2. Determine resources available for the production process
3. Set up equipment for the production process
4. Set team production goals
5. Make job assignments
6. Coordinate work flow with team members and other work groups
7. Communicate production and material requirements and product specifications
8. Perform and monitor the process to make the product
9. Document product and process compliance with customer requirements
10. Prepare final product for shipping or distribution

MAINTENANCE AWARENESS

1. Perform preventive maintenance and routine repair
2. Monitor indicators to ensure correct operations
3. Perform all housekeeping to maintain production schedule
4. Recognize potential maintenance issues with basic production systems, including knowledge of when to inform maintenance personnel about problems with:
   - Electrical systems
   - Pneumatic systems
   - Hydraulic systems
   - Machine automation systems
   - Lubrication processes
   - Bearings and couplings
   - Belts and chain drives

NOTE: MSSC assesses core understanding of the key work activities and core technical knowledge and skills needed in high-performance manufacturing, as defined by MSSC Production Skill Standards. Given online, MSSC Assessments also help measure basic computer, problem-solving and analytical skills and one's ability to apply knowledge to specific situations identified in the assessments. There are no experiential or hands-on requirements for MSSC certification as it is expected that individual employers will determine those requirements based upon their own specific needs. MSSC does not require that individuals take MSSC courses prior to testing.