

LANCASTER COUNTY CAREER & TECHNOLOGY CENTER

Mechatronics & Robotics - CIP Code: 47.0303

Full-Day Senior Only & Adult Program – 1080 hours

Instructor: Harold Hartman

Mission Statement

The mission of the Mechatronics & Robotics program is to prepare people for skilled, innovative and productive careers.

Goals

1. All Mechatronics & Robotics students will demonstrate proficiency on the Pennsylvania System of School Assessment (PSSA) and earn National Skill Certificates; i.e. National Occupational Competency Testing Institute (NOCTI), Advanced Manufacturing/Integrated Systems Technology certificate, and Pennsylvania Skill Certificates.
2. All Mechatronics & Robotics students will successfully transition on to a first career job and/or related post-secondary training.
3. All Mechatronics & Robotics students will be proficient in their career major and demonstrate proficiency through hands-on performance and theoretical testing.

Program Description

Students in this program focus on all aspects of industrial and commercial machines and robotics. This program, which is aligned with the National Center for Integrated Systems Technology (NCIST) in Advanced Manufacturing and the National Institute for Metal Working Skills (NIMS) Level II Machine Maintenance and Repair, includes instruction in operation, set-up, maintenance, troubleshooting and repair of machines and systems found in a commercial facility, packaging plant or medical facility where high tech equipment is being used. Curriculum and instruction includes the areas of: Industrial Electricity, Electronics, Sensor Technology Machine Operations and Maintenance, Industrial Electronics, Computer Machine Controls, EPA Refrigerant Certification, Refrigeration, Machine Repair, Industrial Machining Skills, Motors and Control Applied Physics, Fluid Power, Mechanical Components, Blueprint Reading, and Quality Control. Students use a wide variety of tools for preventative maintenance of making repairs. Individuals entering this career should possess good mechanical aptitude, eye-hand coordination, manual dexterity, critical thinking skills and the ability to work as a team member to complete projects.

Recommended Courses

"Program of Study" academic courses are based on Federal Perkins IV legislation & accountability requirements for Career & Technical Education students.

- 4 years College Prep English
- 4 years College Prep Math including Algebra I, Geometry, Algebra II and a higher level math
- 3 years of science including Biology, Chemistry and Physics or Physical Science
- 3 years of Social Studies including US and World History, with attention given to civic learning

Employment Opportunities

The program's Occupational Advisory Committee has identified the following careers for student completers:

- Electrical Engineer
- Industrial Engineer
- Machine Operator
- Machine Set-Up Operator
- Maintenance Helper/Assistant
- Maintenance Technician
- Packaging/PLA Technician
- Parts Repair & Sales
- Preventive Maintenance Mechanic
- Repair Technician

Dual Enrollment and Advanced Credits Through Tech Prep Articulation:

- Pennsylvania College of Technology
- Reading Area Community College

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- Harrisburg Area Community College
- Thaddeus Stevens College of Technology