ENGINEERING, MANUFACTURING AND INDUSTRIAL TECHNOLOGY
MECHATRONICS & ROBOTICS

PROGRAM LOCATION
LCC West Campus

SESSION OFFERED
AM

AVERAGE LECTURE DAYS/WEEK
2-3 days

AVERAGE LAB DAYS/WEEK
2-3 days

HOMEWORK
Rarely

REQUIRED READING
College level textbooks & manuals
After an introduction to industrial workplace safety, including the ability to earn First Aid and CPR/AED certifications, students will focus on the installation and repair of electrical, hydraulic, pneumatic and digital controls that operate Automated Mechanical and Robotic Systems.

EXPECTED STUDENT OUTCOMES

• Describe the scope and application of Local, State and Federal safety regulations as they apply to both industrial and construction worksites
• Describe appropriate safety procedures
• Explain the basics of fire, building and facility safety
• Demonstrate knowledge of basic first aid
• Describe the basic physical properties of hydraulic and pneumatic systems
• Trace and describe the flow of energy in a given hydraulic or pneumatic system
• Correct malfunctions in hydraulic or pneumatic circuits
• Apply safety rules while working on a robotic system
• Perform robot start up; control coordinate systems and motion systems
• Copy, delete and edit programs
• Program instructions
• Define and spell electric vocabulary
• Solve series, parallel and combination DC circuit problems
• Construct basic circuits and measure electrical quantities using multimeters, ammeters, ohmmeters and wattmeters

CAREERS
Manufacturing Production Technician
Robotics Technician
Mechanical Engineering Technician
Electronics Engineering Technician

MEDIAN WAGE
Manufacturing Production Technician: $29.96 hourly, $62,330 annually
Robotics Technician: $26.74 hourly, $55,610 annually
Mechanical Engineering Technician: $26.19 hourly, $54,480 annually
Electronics Engineering Technician: $29.90 hourly, $62,190 annually

EMPLOYMENT OUTLOOK
Average, 5-9%

CERTIFICATIONS
CPR/First Aid
OSHA 10 Certification

SUCCESS INDICATORS
Mechanically inclined, detail oriented, focused, good at troubleshooting, have strong hand/eye coordination, able to read and understand service manuals, and have strong communication skills.

STUDENT LEADERSHIP
Students have the opportunity for leadership, competition, and community service through membership in SkillsUSA.

13 COLLEGE CREDITS
METS 102 - Industrial Safety
ELTE 108 - Practical Electricity I
ELTE 109 - Practical Electricity II
METS 125 - Intro to Hydraulics/Pneumatics
METS 160 - Introduction to Robotics

ACADEMIC RIGOR
4

CAPITAL REGION TECHNICAL EARLY COLLEGE
Students enrolled in this program may choose to participate in the Capital Region Technical Early College (CRTEC). Capital Region Technical Early College is a high school-to-college program where students start in grade 11 and leave in grade 13 with a college degree or certification. The program gives students relevant career-related experience.

ENROLL NOW! CONTACT YOUR COUNSELOR OR CALL 517.483.9966 WWW.EATONRESA.ORG/CPC