

Industry Credentials, Concentration Sequences, and Career Clusters

Technology of Robotic Design (8421)

Industry Credentials:

These apply only to 36-week courses

- College and Work Readiness Assessment (CWRA+)
- National Career Readiness Certificate Assessment
- Robotics Certification Examination
- Smart Automation Associate Certifications
- Smart Automation Associate Examinations: Certified Industry 4.0 Associate–Advanced Operations
- Smart Automation Associate Examinations: Certified Industry 4.0 Associate–Basic Operations
- Smart Automation Associate Examinations: Certified Industry 4.0 Associate–Robot System Operations
- Smart Manufacturing and Advanced Robotics Training (SMART) Certification Examination
- Workplace Readiness Skills for the Commonwealth Examination

Concentration Sequences:

*A combination of this course and those below, equivalent to two 36-week courses, is a **concentration sequence**. A **program completer** is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program. Students wishing to complete a specialization may take additional courses based on their career pathways.*

- Electronics Systems I (18 Weeks)
- Electronics Systems I (36 Weeks)
- Electronics Systems II
- Manufacturing Systems I (18 Weeks)
- Manufacturing Systems I (36 Weeks)
- Technical Drawing and Design (18 Weeks)
- Technical Drawing and Design (36 Weeks)
- Technology Foundations (18 Weeks)
- Technology Foundations (36 Weeks)

Career Clusters, Career Pathways, and Occupations:

- Information Technology
 - Information Support and Services
 - Applications Integrator
 - Computer Numerical Control Programmer (CNC Programmer)
 - Systems Analyst
- Manufacturing
 - Health, Safety, and Environmental Assurance
 - Occupational Health and Safety Specialist
 - Safety Engineer
 - Logistics and Inventory Control
 - Logistician
 - Materials Handler
 - Manufacturing Production Process Development
 - Electro-Mechanical Technician
 - Industrial Engineer
 - Industrial Engineering Technician
 - Manufacturing Systems Engineer
 - Precision Inspector, Tester, or Grader
 - Production Manager
 - Programmer
 - SPC (Statistical Process Control) Coordinator
 - Production
 - Automated Manufacturing Technician
 - Quality Assurance
 - Calibration Technician
 - Precision Inspector, Tester, or Grader
 - Quality Control Technician
 - SPC (Statistical Process Control) Coordinator
- Science, Technology, Engineering and Mathematics
 - Engineering and Technology
 - Computer Hardware Engineer
 - Electro-Mechanical Technician
 - Human Factors Engineer
 - Industrial Engineer
 - Industrial Engineering Technician
 - Manufacturing Systems Engineer
 - Mechanical Engineer
 - Mechanical Engineering Technician

- Systems Analyst
- Science and Mathematics
 - Secondary School Teacher
 - Technical Writer