

variety of mechanical fields, including robotics, refinery and pipeline systems, deep ocean exploration, and hazardous waste

Secondary Courses for High School Credit

Level 1	Principles of Manufacturing Principles of Applied Engineering
Level 2	Robotics I Manufacturing Engineering Technology I Occupational Safety and Environmental Technology I Programmable Logic Controller I
Level 3	Robotics II Manufacturing Engineering Technology II Occupational Safety and Environmental Technology II Programmable Logic Controller II Engineering Design and Presentation I
Level 4	Practicum in Manufacturing Practicum in Manufacturing + Extended Practicum in Manufacturing Career Preparation for Programs of Study Career Preparation for Programs of Study + Extended Career Preparation

Aligned Advanced Academic Courses

Dual Credit Dual credit offerings will vary by local education agency.

Students should be advised to consider these course opportunities to enrich their preparation. AP or IB courses not listed under the Secondary Courses for High School Credit section of this framework document do not count towards concentrator/completer status for this program.

Work-Based Learning and Expanded Learning Opportunities

Work-Based Learning Activities	Intern with a robot troubleshooting I

Example Postsecondary Opportunities

Associate Degrees

- Instrumentation Technology
- Industrial Technology
- Robotics Technology
- Automation Engineer Technology

- Mechanical Engineering
- Electrical Electronics Engineering
- Electrical, Electronic, and Communications Engineering Technology
- Electromechanical Engineering Technology

- Mechanical Engineering
- Engineering/Industrial Management
- Industrial Engineering
- Electrical and Electronics Engineering

Example Aligned Occupations














Computer Numerically Controlled Tool Operators
Median Wage\$

- C200 Certified Industry Machining CNC Turning Level I
- Certified Logistics Technician (CLT)
- Certified Production Technician (CPT) 4.0
- Lean Six Sigma Green Belt Certification
- Certified Technician Supply Chain Automation (CT SCA)
- Machining Milling Level I
- Machining Drill Press Level I
- Machining Grinding Level I

Manufacturing Career Cluster

Statewide Program of Study: Robotics and Automation Technology

Course Information

Level 1	Course	Prerequisites Corequisites	Career Clusters
	Principles of Manufacturing* 13032200 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisite: Algebra I or Geometry Recommended Corequisites: None	
	Principles of Applied Engineering* 13036200 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisite: None Recommended Corequisites: None	  
Level 2	Course	Prerequisites Corequisites	Career Clusters
	Robotics I 13037000 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisite: Principles of Applied Engineering Recommended Corequisites: None	 
	Manufacturing Engineering Technology I 13032900 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisite: Algebra I Recommended Corequisites: None	 
	Occupational Safety and Environmental Technology I* N1303680 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisite: Principles of Transportation Systems, Principles of Distribution and Logistics, or Principles of Manufacturing Recommended Corequisites: None	  
	Programmable Logic Controller I N1303689 (1 credit)	Prerequisites: None Corequisites: None Recommended Prerequisite: Principles of Applied Engineering or Principles of Manufacturing Recommended Corequisites: None	 
Level 3	Course	Prerequisites Corequisites	Career Clusters
	Robotics II 13037050 (1 credit)	Prerequisites: Robotics I Corequisites: None Recommended Prerequisite: None	

Manufacturing Career Cluster

Statewide Program of Study Robotics and Automation Technology

Course Information

Level 4

Course

Prerequisites | Corequisites

Career Clusters

Career Preparation for
Programs of Study*
First Time Taken:
12701121 (2 credits)