



Name \_\_\_\_\_

Learner ID \_\_\_\_\_

School/College/University \_\_\_\_\_

**Manufacturing: Production**

**Career Pathway Plan of Study for ► Learners ► Parents ► Counselors ► Teachers/Faculty**

This Career Pathway Plan of Study (based on the Production Pathway of the Manufacturing Career Cluster) can serve as a guide, along with other career planning materials, as learners continue on a career path. Courses listed within this plan are only recommended coursework and should be individualized to meet each learner's educational and career goals. \*This Plan of Study, used for learners at an educational institution, should be customized with course titles and appropriate high school graduation requirements as well as college entrance requirements.

EDUCATION LEVELS	GRADE	English/ Language Arts	Math	Science	Social Studies/ Sciences	Other Required Courses Other Electives Recommended Electives Learner Activities	*Career and Technical Courses and/ or Degree Major Courses for Production Pathway	SAMPLE Occupations Relating to This Pathway	
Interest Inventory Administered and Plan of Study Initiated for all Learners									
<b>SECONDARY</b>	9	English 9	Algebra I	Physical Science	World History	1 year World Language, and minimum 1 year CTE course(s) Certain local student organization activities are also important including public speaking, record keeping and work-based experiences.		<ul style="list-style-type: none"> <li>► Assembler</li> <li>► Automated Manufacturing Technician</li> <li>► Calibration Technician</li> <li>► Electrical Installer and Repairer</li> <li>► Electromechanical Equipment Assembler</li> <li>► Extruding and Drawing Machine Setter/Set-Up Operator</li> <li>► Foundry Worker</li> <li>► Grinding, Lapping, and Buffing Machine Operator</li> <li>► Hand Packer and Packager</li> <li>► Hoist and Winch Operator</li> <li>► Instrument Maker</li> <li>► Large Printing Press Machine Setter and Set-Up Operator</li> <li>► Machine Operator</li> <li>► Medical Appliance Maker</li> <li>► Micro and Nano Fabrication Technicians</li> <li>► Milling Machine Setter and Set-Up Operator</li> <li>► Millwright</li> <li>► Pattern and Model Maker</li> <li>► Precision Layout Worker</li> <li>► Sheet Metal Worker</li> <li>► Solderer and Brazier</li> <li>► Tool and DieMaker</li> <li>► Welder</li> </ul>	
	10	English 10	Geometry or Honors Geometry	Biology	U.S. History		**Robotics I		
	11	English II	Algebra 2 or Honors Algebra 2	Chemistry or Physics	American Government Economics		**Robotics II		
	College Placement Assessments-Academic/Career Advisement Provided								
	12	English 12	Pre-Calculus or Honors Pre-Calculus	Physics or other science course	MicroEconomics MacroEconomics Practical Law				
Articulation/Dual Credit Transcribed-Postsecondary courses may be taken/moved to the secondary level for articulation/dual credit purposes.									
<b>POSTSECONDARY</b>	Year 13	English Composition English Literature	Algebra or Calculus	Lab Science	Economics Psychology	All plans of study need to meet learners' career goals with regard to required degrees, licenses, certifications or journey worker status. Certain local student organization activities may also be important to include.	Continue courses pertinent to the pathway selected.		
	Year 14	Speech/ Oral Communication Technical Writing			Sociology Public Policy				
	Year 15	Continue courses in the area of specialization.							
	Year 16								

\*\*See course descriptions on page 2.

# **Mechatronics**

## **Course Descriptions:**

#1

### ***Robotics I***

*Students will learn and apply the design process while learning fundamental skills in order to build mechanical systems, and small programmable robots. Students will learn and apply Safety, Procedures, Programming, Teamwork, Communication, and Collaboration while solving various problems. This project-based course will enhance a student's twenty first century STEM skills.*

#2

### ***Robotics II***

*May be taken for 4th year math credit. May be counted toward a VPAA credit. This course is repeatable. Students will continue learning and applying their skills. Students will advance their learning from semester 1 including: Programming, Advertising, and Budgeting, while competing to solve various challenges. This project - based course will give students the opportunity to continue to enhance and apply their twenty first century STEM skills learned in first semester.*