

## MANUFACTURING PRINCIPLES & INDUSTRIAL PRODUCTION TECHNOLOGY

### **Background**

The entire Advanced Manufacturing Technology program consists of four exit points including a Certificate of Proficiency in Manufacturing Principles, a Technical Certificate in Industrial Production Technology, a more advanced Technical Certificate in Advanced Manufacturing Technology and an Associate of Applied Science in Advanced Manufacturing Technology degree. All core courses have been created based on the demand of businesses and industries.

### **Description**

Students are provided the knowledge, skills and technical ability to apply skills and foundational principles to the identification and resolution of production problems in the manufacture of products.

The program length for a full-time student to earn a CP in Manufacturing Principles is one (1) semester. The program length for a full-time student to earn an Industrial Production Technology technical certificate is two (2) semesters and one (1) summer term.

### **Student Learning Outcomes**

Upon successful completion of this technical certificate program a student should be able to:

- Perform entry-level manufacturing jobs with a basic foundational knowledge of safety, plant processes, machine operations and maintenance, and advanced industrial mathematics.
- Demonstrate competencies in beginning levels of industrial production to include basic electricity, equipment, print reading, and precision measurement.
- Demonstrate a value for and knowledge of applications of quality management and lean management.
- Demonstrate teamwork, effective communication skills, and a strong work ethic.

### *GRADUATION REQUIREMENTS*

*(Suggested Schedule)*

			<b>Fall Semester</b>	<b>Credit Hours</b>
AMST	10153	Introduction to Manufacturing		3
AMST	10253	Industrial Safety for Manufacturing		2
AMST	15252	Professional Behaviors		2
MATH	12073	Technical Mathematics <i>OR higher-level math course</i>		3
CPSI	11083	Tech Computer Fundamentals <i>OR higher-level computer course</i>		3
COMM	12053	Tech Communications <i>OR higher-level composition course</i>		3
			<b>Exit: Manufacturing Principles Certificate of Proficiency</b>	<b>16</b>
			<b>Spring Semester</b>	
AMST	10553	Electricity for Manufacturing		3
AMST	10653	Manufacturing Equipment Maintenance & Operation		3
AMST	10753	Print Reading, Tolerancing & Precision Measurement		3
AMST	10453	Industrial Plant Processes		3
AMST	19253	Advanced Manufacturing Applications		3
			<b>Exit: Industrial Production Technology Technical Certificate</b>	<b>31</b>

**\*This pathway is part of the Associate's in Applied Science in Advanced Manufacturing Technology.**