

# MANUFACTURING TECHNOLOGY (AS.MFGT)

## ASSOCIATE OF SCIENCE

**Program Outcomes:** Upon successful completion of this program a student will be able to:

- demonstrate the ability to adhere to personal, industry, and OSHA safety standards in all projects.
- analyze and solve manufacturing problems and applications using a variety of fabrication and basic machining processes.
- explain, identify and troubleshoot applications of hydraulics and pneumatics as it pertains to manufacturing.
- communicate effectively, both orally and in writing, using appropriate technical language
- explain, identify, and troubleshoot applications of industrial electricity as it pertains to manufacturing.
- read, interpret, and compare industrial blueprints.

### Required Major Courses (19 units)

<input type="checkbox"/> CMA-74 – Industrial Drawing and Print Reading	3.0
<input type="checkbox"/> MFGT-70 – Introduction to Mechanized Agriculture	3.0
<input type="checkbox"/> MFGT-130 – Introduction to Metal Fabrication	3.0
<input type="checkbox"/> MFGT-140 – Introduction to Industrial Hydraulics and Pneumatics	2.0
<input type="checkbox"/> MFGT-150 – Introduction to Industrial Electricity	2.0
<input type="checkbox"/> MFGT-169 – Hazmat and Industrial Safety	2.0
<input type="checkbox"/> MFGT-180 – Industrial Workplace Skills	1.0
<input type="checkbox"/> WLD-150 – Basic Welding	3.0

### Major Electives (Complete 2-3 units)

<input type="checkbox"/> MFGT-131 – Intermediate Metal Fabrication	3.0
<input type="checkbox"/> MFGT-141 – Intermediate Industrial Hydraulics and Pneumatics	2.0
<input type="checkbox"/> MFGT-151 – Intermediate Industrial Electricity	2.0

### Major Electives (Complete 5-6 units)

<input type="checkbox"/> CMA-75 – Engineering Drawing and Solidworks	3.0
<input type="checkbox"/> CMA-76 – Computer Aided Mechanical Drafting and Detailing	3.0
<input type="checkbox"/> CMA-81 – Computer Aided Drafting and Design I	3.0
<input type="checkbox"/> MFGT-71 – Agricultural and Industrial Equipment Operation	3.0
<input type="checkbox"/> MFGT-75 – Agriculture Machinery and Management	3.0
<input type="checkbox"/> MFGT-132 – Advanced Metal Fabrication	3.0
<input type="checkbox"/> WLD-151 – Introduction to GTAW/TIG Welding	3.0
<input type="checkbox"/> WLD-152 – Sheet Metal Fabrication	2.0

**SUBTOTAL: 26-28 UNITS**

### General Education – Required Courses

*Students must complete one of the following General Education Plans:*

**HCCD GE** (see page 66) *MAT-123 or higher*

- Natural Sciences  Social & Behavioral Sciences  Humanities
- Ethnic Groups in the US  Language and Rationality

**SUBTOTAL: 21 UNITS**

*Students can double-count required courses and courses for General Education*

■ **Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.**

**TOTAL: 60 UNITS**