

Manufacturing

Overview

Learning Outcomes for Manufacturing, AAS

Upon completion of this program, students will:

- Demonstrate high standards of professionalism and safety.
 - a. Working with Others: Students will demonstrate that they can plan, work, and accomplish a task utilizing the help of their peers.
 - b. Hand Tool Safety: Students will demonstrate the proper and safe use of hand tools.
 - c. Personal Safety: Students will demonstrate proper use of Personal Protective Equipment (PPE).
- Demonstrate skills in utilizing proper tools, materials & machines for manufacturing.
 - a. Measurement Tools: Students will demonstrate the proper selection and use of Semi-Precision and Precision Measurement Tools.
 - b. Welding, cutting and foundry: Students will demonstrate the proper processes when Welding/Cutting/Founding Metals.
 - c. Machine Tools: Students will demonstrate the proper selection and use of CNC or manual machine tools.
- Demonstrate understanding of the Development Process by effective use of resources to convert materials into industrial and consumable goods.
 - a. Design: Students will demonstrate how to design something based upon a perceived need.
 - b. Development: Students will Create and Test their Design to see if it fills the need of the Original Design Idea.
 - c. Manufacture: Students will use a Developed Design and create Manufacturing Processes that will produce enough of said Design to fill the needs of the market.
- Use Graphic Communication resources to convey technical information.
 - a. Technical Drafting: Students will be able to use Precision Measuring tools, (i.e. caliper, rule, micrometer, dial indicator, Vernier scale tools,) to aid in Drafting Geometric figures.
 - b. Computer Aided Design 2D: Students will demonstrate proficiency in creating 2D CAD drawings and prints.
 - c. Computer Aided Design 3D: Students will demonstrate proficiency in creating 3D CAD Drawings as well as 3D printed models.

Associates of Applied Science in Metals Manufacturing

Code	Title	Credits
Required Courses		
DDSN 113	Technical Drafting	
WLDG 110	Welding Theory I	2
WLDG 111	Welding Theory I Practical	2
WLDG 114	Mig/Tig Welding	3
WLDG 195	Practicum: Welding	3
WRIT 101	College Writing I	3
WLDG 180	Shielded Metal Arc Welding	3
WLDG 260	Repair & Maintenance Welding	3
WLDG 186	Welding Qual Test Prep w/Lab	3
BGEN 105	Introduction to Business	3
COMX 111	Intro to Public Speaking	3
DDSN 114	Introduction to CAD	3
MCH 200	Machining	3
MCH 250	Manuf Processes and Materials	3
CAPP 120	Introduction to Computers	3
M 121	College Algebra (Meets CAT II Requirement)	3

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DDSN 255	Machine Drafting	3
MCH 351	CAD/CAM Applications	3
IT 111	Industrial Safety/Waste Mgmt	2
PHSX 105	Fund of Physical Science	3
PHSX 106	Fund of Physical Science Lab	0
IT 105	Industry Foundations	
Total Credits Required		61