INDUSTRIAL WELDING, ASSOCIATE OF APPLIED SCIENCE

This program provides basic training for students who want to acquire the fundamental skills of Stick, MIG, TIG, and OxyFuel welding and introduces additional industry technologies: programming of welding robots, fabrication, nondestructive testing techniques, metallurgy, and workplace safety. Students have the potential to earn three nationally recognized certifications. At the conclusion of the MIG, TIG, and Stick welding classes, students submit a test piece (between 1F and 4G) for American Weld Society (AWS) certification evaluation.

Program Admission Requirements

- High School Diploma/GED
- MATH-0915 Basic Arithmetic and Pre-Algebra MATH-0915 Basic Arithmetic and Pre-Algebra or qualified Math Placement.

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes:

1. Use effective interpersonal, communication, and professional skills to work with welding, production, engineering, and quality control teams.
2. Comply with industry safety guidelines.
3. Apply TIG, MIG, and Stick processes to join metal.
4. Apply oxygen and fuel cutting skills.
5. Add and subtract decimals and fractions and convert decimals to fractions.
6. Train operators, troubleshoot equipment, analyze root causes and identify corrective actions of weld issues.
7. Work with production and engineering teams to develop equipment and processes for product development, production needs, and customer expectations.
8. Use practical knowledge/experience of fabricating, blue print reading, and welding skills to complete most welding projects.
9. Utilize effective communication, time management and conflict management skills to propose solutions to technical problems to supervisors and team members.

Suggested Semester Sequence

First Semester		Credit Hours
ENG-1010	College Composition I	3
ISET-1101	Welding Blue Print Reading (1st 8 Weeks)	3
ISET-1110	Oxyfuel Processes/Plasma Processes	4
ISET-2100	Gas Metal Arc Welding (MIG) (2nd 8 Weeks)	4
MATH-1190	Algebraic and Quantitative Reasoning	3
	Credit Hours	**17**
Second Semester		
HLTH-1230	Standard First Aid and Personal Safety (1st 8 Weeks)	1
BADM-1050	Professional Success Strategies	3
ISET-2120	Shielded Metal Arc Welding (STICK) (1st 8 Weeks)	4
ISET-2110	Gas Tungsten Arc Welding (TIG) (2nd 8 Weeks)	4
IT-1090	Computer Applications	3
	Credit Hours	**15**
Third Semester		
COMM-1000	Fundamentals of Interpersonal Communication	3
ISET-2170	Flux-Cored Arc Welding (FCAW) (1st 8 Weeks)	4
ISET-2151	Robotic Welding (2nd 8 Weeks)	4
PSY-1050	Introduction to Industrial/Organizational Psychology	3
	Credit Hours	**14**
Fourth Semester		
ENG-2151	Technical Writing	3
ISET-2140	Non-Destructive Testing (1st 8 Weeks)	3
ISET-2160	Structural Fabrication (2nd 8 Weeks)	4
MET-1300	Engineering Materials and Metallurgy	3
DEGR-XXXX	Arts and Humanities/Natural Science Elective	3
	Credit Hours	**16**
	Total Credit Hours	**62**