Industrial Welding Technology

ASSOC OF APPLIED SCIENCE

Major code: 2211
Department: Industrial Manufacturing and Controls
Chair: Justin Blazzard
Advising: Drew Pearson 541-881-5973

PROGRAM OVERVIEW
This degree provides training for entry-level skills and related technical knowledge necessary for advancement in the metals welding industry. Upon satisfactory completion students will be able to weld all types of joints, including piping, and perform oxyacetylene welding and cutting, shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, and fluxed cored arc welding. They will plan and layout work for drawings, blueprints and other written specifications; demonstrate knowledge of the welding properties of metals and alloys; and establish and maintain a safe working environment.
This degree is designed for students wishing to directly enter the workforce. It is not designed for transfer to a four-year institution, although some coursework may be transferable. Students who wish to transfer coursework are strongly encouraged to work closely with their TVCC advisor to develop a transfer plan and to identify and contact an advisor at their chosen transfer institution. A minimum grade point average of 2.0 is needed to graduate with a degree.

PROGRAM/DISCIPLINE OUTCOMES
Student who complete this area of study will be prepared to:

- Demonstrate proper safety procedures when performing minor troubleshooting repairs
- Devise maintenance routines for mechanical, hydraulic, and pneumatic systems.
- Employ appropriate diagnostic tools to troubleshoot, repair, and/or maintain production systems.
- Calculate total system amperage, voltage, and wattage.
- Connect motors, electrical connections and controllers to allow a Program Logic Controller (PLC} to properly operate a machine.
- Demonstrate correctly and perform periodic maintenance procedures.
- Troubleshoot system for errors or malfunctions.
- Apply correct procedures in setting up equipment to perform basic welds using OAW, SMAW, FCAW, and GTAW processes .

REQUIRED COURSES (90 CREDITS)
Courses are listed in suggested sequence.

YEAR 1

COURSE #	COURSE TITLE	CREDITS
-	Electives	3
-	AG 207-Ag Seminar OR HDEV 112-College Survival	1
- DRFT 112	GENERAL DRAFTING & SKETCHING WELDER	3
- INED 100	INTRO TO AUTOMATION/RENEWABLE	3
- INED 101	INTRO TO BASIC TROUBLESHOOTING	3
- INED 104	ELECT SYSTEMS TROUBLESHOOTING I	3
- INED 167	CAD I 2D DRAWING	4
- INED 212	INDUSTRIAL SAFETY & MANAGEMENT	3
- WELD 102	PIPE WELDING	3
- WELD 103	SHIELDED METAL ARC WELDING II	5
- WELD 120	WELDING SYMBOLS & PRINT READING	3
- WELD 150	BASIC WELDING I	5
- WELD 160	BASIC WELDING II	5
- WELD 296	WELDING FABRICATIONS PRACTICES	4

YEAR 2

COURSE #	COURSE TITLE	CREDITS
-	INED 156 - EMPLOYMENT STRATEGIES	1
-	Electives	2
-	Electives	3
- BA 204	TEAMWORK DYNAMICS	3
- HPE 120	FIRST AID & CPR	2
- INED 103	MECHANICAL SYSTEMS	3
- INED 113	BASIC HYDRAULICS	2
- INED 114	BASIC PNEUMATICS	3
- MATH 063	TECHNICAL MATH I	4
- WELD 104	GAS METAL ARC WELDING	3
- WELD 106	FLUX CORED ARC WELDING	3
- WELD 190	WELDING CODES, PROCEDURE & INSPECT	5
- WELD 297	WELDING FABRICATION PRACTICES II	2
- WELD 298	WELDING FABRICATION PRACTICES III	2
- WR 115	INTRO TO COLLEGE WRITING	4

Total number of credits 90