WELD - WELDING TECHNOLOGY

Liaison: Jeff Schultz (845-9486, jeff8@hawaii.edu)

Website: *www.honolulu.hawaii.edu/weld*

Faculty: Jeff Schultz, Alton Waiamau

Program Mission: The Welding Technology program's mission is to serve the community as a learning-centered, open door program that provides technical training to meet the demands of the welding industry and the needs of the individual. An open-exit option allows the students to identify their career objectives and participate in program exploration.

Program Description: The Welding curriculum is designed to meet the minimum skill standards established by the American Welding Society (AWS) for entry-level welders. Training is given in both theory and practical skills in the various phases of welding and cutting. This includes arc welding, plasma and air carbon arc cutting, oxyacetylene welding, TIG welding, MIG welding, gas metal and flux core arc welding, welding inspecting testing principles and fabrication techniques. Entry-level welders are employed in a wide range of industries that use welding and welding-related tasks. This range of industries includes small, medium, and large union and non-union facilities. Students have the option of pursuing a Certificate of Achievement or Associate of Applied Science degree.

Program Learning Outcomes (PLOs): Upon successful completion of the WELD program, students will be able to:

- Demonstrates integrity, motivation, dependability and reliability and willingness to learn.
- Demonstrates skills related to applied science, basic computers, applied mathematics/measurements, reading for information, business writing, listening and following directions, locating/using information and speaking/presentation.
- Demonstrates understanding of business fundamentals, teamwork, adaptability/flexibility, marketing and customer focus, planning and organizing, problem solving and decision-making and applied technology.
- Demonstrates competencies in manufacturing process development and design, production, maintenance installation and repair, supply chain logistics, quality assurance/continuous improvement and health and safety.
- Demonstrates welding fundamentals, processes and equipment, materials and metallurgy and welding safety.
- Demonstrates knowledge in safety and health, drawing and symbols, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW), Thermal Cutting, Oxygen Fuel Cutting (OFC), Plasma Arc Cutting (PAC), Carbon Arc Cutting (CAC) and Inspection.
- Demonstrates competencies in SMAW, GMAW, FCAW, GTAW, thermal cutting, OFC, PAC, CAC and inspection.

Program Requirements:

Program Prerequisites: *Placement into ENG 100; MATH 50 OR Placement into MATH 150 or higher*

Recommended Prep: *IS 20*

First Semester	CA Credits	AAS Credits
WELD 152 - Introduction to Arc I	*3*	*3*
WELD 154 - Introduction to Arc II	*2*	*2*
WELD 156 - Introduction to Arc III	*2*	*2*
WELD 158 - Introduction to Arc IV	*2*	*2*
IEDB 100 - Blueprint Reading and Drafting	*3*	*3*
*General Education Requirements - Natural Science**		*3-4*
	12	*15-16*

Second Semester	CA Credits	AAS Credits
WELD 160 - Advanced Arc Welding I	*2*	*2*
WELD 162 - Advanced Arc Welding II	*3*	*3*
WELD 164 - Advanced Arc Welding III	*3*	*3*
WELD 166 - Plasma and Air Carbon Arc Cutting	*1*	*1*
WELD 121 - Shop and Hand Tools	*2*	*2*
WELD 168 - Blueprint Reading for Welders	*3*	*3*
MATH 150 - Technical College Mathematics		*3*
	14	*17*

Third Semester	CA Credits	AAS Credits
WELD 170 - Oxyacetylene Welding I		*2*
WELD 172 - Oxyacetylene Welding II		*2*
WELD 174 - TIG Welding I		*2*
WELD 176 - TIG Welding II		*2*
WELD 178 - Fabrication Techniques		*4*
ENG 100 - Composition I		*3*
		15

Fourth Semester	CA Credits	AAS Credits
WELD 180 - Gas Metal and Flux Cored Arc Welding		*5*
WELD 182 - Welding Inspection Testing Principles		*1*
WELD 184 - Advanced Fabrication Techniques		*4*
*General Education Requirements **		*6*
		16
Minimum Credits Required	**26**	**63-64**

Cost of Textbooks/Supplies: The cost for textbooks, tools, PPE, and supplies for the 4- semester program is approximately $1500.00. Purchases of additional tools and textbooks may be required each semester.

Advisory Committee:
Glenn Euginio, Training Coordinator, Ironworkers Training Office, Local Union 625
Melvin McDermott, Owner/Operator, Hawaiian Iron Craft
Eugene Paris, Business Manager, Ironworkers Union Local 803
Paul Remigio, Industrial Sales, Gaspro Welding