Program Assessment Plan

Program: Welding

Contact Person: Joel Sims

Date Submitted/Revised: Nov 4, 2020

1. Program Maps

Please include below or attach a curriculum map linking program outcomes to courses. Also include a map indicating where in the program College Learning Outcomes and High Impact Practices are addressed.

Curriculum Map

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14
WLDG 100			B				B	B	B				B	
WLDG 110		B	B			B	B					B	B	
WLDG 111		B	B				B	B				B	B	
WLDG 117												B		
WLDG 145		B						B				B		
M191B		B												
WLDG 120			I		I		I		I			I		
WLDG 121			I		I	I	I	I				I	I	
WLDG 130		I										I		
WLDG 185			I		I		I		I					
WLDG 205													I	
WLDG 209						I	I		I	I				

Course	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COMX 102	I			I												
WRIT 104	I															
DDSN 114																R
WLDG 212					R	R		R		R				R		
WLDG 260									R		R			R		
WLDG 280			R		R			R								
WLDG 298	R			R												
BGEN 105				R												
WLDG 217													P			
WLDG 237					P	P	P									
WLDG 245	P					P	P	P				P				P
WLDG 281			P		P			P	P	P						
WRIT 121	P															

B= student ability to demonstrate the learning outcome is considered basic

I = student ability to demonstrate the learning outcome is considered introductory

R = student ability to demonstrate the learning outcome is reinforced, based on previous learning experiences

P= student ability to demonstrate the learning outcome is considered proficient

CLO alignment

Course	CLOs		
	Critical Thinking	Comm.	Prof.
WLDG 100			
WLDG 110			X
WLDG 111			

	Critical Thinking	Communication	Professionalism
WLDG 117		X	
WLDG 145	X		
M191B			
WLDG 120			X
WLDG 121			
WLDG 130	X		
WLDG 185			
WLDG 205			
WLDG 209			
COMX 102			
WRIT 104			
DDSN 114			
WLDG 212			
WLDG 260			
WLDG 280		X	X
WLDG 298			
BGEN 105			
WLDG 217		X	
WLDG 237			
WLDG 245	X		
WLDG 281			X
WRIT 121			

CLOs: Critical Thinking   Communication   Professionalism

Department/Program Assessment__X___   Welder qualification testing of various processes throughout the program.

2. Assessment Plan and Schedule

Individual faculty will complete reflections for the courses indicated based on the program outcomes assessment schedule. The director of teaching and learning innovation will draft annual assessment reports

Program Outcomes

PO1.   Demonstrate effective oral and written communication skills appropriate to the welding industry.

PO2.   Demonstrate measuring methods and apply mathematical concepts to solve problems related to welding.

PO3.   Demonstrate the ability to follow industry safety practices.

PO4.   Demonstrate industry work ethic and professionalism.

PO5.   Demonstrate basic knowledge about AWS (American Welding Society) D1.1, API (American Petroleum Institute) 1104, and ASME (American Society of Mechanical Engineers) Section IX welding codes with the ability to pass a welder qualification test in multiple processes according to these codes.

PO6.   Troubleshoot and critically think through problems with welding systems and processes.

PO7.   Demonstrate the ability to produce welds that meet visual inspection criteria based on AWS codes and industry standards in all positions on the five basic joint configurations with carbon steel, stainless steel, and aluminum, using Gas Metal Arc Welding (GMAW), Shielded Metal Arc Welding (SMAW), Flux Core Arc Welding (FCAW), and Gas Tungsten Arc Welding (GTAW).

PO8.   Plan, design, and fabricate a weldment to industry standards by combining skills related to the various processes taught in the program. This will include cutting, preparing, welding, and assembling projects to specified tolerances.

PO9.   Demonstrate the ability to set up and operate to industry standards Oxy-fuel, Air Carbon Arc Cutting, and Plasma Cutting equipment.

PO10.   Demonstrate the ability to perform pipe welds in multiple positions to industry standards and codes.

PO11.   Demonstrate a basic understanding of weld repair and equipment maintenance related to the welding field.

PO12.   Demonstrate the ability to interpret blueprints and welding symbols to accurately fabricate a product.

PO13.   Identify materials and apply the principles of metallurgy during the welding process to solve practical welding problems.

PO14.   Use Computer Aided Design software to: Draw and edit a 2D object, annotate a drawing, plot and scale drawings.