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Welding Program

Course Curriculum

Semester 01 (Tuition: \$3,530)

Course #	Course Title	Credits
31-442-310	Equipment Safety	1
Credits: 1 Lecture Hours: 9 Lab Hours: 27		
In this hands-on course students will set up machine guards, identify different personal protective equipment, demonstrate safety using a fork truck, and demonstrate welding safety as well as oxy-fuel safety.		
31-442-311	Oxyfuel Gas Cutting & Gouging	1
Credits: 1 Lecture Hours: 4 Lab Hours: 32		
In this hands-on class students will perform manual and machine (track burner) oxyfuel gas cutting as well as manual and machine oxyfuel gas gouging.		
31-442-312	Arc Cutting & Gouging	1
Credits: 1 Lecture Hours: 4 Lab Hours: 32		
In this hands-on course students will complete air carbon cutting and gouging as well as examine cut surfaces and edges of prepared base metal parts.		
31-442-313	Plasma Cutting & Gouging	1
Credits: 1 Lecture Hours: 4 Lab Hours: 32		
In this hands-on course students will complete plasma arc cutting as well as plasma arc gouging and will examine gouge surfaces and edges of prepared base metal.		
31-442-314	Oxyfuel Equipment	1
Credits: 1 Lecture Hours: 4 Lab Hours: 32		
In this hands on course, students will learn how to make external repairs on oxy-fuel equipment components, inspect for safety, and set up oxyfuel equipment for welding.		
31-442-315	Oxyfuel Brazing & Welding-Carbon Steel	1
Credits: 1 Lecture Hours: 4 Lab Hours: 32		
In this hands-on course students will learn how to make surfacing welds in the flat position, make fillet welds, and make groove welds on plain carbon steel.		
31-442-316	Oxyfuel Brazing & Welding-Stainless Steel	1
Credits: 1 Lecture Hours: 4 Lab Hours: 32		
In this hands-on course students will learn how to make fillet and groove welds in all positions on 3XX stainless steel using the Oxyfuel process in accordance with AWS specifications.		
31-442-320	SMAW - Equipment	1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course the student will identify SMAW equipment components as well as inspect those components for safety. The student will also set up SMAW equipment for welding plain carbon steel and 3XX stainless steel.

31-442-336 SMAW 2

Credits: 2 Lecture Hours: 8 Lab Hours: 64

In this hands-on course the learner will learn how to fillet and groove welds in all positions on plain carbon steel and 3XX stainless steel using SMAW process as well as perform SMAW weldments that pass visual inspection and in accordance with AWS specifications.

31-457-317 Forming & Folding Metal 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course students will learn to form and fold metal using a forming roll, power press break, and a box and pan brake. Students will also learn to bend pipe.

31-457-318 Fabricating 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course students will use different equipment to fabricate, including sawing equipment, drill and tap equipment, and hydraulic iron worker.

31-457-334 Fabrication Planning & Drawing 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course students will learn how to properly form blueprints as well as create a project through planning, drawing and fabricating phases.

31-804-305 Applied Mathematics 2

Credits: 2 Lecture Hours: 72

Students compute with rational numbers. They make and convert various measurements. Students use formulas to solve problems. They compute dimensions of geometric shapes. Students use statistical tools to represent and analyze data. They analyze various financial situations. Students use basic right triangle trigonometry to solve problems. In each topic area, students solve application problems.

32-442-308 Blueprint Reading-Welding 1 1

Credits: 1 Lecture Hours: 36

Students learn the basic concepts and fundamentals of blueprint reading. Students apply the use of basic mechanical drafting skills to basic shop sketching. Students develop skills in recognizing basic lines and views in reading a welding print.

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Semester 02 (Tuition: \$3,050)

Course #	Course Title	Credits
31-442-323	GTAW - Equipment	1
Credits: 1 Lecture Hours: 4 Lab Hours: 32		
In this hands-on course the student will identify GTAW equipment components as well as inspect those components for safety. The student will also set up GTAW equipment for welding plain carbon steel, aluminum and 3XX stainless steel.		
31-442-324	GTAW - Carbon Steel	1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course the learner will learn how to make fillet and groove welds in all positions on plain carbon steel using the GTAW process as well as perform GTAW weldments that pass visual inspection.

31-442-325 GTAW - Aluminum 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course students will learn to make groove and fillet welds in all positions on aluminum using the GTAW process in compliance with the AWS specifications.

31-442-326 GTAW - Stainless Steel 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course students will learn how to make fillet and groove welds in all positions on 3XX stainless steel using the GTAW process in accordance with AWS specifications.

31-442-327 GMAW - Equipment 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course the student will identify GMAW equipment components as well as inspect those components for safety. The student will also set up GMAW equipment for welding plain carbon steel, aluminum and 3XX stainless steel.

31-442-328 GMAW - Carbon Steel (S Process) 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course student will learn to make fillet and groove welds in all positions on plain carbon steel using the GMAW-S process in accordance with AWS Specifications.

31-442-329 GMAW - Aluminum 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course student will learn to make fillet and groove welds in all positions on Aluminum using the GMAW process in accordance with AWS Specifications.

31-442-330 GMAW - Stainless Steel 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course students will learn how to make fillet and groove welds in all positions on 3XX stainless steel using the GMAW process in accordance with AWS specifications.

31-442-331 GMAW - Carbon Steel (Spray Transfer) 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course student will learn to make fillet and groove welds in all positions on plain carbon steel using the GMAW- Spray Transfer process in accordance with AWS Specifications.

31-442-332 FCAW - Equipment 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course the student will identify FCAW equipment components as well as inspect those components for safety. The student will also set up FCAW equipment for welding plain carbon steel.

31-442-333 FCAW - Carbon Steel (Gas Shielded) 1

Credits: 1 Lecture Hours: 4 Lab Hours: 32

In this hands-on course the learner will learn how to make fillet and groove welds in all positions on plain

carbon steel using the FCAW (Gas Shielded) process as well as perform FCAW weldments that pass visual inspection.

31-801-310 Workplace Communication 2

Credits: 2 Lecture Hours: 72

Students apply oral, written, listening, and non-verbal skills to workplace situations. Students discover how to use communication as the key to solving workplace problems, resolving conflicts, working as members of a team, and effectively giving and receiving criticism. Students develop an understanding of diversity in the workplace, harassment issues, and the impact of substance abuse on the job.

32-442-309 Blueprint Reading-Welding 2 1

Credits: 1 Lecture Hours: 36

Students interpret the use of a wide variety of symbols and abbreviations used in welding and how they are applied to assembly and detailed prints. Students use their knowledge of welding symbols to assemble projects.

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Total Credits: 30

Estimated Total Tuition*: \$6,580

Tools/Equipment: \$300