

FLORIDA STATE COLLEGE AT JACKSONVILLE

NON-COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: PMT 0108

COURSE TITLE: Introduction to Welding

PREREQUISITE(S): None

COREQUISITE(S): None

TOTAL CONTACT HOURS: 125

(For Office Use Only:
Vocational Credits 4.0)

FACULTY WORKLOAD POINTS: 4.16

STANDARDIZED CLASS SIZE
ALLOCATION: 20

COURSE DESCRIPTION:

This course is designed to familiarize students with the various welding processes and give the basic knowledge and skills to perform satisfactory welds using each process. The processes covered will include Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW), and Oxyacetylene Welding (OAW). Students will be required to weld lap, tee, and joints in the flat and horizontal positions utilizing each welding process. Furthermore, a visual inspection by the instructor will determine the acceptability of the welded joint. Oxyacetylene and plasma cutting will also be covered during this course. The instruction will be individualized and will consist of classroom instruction and laboratory assignments. Students will use information contained in the textbook, workbook, videotapes, and instructions and demonstrations by the instructor to complete the assignments. Students must purchase the textbook, workbooks, and all personal equipment.

SUGGESTED TEXT(S): The Welding Guide/Hobart
Modern Welding Technology, Cary (Optional)

IMPLEMENTATION DATE: Fall Term, 1998 (991)

REVIEW OR MODIFICATION DATE: Fall Term, 2002 (20031)
Fall Term 2008 (20091) - Outline Review 2007
Summer Term, 2010 (20103) - Proposal 2010-09

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Personal Skills	10
A. Orientation B. Safety C. Communication skills D. Employability skills	
II. Oxygen-Acetylene Flame Cutting	36
A. Basic Operation B. Fuel Gauges C. Tip Selection D. Manual and Machine flame Techniques	
III. Oxyfuel Gas Cutting Principles and Practices	79
A. Perform equipment inspections B. Perform straight cutting operations C. Set up for plain carbon steel machine OFC operations D. Perform bevel cutting operations	

PROGRAM TITLE: Applied Welding Technologies
 COURSE TITLE: Introduction to Welding
 CIP NUMBER: 0648.050802

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

01.0 APPLY BASIC SHOP SKILLS -- The student will be able to be:

- 01.01 Apply Communication and leadership skills.
- 01.02 Apply safety and health practices.

02.0 APPLY BASIC OXYFUEL GAS CUTTING PRINCIPLES AND PRACTICES -- The student will be able to:

- 02.01 Perform external inspections of equipment and accessories.
- 02.02 Make minor repairs to equipment and accessories.
- 02.03 Set up manual OFC operations for plain carbon steel.
- 02.04 Operate manual oxyfuel cutting equipment.
- 02.05 Perform straight cutting operations using manual oxyfuel cutting process on plain carbon steel.

APPLY BASIC SHIELDED METAL ARC WELDING (SMAW) SKILLS--The student will be able to:

- 03.01 Perform external inspections of SMAW equipment and accessories.
- 03.02 Make minor repairs to SMAW equipment and accessories.
- 03.03 Set up shielded metal arc welding operations on plain carbon steel.
- 03.04 Operate shielded metal arc welding equipment.
- 03.05 Make fillet welds, all positions, on plain carbon steel.

04.0 DEMONSTRATE EMPLOYABILITY SKILLS--The student will be able to:

- 04.01 Conduct a job search.
- 04.02 Secure information about a job.
- 04.03 Identify documents, which may be required when applying for a job interview.
- 04.04 Complete a job application form correctly.
- 04.05 Demonstrate competence in job interview techniques.
- 04.06 Identify or demonstrate appropriate responses to criticism from employer, supervisor or other employees.
- 04.07 Identify acceptable work habits.
- 04.08 Demonstrate knowledge of how to make job changes appropriately.
- 04.09 Demonstrate acceptable employee health habits.
- 04.10 Demonstrate knowledge of the "Right-to-Know Law".

LIST PERFORMANCE STANDARDS ADDRESSED: (Continued)

NUMBER(S): TITLES(S):

05.0 DEMONSTRATE APPROPRIATE COMMUNICATION SKILLS--The student will be able to:

- 05.01 Write logical and understandable statements, or phrases, to accurately fill out forms/invoices commonly used in business and industry.
- 05.02 Read and understand graphs, charts, diagrams, and tables commonly used in this industry/occupational area.
- 05.03 Read and follow written and oral instructions.
- 05.04 Answer and ask questions coherently and concisely.
- 05.05 Read critically by recognizing assumptions and implications and by evaluating ideas.
- 05.06 Demonstrate appropriate telephone/communication skills.

09.0 APPLY INTERMEDIATE OXYFUEL GAS CUTTING PRINCIPLES AND PRACTICES--The student will be able to:

- 09.01 Apply intermediate manual oxyfuel gas cutting skills.
- 09.02 Perform shape cutting operations on plain carbon steel.
- 09.03 Perform bevel cutting operations on plain carbon steel.
- 09.04 Remove weld metal on plain carbon steel using weld washing techniques.
- 09.05 Apply machine oxyfuel gas cutting (track burner) skills.
- 09.06 Perform safety inspections of equipment and accessories.
- 09.07 Make minor external repairs to equipment and accessories.
- 09.08 Set up for plain carbon steel machine OFC (track burner) operations.
- 09.09 Operate machine oxyfuel gas cutting (track burner) equipment.
- 09.10 Perform straight cutting operations on plain carbon steel.
- 09.11 Perform bevel cutting operations on plain carbon steel.



NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

Section 1	
COURSE PREFIX AND NUMBER: <u>PMT0108</u>	SEMESTER CREDIT HOURS (CC): _____ CONTACT HOURS (NCC): <u>125</u>
COURSE TITLE: <u>Introduction to Welding</u>	

Section 2
TYPE OF COURSE: (Click on the box to check all that apply)

<input type="checkbox"/> AA Elective	<input type="checkbox"/> AS Required Professional Course	<input type="checkbox"/> College Prep
<input type="checkbox"/> AS Professional Elective	<input type="checkbox"/> AAS Required Professional Course	<input type="checkbox"/> Technical Certificate
<input type="checkbox"/> Other _____	<input checked="" type="checkbox"/> PSAV	<input type="checkbox"/> Apprenticeship
<input type="checkbox"/> General Education: (For General Education courses, you must also complete Section 3 and Section 7)		

Section 3 (If applicable)
INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:

<input type="checkbox"/> Communications	<input type="checkbox"/> Social & Behavioral Sciences	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Humanities	

Section 4
INTELLECTUAL COMPETENCIES:

<input type="checkbox"/> Reading	<input type="checkbox"/> Speaking	<input type="checkbox"/> Critical Analysis	<input type="checkbox"/> Quantitative Skills	<input type="checkbox"/> Scientific Method of Inquiry
<input type="checkbox"/> Writing	<input type="checkbox"/> Listening	<input type="checkbox"/> Information Literacy	<input type="checkbox"/> Ethical Judgment	<input type="checkbox"/> Working Collaboratively

	LEARNING OUTCOMES	METHOD OF ASSESSMENT
•	Describe and identify welding symbols	Test scores 70% or better
•	Safety inspections of oxyfuel gas equipment and accessories	
•	Ability to do basic oxy fuel gas cutting.	Lab projects pass or fail per instructor evaluation on Weld Bend test.
•		
•		
•		
•		
•		

Section 6

Name of Person Completing This Form: Gary Krupa Date: 11/2009