Wharton County Junior College

Administrative Master Syllabus

Course Information

Course Title	Introduction to Shielded Metal Arc Welding
Course Prefix, Num. and Title	WLDG 1428
Division	Vocational Science: Welding Technology
Department	Welding Technology
Course Type	WECM Course
Course Catalog Description	An introduction to the shielded metal arc welding process. Emphasis placed on power sources, electrode selection, oxy-fuel cutting and various joint designs. Instruction provided in SMAW fillet welds in various positions.
Pre-Requisites	none
Co-Requisites	none

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours: Lab/Other Hours	4:3:4
Equated Pay Hours	5
Lab/Other Hours Breakdown: Lab Hours	4
Lab/Other Hours Breakdown: Clinical Hours	Enter Clinical Hours Here.
Lab/Other Hours Breakdown: Practicum Hours	Enter Practicum Hours Here.
Other Hours Breakdown	List Total Lab/Other Hours Here.

Approval Signatures

Title	Signature	Date
Prepared by:	Aaron Dittmar Digitally signed by Aaron Dittmar Date: 2020.08.13 11:56:09 -05'00'	
Department Head:	Aaron Dittmar Digitally signed by Aaron Dittmar DN: cn=Aaron Dittmar, o=Wharton Country Junior college, ou=Welding Program Director, email=Dittmara@wcjc.edu, c=US Date: 2020.08.04 15:25:34 -05'00'	
Division Chair:	Timothy Guin Digitally signed by Timothy Guin DN: cn=Timothy Guin, o=Division Chair, ou=VOCS, email=guint@wcjc.edu, c=US Date: 2020.08.13 13:25:35 -05'00'	
Dean/VPI:	Paul J. Quinn Digitally signed by Paul J. Quinn Date: 2020.08.14 10:43:41 -05'00'	
Approved by CIR:	Paul J. Quinn Digitally signed by Paul J. Quinn Date: 2020.08.14 10:44:00 -05'00'	

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

The use of Shielded Metal Arc Welding process in various Fillet positions: 1F (Flat Fillet), 2F(Horizontal Fillet), 3F (Vertical Fillet) and 4F (Overhead Fillet); including lap-joints and butt-joints. Student will be proficient in all positions. All welds will be assessed by visual inspection.

Course Learning Outcomes:

- Select electrodes and amperage settings for various thicknesses of materials and welding positions

- Define principles of arc welding

- Explain electrode classifications

- Perform SMAW operations in various positions using selected electrodes and different joint designs

- Explain shop safety rules, safety rules for tools and equipment, and personal visual tests on each safety rules.

Methods of Assessment:

- Periodic Written Examinations.

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- Perform welds per AWS code acceptance criteria.

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Required text(s), optional text(s) and/or materials to be supplied by the student:

Welding Fundamentals

Suggested Course Maximum:
20

List any specific or physical requirements beyond a typical classroom required to teach the course.
none
Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

AWS Assignments 40%
Laboratory Assignments 40%
Final Exam 20%
Total 100%

Curriculum Checklist:

☐**Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.

☐**Administrative WCJC Core Course**. Attach the Core Curriculum Review Forms

- ☐Critical Thinking
- ☐Communication
- ☐Empirical & Quantitative Skills
- ☐Teamwork
- ☐Social Responsibility
- ☐Personal Responsibility

☒**WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist