



Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title - Advanced Gas Metal Arc Welding (GMAW)

Course Prefix and Number - WLDG 2447

Department - Welding Technology

Division – Vocational Science

Course Type: (check one)

- Academic General Education Course (from ACGM – but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course: Y or N)

Semester Credit Hours #: Lecture hours#: Lab/other hours # **4:3:4**

Equated Pay hours for course - 5

Course Catalog Description - Advanced topics in Gas Metal Arc Welding (GMAW). Includes welding in various positions and directions.

Prerequisites/Co requisites – WLDG 1457 or Division Chair approval

List Lab/ Other Hours
Lab Hours 4
Clinical Hours
Practicum Hours
Other (list)

Prepared by Roy Jones **Date** 10-19-11

Reviewed by department head Roy Jones **Date** 10-19-11

Accuracy verified by Division Chair Terry David Lynch **Date** 3/27/2012

**Approved by Dean of Vocational Instruction or
Vice President of Instruction** Lac **Date** 11-9-12



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

Utilize architectural terms, symbols, residential construction materials and processes to produce a set of residential construction drawings including site plan, floor plan, elevations, wall sections, schedules, details and foundation plans using reference materials.

II. Course Learning Outcomes

Course Learning Outcome	Method of Assessment
<ul style="list-style-type: none"> -Describe safety rules and equipment use -Explain importance of a Material Safety Data Sheet (MSDS) -Describe welding positions with various joint designs -Calculate total cost of welding multiple pass t-joints using the GMAW process -Demonstrate proficiency in various welding positions -Describe the effects of welding parameters in GMAW -Diagnose welding problems and perform visual inspection 	<ol style="list-style-type: none"> 1. Attend demonstrations of how to safely plan laboratory activities before starting work. 2. Practice 1F (flat) T-joint fillet welds using proper gas and filler material selections. 3. Adjust machine correctly and proceed with 2F (horizontal) T-joint fillet procedures. 4. Adjust machine correctly and proceed 3F (vertical) T-joint fillet procedures. 5. Adjust machine correctly and proceed 4F (overhead) T-joint fillet procedures. 6. Perform 1G flat and 2G horizontal V-butt. 7. Perform 3G vertical V-butt and 4G overhead V-butt

III. Required Text(s), Optional Text(s) and/or Materials to be Supplied by Student.

Modern Welding Technology

Supplemental Readings: Gas Metal Arc Welding Handbook, by William H. Minnick: Goodheart-Willcox Co., 1988. Gas Metal Arc Welding, Published by Hobart Brothers Co., Troy, Ohio 45373, 1980. Modules and Displays. Handouts.

IV. Suggested Course Maximum - 15

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

None.

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

Student learning outcomes will be measured through the critique of weekly laboratory assignments and through periodic examinations. The final course will be base on the following:

Department Assignments	30%
Laboratory Assignments	50%
Final Exams	20%
Total	100%

100-90 = A
89-80 = B
79-70 = C
69-60 = D
Below 60 = F

I = Incomplete (to be used in case of emergencies or illness)

W = Student Withdrawal (either by student or by instructor)

VII. Curriculum Checklist

- **Academic General Education Course** (from ACGM – but not in WCJC Core)
No additional documentation needed

- **Academic WCJC Core Course**
Attach the Core Curriculum Checklist, including the following:

- Basic Intellectual Competencies
- Perspectives
- Exemplary Educational Objectives

- **WECM Courses**
If needed, revise the Program SCANS Matrix & Competencies Checklist.