Wharton County Junior College

Administrative - Master Syllabus
COVER SHEET

***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 - Orbital Tube Welding
Course Prefix and Number - WLDG 2450
Department - Welding Technology **Division** - VOCS
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 - Orbital tube welding in various industries. Special emphasis on the disciplines of orbital tube welding, including cutting, facing, and development of advanced welding procedures, using high frequency welding equipment.

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

Prerequisites/Co requisites - WLDG 1434, 1457, 1435, or welding department chair approval.

Approvals – the contents of this document have been reviewed and are found to be accurate.

Prepared by Roy Jones	Signature	Date 3/4/10
Department Head Roy Jones	Signature	Date 3/4/10
Division Chair David Clayton	Signature	Date 3/3/10
Vice President of Instruction or Dean of Vocational Instruction Leigh Ann Collins, Dean	Signature	Date 3-4-10

I. Topical Outline –

Orbital tube welding in various industries including, oil refineries and chemical plants, the nuclear industry and power generating plants. Special emphasis on the disciplines of orbital tube welding, including cutting, facing, and development of weld procedures on carbon steel, stainless and various other metal alloys requiring the use of high frequency welding equipment. Instruction and use of the required safety equipment related to the field.

II. Course Learning Outcomes

Course Learning Outcome	Method of Assessment
Describe the fitting, tubing, and tungsten used in the orbital tube welding process. Demonstrate skills in orbital tube welding, cutting, and facing in various alloys, including carbon steel, stainless, and tungsten. Demonstrate the proper use and care of high frequency welding equipment. Demonstrate 80% proficiency on skills projects by visual examination and bend tests. Demonstrate proper use and care of safety procedures and equipment.	Visual examination and inspection. Bend tests. Written examinations. Students must maintain 70% average and satisfactorily pass all inspections.

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

Gas Tungsten Arc Welding Handbook, by William H. Minnick; Published by The Goodheart-Willcox Company, Inc. , 2006.

IV. Suggested Course Maximum – 30

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

Standard welding equipment includes: High Frequency Metal Arc Welding Machines, 100% duty cycle, 275 AMP rated, pipe cutting equipment, measuring tape, soap stone, and fitters blue book. Required safety equipment: safety glasses, gloves, safety shoes. PowerPoint capability and Internet connectivity.

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
Unit Exams: 30%
Laboratory Practicals: 50%
Final Exam: 20%

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

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**
Attach the following:
- Program SCANS Matrix