**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** - Introduction to Gas Tungsten Arc Welding (GTAW)

**Course Prefix and Number** - Welding 1434

**Department** - Welding Technology

**Division** – Vocational Science

**Course Type:**
- [ ] Academic General Education Course (from ACGM – but not in WCJC Core)
- [ ] Academic WCJC Core Course
- [x] 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

**Equate Pay hours for course** - 5

**Course Catalog Description** - Principles of gas tungsten arc welding (GTAW), including setup, GTAW equipment. Instruction in various positions and joint designs.

**Prerequisites/Co requisites** – WLDG 1413, WLDG 1428, WLDG 1430 or approval of the Division Chair.

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**Prepared by**  Aaron Dittmar  
**Date 7/21/2014**

**Reviewed by department head**  Aaron Dittmar  
**Date 7/21/2014**

**Accuracy verified by Division Chair**  Tim Guin  
**Date 7/21/2014**

**Approved by Dean of Vocational Instruction or Vice President of Instruction**  Amy LaPan  
**Date 8/8/2014**
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):

Safety procedures in welding environments, use and application of welding equipment, use and application of blueprints in welding, performing math commonly used in welding, and create parts using information provided in blueprints to the given specifications.

II. Course Learning Outcomes

<table>
<thead>
<tr>
<th>Course Learning Outcome</th>
<th>Method of Assessment</th>
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<tbody>
<tr>
<td>-Correctly make a groove weld using the TIG process</td>
<td>A visual test and bend test</td>
</tr>
<tr>
<td>-Describe safety rules and equipment</td>
<td>Weekly laboratory assignments</td>
</tr>
<tr>
<td>-Explain importance of a Material Safety Data Sheet (MSDS)</td>
<td>Periodic examinations</td>
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<tr>
<td>-Describe various joint designs</td>
<td></td>
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<tr>
<td>-Describe the effects of welding parameters in GTAW</td>
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<tr>
<td>-Weld various structural materials</td>
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</tbody>
</table>

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

IV. Suggested Course Maximum - 20

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

<table>
<thead>
<tr>
<th>Department Assignments</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Assignments</td>
<td>50%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

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)
Department assignments may be composed of a combination of homework assignments, a safety review assignment, in class short quizzes on lecture/reading material, and/or short papers.

Laboratory assignments may be composed of a series of weld assessments on groove welds using the TIG process.

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.