WAF 288 Gas Metal Arc Welding Effective Term: Fall 2012

Course Cover

Division: Vocational Technologies Department: Welding and Fabrication Discipline: Welding and Fabrication Course Number: 288 Org Number: 14610 Full Course Title: Gas Metal Arc Welding Transcript Title: Gas Metal Arc Welding Is Consultation with other department(s) required: No Publish in the Following: College Catalog , Time Schedule , Web Page Reason for Submission: Course Change Change Information: Consultation with all departments affected by this course is required. Course discipline code & number Rationale: This course began as a Study Problem and properly numbered 289. In fall 2001, the course was approved to run as a regular credit course - the course number should have

the course was approved to run as a regular credit course - the course number should have been changed to a non-Study Problems number.

Proposed Start Semester: Fall 2012

Course Description: This course focuses on gas metal arc welding (GMAW), which is more commonly known as metal inert gas (MIG) welding. Welding is done on steel with solid and flux cored wires in various positions. Welding theories and proper welding techniques are addressed along with filler metal classification, identification and proper selection for specific applications. The course was previously WAF 289, MIG Welding.

Course Credit Hours

Variable hours: No Credits: 4 Lecture Hours: Instructor: 30 Student: 30 Lab: Instructor: 90 Student: 90 Clinical: Instructor: 0 Student: 0

Total Contact Hours: Instructor: 120 Student: 120 Repeatable for Credit: NO Grading Methods: Letter Grades Audit Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math Requisites

Prerequisite

WAF 105 minimum grade "C"; may enroll concurrently

General Education Request Course Transfer

Student Learning Outcomes

1. Recognize and apply welding vocabulary. Assessment 1

Assessment T Assessment Tool: Written exam Assessment Date: Fall 2012 Assessment Cycle: Every Three Years Course section(s)/other population: All Number students to be assessed: All How the assessment will be scored: Answer key Standard of success to be used for this assessment: 80% of students will score 90% or higher. Who will score and analyze the data: Departmental faculty

2. Recognize and interpret welding theory.

Assessment 1 Assessment Tool: Written exam Assessment Date: Fall 2012 Assessment Cycle: Every Three Years Course section(s)/other population: All Number students to be assessed: All How the assessment will be scored: Answer key Standard of success to be used for this assessment: 80% of students will score 90% or higher. Who will score and analyze the data: Departmental faculty

3. Gas metal arc weld a butt, lap and tee joint in the basic flat and horizontal positions. Assessment 1

Assessment Tool: Welded samples Assessment Date: Fall 2012 Assessment Cycle: Every Three Years Course section(s)/other population: All Number students to be assessed: All How the assessment will be scored: The welds be scored as pass or fail in meeting AWS D1.1 code. Standard of success to be used for this assessment: 80% of students will

create welds in accordance with AWS D1.1 code. Who will score and analyze the data: Departmental faculty

4. Gas metal arc weld a butt, lap and tee joint in the advanced vertical and overhead positions.

Assessment 1

Assessment Tool: Welded samples Assessment Date: Fall 2012 Assessment Cycle: Every Three Years Course section(s)/other population: All Number students to be assessed: All How the assessment will be scored: The welds will be scored as pass or fail in accordance with AWS D1.1 code. Standard of success to be used for this assessment: 80% of students will create welds in accordance with AWS D1.1 code.

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Properly set-up GMAW equipment for use.

Matched Outcomes

2. Demonstrate safe welding and equipment operating procedures.

Matched Outcomes

3. Run a bead in all positions on 1/4" and 14 GA steel with solid wire.

Matched Outcomes

4. Weld a butt, lap, tee and corner joint on 1/4" and 14 GA steel in the flat position with solid wire.

Matched Outcomes

5. Weld a butt, lap, tee and corner joint on 1/4" and 14 GA steel in the horizontal position with solid wire.

Matched Outcomes

6. Weld a butt, lap, tee and corner joint on 1/4" and 14 GA steel in the vertical position with solid wire.

Matched Outcomes

7. Weld a butt, lap, tee and corner joint on 1/4" and 14 GA steel in the overhead position with solid wire.

Matched Outcomes

8. Weld a V-groove joint on 1/2" steel in the horizontal, vertical and overhead positions with solid wire.

Matched Outcomes

- 9. Run a stringer and a weave bead in the flat position on 1/4" steel with flux cored wire. **Matched Outcomes**
- 10. Weld a butt, lap and tee joint on 1/4" steel in the flat position with flux cored wire. **Matched Outcomes**
- 11. Demonstrate the understanding of MIG welding equipment by trouble shooting and correcting common problems with MIG welding equipment. Matched Outcomes
- 12. Explain the differences between the GMAW transfers. Matched Outcomes

New Resources for Course

Course Textbooks/Resources

Textbooks Manuals Periodicals Software Equipment/Facilities Level III classroom

Reviewer Action Date Faculty Preparer: Glenn Kay II Faculty Preparer Jan 11, 2012 Department Chair/Area Director: Glenn Kay II Recommend Approval Jan 11, 2012 Dean: Ross Gordon Recommend Approval Jan 26, 2012 Vice President for Instruction: Stuart Blacklaw Feb 20, 2012 Approve