MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

Course Outline

Course Title: Stainless Steel Welding
Semester Course Prefix and Number: Weld 2275
Old Quarter Course Prefix and Number: Weld 2275
Submitted By: D. Mroz
Approval Date:
Revision Date: 3/18/10

Number of Credits: 2
Semester(s) Offered: Fall
Class Size: 24
Negotiated by AASC on: (date)
Number of Lecture Credits:
Number of Lab Credits: 2 **Number of Lab Hours:** 4
Number of Studio/Demonstration/Internship Credits:

Course Purpose Code:

_____ **0 –** Developmental Courses
__x__ **1 –** Non-transferable
_____ **2 –** Technical course related to career programs
_____ **3 –** College course which has the primary goal of applying certain concepts (e.g. vocal ensemble)
_____ **4 –** Other college course not considered a part of MNTC (e.g. computer science, health, physical education)
_____ **5 –** Course which is intended to fulfill the Minnesota Transfer Curriculum (MNTC) requirements or intended for transfer.
_____ **9 –** Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

Catalog Description:

This course covers the physical and mechanical properties of stainless steel as applicable to the welder. A variety of stainless steel weldments will be made in all positions. Destructive testing will be done on some weldments and the effects of technique, heat, and metallurgy will be examined.

Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): A 2.0 GP in Weld 1224 or consent of instructor.
Reading Prerequisite:
Composition Prerequisite:
Mathematics Prerequisite:

Career Programs and Transfer Majors Accessing this Course:

Any career program utilizing welding: IT degree, IT Management, Welding Management, Non Destructive Testing.

Minnesota Transfer Curriculum Goal(s) partially met by this course if applicable:

(Notes: No more than two goals may be met by any one course. Curriculum Committee review and the Chief Academic Officer's approval are required.)

0. __x__ None
1. _____ Communications
2. _____ Critical Thinking
3. _____ Natural Sciences
4. _____ Mathematical/Logical Reasoning
5. _____ History and the Social and Behavioral Sciences
6. _____ The Humanities and Fine Arts
7. _____ Human Diversity
8. _____ Global Perspectives
9. _____ Ethical and Civic Responsibility
10. _____ People and the Environment

Learning Outcomes: (including any relevant competencies listed in the Minnesota Transfer Curriculum)

Upon completion of this course, the student will be able to:

- Identify filler metals by their AWS classifications
- Show understanding of base metals and filler metals by choosing the correct filler metal for certain basic applications
- Understand and describe electrical concepts applicable to procedures used.
- Demonstrate knowledge of welding accessories
- Demonstrate knowledge of welding safety equipment and clothing
- Understand and use basic welding terminology
- Describe general weld joint configurations
- Demonstrate the ability to prepare joints by manual and semi-automatic processes.
- Demonstrate rod angles & rod manipulation techniques
- Understand problems encountered during the welding process
- Demonstrate the ability to resolve problems encountered during the welding process
- Be able to recognize problems with and make minor repairs to welding equipment
- Understand acceptance criteria for AWS D1.6 code.

Student Assessment Methods:

Visual and destructive testing of welded materials. Evaluated lab assignments.

Use of Instructional Technology: (includes software, interactive video and other instructional technologies):

The student will supply all materials from the "Required Tool and Safety Equipment" list.

Additional Special Information: (special fees, directives on hazardous materials, etc.)

Transfer Information: (Please list colleges/majors that accept this course in transfer.)

Course Outline Revision History:

Last Revised May2005. This course changes from a 3 credit lab to a 2 credit lab.

Approvals:

Body	Representative Signatures	Date
Curriculum Committee		
Faculty Association		
Academic Affairs Standards Committee		
Chief Academic Officer		

Distribution: Original – Instructional Services
Copies: Transfer Specialist, Originating Faculty Member, Records
Revised: March 2010