

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

Course Outline

Course Title: Flux Core Arc Welding III
Semester Course Prefix and Number: Weld 2243
Old Quarter Course Prefix and Number: Weld 2243

Submitted By: D. Mroz
Approval Date:
Revision Date: 3/18/10

Number of Credits: 4
Semester(s) Offered: Sp
Class Size: 24
Negotiated by AASC on: (date)
Number of Lecture Credits:
Number of Lab Credits: 4
Number of Lab Hours: 8
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:

The purpose of this course is to afford the student the opportunity to become proficient welding plate and structural steel in all positions using Flux Core Arc Welding (self and dual shield) processes. AWS D1.1 and D1.6 codes will be followed.

Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): A 2.5 average or better in Weld 1281a, 1281b, 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 D1.1 and D1.8codes.

Student Assessment Methods:

Visual and destructive testing of welded materials.

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

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

The student will supply all materials from the “Required Tools and Safety Equipment” list.

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

Course Outline Revision History:

Last revised May 2005. Course title changed from Flux Core Arc Welding II. Credits changed from 3 lab credits to 4 lab credits.

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