## MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

# Course Outline

**Course Title:** Intro to Thermal Cutting Processes
**Semester Course Prefix and Number:** Weld 1231
**Old Quarter Course Prefix and Number:**
**Submitted By:** T. Baldwin
**Approval Date:** Oct 2013
**Revision Date:** Oct 2013

**Number of Credits:** 1
**Semester(s) Offered:** Fall
**Class Size:** 24
**Negotiated by AASC on: (date)**
**Number of Lecture Credits:** 1
**Number of Lab Credits:** 0
**Number of Lab Hours:** 0
**Number of Studio/Demonstration/Internship Credits:**

**Course Purpose Code:**

_____ **0 –** Developmental Courses
_____ **1 –** Non-transferable
__X__ **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 AWS National Skills Standards related to Thermal Cutting Processes and the related safety practices. The student will become familiar with process components, limitations, advantages and disadvantages of the OFC, PAC, CAC-A, and other various types of thermal cutting processes.

**Prerequisites and/or recommended entry skills/knowledge:**

Course Prerequisite(s): None
Reading Prerequisite:
Composition Prerequisite:
Mathematics Prerequisite:

**Career Programs and Transfer Majors Accessing this Course:**

Welding, Welding Engineering, any trades/technical area utilizing welding

**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 | 6. | _____ | The Humanities and Fine Arts |
| 1. | _____ | Communications | 7. | _____ | Human Diversity |
| 2. | _____ | Critical Thinking | 8. | _____ | Global Perspectives |
| 3. | _____ | Natural Sciences | 9. | _____ | Ethical and Civic Responsibility |
| 4. | _____ | Mathematical/Logical Reasoning | 10. | _____ | People and the Environment |
| 5. | _____ | History and the Social and Behavioral Sciences | | | |

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

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

- Describe the theory and practical use of the OFC Process, equipment, and procedures

- Describe the theory and practical use of the PAC Process, equipment, and procedures
- Describe the theory and practical use of the CAC-A Process, equipment, and procedures
- List and implement all pertinent safety rules concerning thermal cutting processes
- Communicate with typical industry vocabulary

**Student Assessment Methods:**
Written and oral examinations

**Use of Instructional Technology**: (includes software, interactive video and other instructional technologies):
May use any or all of the following: Videos, PowerPoint presentations, and/or Internet

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

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

**Affiliated Mesabi Range College Courses and Programs:**

**Approvals:**

| Body | Representative Signatures | Date |
|---|---|---|
| **Faculty Association** | | |
| **Academic Affairs Standards Committee** | | |
| **Chief Academic Officer** | | |

**Distribution**: Original – Instructional Services
**Copies**: Transfer Specialist, Originating Faculty Member, Records
**Revised**: December 2012