MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

Course Outline

Course Title:	**Introduction to Industrial Maintenance**	**Submitted By:**	**Dennis Fleetwood, Ron Markovich, and Keith Mattson**
Semester Course Prefix and Number:	**IMRT 1215**	**Approval Date:**	
Old Quarter Course Prefix and Number:		**Revision Date:**	

Number of Credits:	**3**	**Number of Lecture Credits:**	**2**
Semester(s) Offered:		**Number of Lab Credits:**	**1**
		Number of Lab Hours:	**2**
Class Size:	**36**	**Number of Studio/Demonstration/Internship Credits:**	
Negotiated by AASC on: (date)			

Course Purpose Code:

_____ **0 –** Developmental Courses
_____ **1 –** Non-transferable, General Education
__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 general education (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 introduce the student to the field of industrial maintenance. The course will provide a foundation upon which courses in year two of the industrial Technology Program will be built. Students will learn the fundamentals of bearings, lubrication, machine safety, and rigging. Students will be exposed to mechanical devices such as measuring tools, common hand tools, common power tools and the fundamentals of pumps and valves. Students will demonstrate predictive maintenance principles prior to the specialized training received after graduations.

Prerequisites and/or recommended entry skills/knowledge:

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

Career Programs and Transfer Majors Accessing this Course:

Industrial Maintenance Technology

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
6. _____ The Humanities and Fine Arts
7. _____ Human Diversity
8. _____ Global Perspectives
9. Ethical and Civic Responsibility

4. ____ Mathematical/Logical Reasoning
5. ____ History and the Social and Behavioral Sciences
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:

- Demonstrate knowledge regarding basic industrial maintenance.
- Describe predictive maintenance and its effectiveness
- Identify the general needs and uses of lubrications.
- Identify and inspect components (including pumps, crusher, kiln, etc.) and tools
- Illustrate the flow-through facility with industrial drawings
- Demonstrate proper maintenance practices in a lab environment
- Develop the "hands-on skills" required for a broad range of maintenance tasks

Student Assessment Methods:
Observation of practical skills and application using a rubric, class participation, quizzes, and exams.

Use of Instructional Technology: (includes software, interactive video and other instructional technologies):
Tests, Hands-on projects, videos, software

Outline or Statement of Major Course Content:

- Maintenance System: Overview and Philosophy
- Proactive, preventative, predictive breakdown (philosophy of series of systems and overview of maintenance processes)
- Lubrication – general needs and use
- Broad exposure to systems – area's specifics
- Component identification – includes pump, crusher, kiln, type of kiln
- Tool identification – visual inspection and proper use
- Flow-through facility with industrial drawings

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

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

Approvals:

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

Distribution: Original – Administrative Office
Copies: Curriculum Committee Chair, AASC Chair, Transfer Specialist, Originating Faculty Member, Scheduler, Records, Student Services, Learning Center, Library
Revised: October 2006