

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE

Course Outline

Course Title: Hydraulics & Schematics

Submitted By: Waldorf,
Parker, Hill

Semester Course Prefix and Number: IMT 2261

Approval Date:

Old Quarter Course Prefix and Number:

Revision Date: 11-30-11

Number of Credits: 3

Number of Lecture Credits: 1

Semester(s) Offered:

Number of Lab Credits: 2

Number of Lab Hours:

Class Size: 35

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:

This course covers the fundamentals of schematic diagrams. It is designed to provide the student with a strong foundation for advanced work. The student will learn piping diagrams and fluid power diagrams. The student will study fundamental hydraulic principles.

Prerequisites and/or recommended entry skills/knowledge:

Course Prerequisite(s): IMT 1235, IMT 1247

Reading Prerequisite:

Composition Prerequisite:

Mathematics Prerequisite:

Career Programs and Transfer Majors Accessing this Course:

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:

- Perform necessary math functions
- Demonstrate hydraulic system safety
- Read schematics, symbols, schematic flow, piping diagrams, single-line piping diagrams, fluid power diagrams, hydraulic diagrams, pneumatic diagrams, industrial schematics, and welding symbols
- Assemble basic linear circuit, regenerative circuit, sequencing circuit, sequencing circuit with limited clamping pressure, counter balance circuit, circuit with speed control, traverse and feed circuit, sequencing circuit with speed control, rotary motion circuit, and speed control rotary drive

Student Assessment Methods:

Tests and hands-on performance

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

Videos

Outline or Statement of Major Course Content:

This course focuses on the fundamentals of schematic diagrams.

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: June 2009