MESABI RANGE COMMUNITY & TECHNICAL COLLEGE – VIRGINIA/EVELETH

Course Outline

Course Title:	**Introduction to Engineering**	**Submitted By:**	**M. Threapleton**
Semester Course Prefix and Number:	**ENGR 1010**	**Approval Date:**	**Feb. 2002**
Old Quarter Course Prefix and Number:		**Revision Date:**	**Feb. 2002**

Number of Credits: 2	**Number of Lecture Credits:**	**2**
Semester(s) Offered: Fall	**Number of Lab Credits:**	**Number of Lab Hours:**
Negotiated Class Size:	**Number of Studio/Demonstration/Internship Credits:**	

Course Purpose Code:

_____ **0 –** Developmental Courses
_____ **1 –** Non-transferable, General Education
_____ **2 –** Technical course related to career programs
_____ **3 –** College course which has the primary goal of applying certain concepts (e.g. vocal ensemble)
__X__ **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.
_____ **9 –** Continuing Education/Customized Training specialized credit course (not occurring in 0-5)

Catalog Description:
This course is an introduction to problem solving methods, engineering curriculum, and computer applications in engineering. In addition, students will explore educational and professional career opportunities.

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:
All engineering transfer students

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
6. _____ The Humanities and Fine Arts
7. _____ Human Diversity

2. _____ Critical Thinking
3. _____ Natural Sciences
4. _____ Mathematical/Logical Reasoning
5. _____ History and the Social and Behavioral Sciences
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:
The student will:

1. demonstrate an organized problem-solving method.
2. perform engineering analysis.
3. complete engineering design problems.
4. identify opportunities available in engineering.
5. attend lectures by guest engineers.
6. prepare a resume.
7. develop an educational career plan.
8. complete various word processing assignments.
9. apply functions used in spreadsheets.
10. demonstrate competent and ethical use of the Internet.
11. perform in a team environment.

Student assessment methods:
The final grade will be determined based on classroom participation, graded homework assignments, engineering design projects, and a final exam.

Use of instructional technology (includes software, interactive video and other instructional technologies):
The students will use Microsoft Office computer software, Graphical Analysis computer software, and computer projection equipment.

Outline of the major course content:
I. Problem solving
II. Engineering analysis
III. Engineering design
IV. Engineering fields
V. Transfer universities
VI. Professional development
VII. Career planning
  A. Resume
  B. Education plan
VIII. Word processing applications
IX. Spreadsheet applications
X. Internet use

Additional special information (special fees, directives on hazardous materials, etc.)
A scientific calculator with exponential and logarithmic capabilities is required for this course. Engineer's paper will be required for some homework assignments.

Transfer Information: (Please list colleges/majors that accept this course in transfer.)
University of Minnesota; University of Minnesota-Duluth; Minnesota State University, Mankato; St. Cloud State University; Michigan Technological University; North Dakota State University; University of North Dakota all accept for engineering majors.

Approvals:

Body	Representative Signatures	Date
Curriculum Committee	Kim Giermann	2-1-02

Faculty Association	L. Hazareesingh	2-1-02
Meet and Confer	Dr. Jill Peterson	2-11-02
Chief Academic Officer	Dr. Jill Peterson	2-06-02

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