MESABI RANGE COMMUNITY & TECHNICAL COLLEGE – VIRGINIA/EVELETH

Course Outline

Course Title:	**Engineering Drafting**	**Submitted By:**	**R. Bennick**
Semester Course Prefix and Number:	**ENGR 1355**	**Approval Date:**	**March 2002**
Old Quarter Course Prefix and Number:	**ENGR 111**	**Revision Date:**	**Feb. 2002**

Number of Credits:	**3**	**Number of Lecture Credits:**	**1**		
Semester(s) Offered:	**Spring**	**Number of Lab Credits:**	**2**	**Number of Lab Hours:**	**4**
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 reviews the fundamentals of drafting with a review of technical sketching and lettering, orthographic projection, dimensioning rules, and sectional views. The course includes descriptive geometry, including auxiliary views, revolution, intersection, and developments, and technical drafting. Techniques used include hand/machine drafting and computer aided drafting.

Prerequisites and/or recommended entry skills/knowledge:

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

Career Programs and Transfer Majors Accessing this Course:
Engineering, architectural

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

- Produce and dimension orthographic, pictorial, and sectional view drawings, with a minimum of instruction
- Complete descriptive geometry problems using auxiliary views, revolutions, intersections, and developments
- Read and analyze working drawings and blueprints
- Enter and plot an assigned drawing, using the available computer-aided hardware and software

Student assessment methods:

- Drawings and assignments will be graded on accuracy, solution, difficulty and appearance
- Drawings and assignments will constitute 50% of final grade, weekly quizzes and mid quarter examination will constitute 25% of final grade and final examination will constitute 25% of final grade.
- Letter grades will be used based on points accumulated on drawings, quizzes and tests

Use of instructional technology (includes software, interactive video and other instructional technologies):
Students will use a computer aided drafting software package (AutoCAD 98 LT) to draw one half of the assignments.

Outline of the major course content:

- Pre-test to determine students' status
- Review of orthographic projection, dimensioning, and section view drawing
- Demonstrate computer-aided drafting using PC hardware and software (AutoCAD 98 LT)
- Review of pictorial drawings
- Auxiliary views
- Revolutions
- Intersections
- Developments
- Working drawings
- Blueprint analysis
- Reproduction of drawings
- Review all of the above; final examination

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	Kim Giermann	Feb. 20, 2002
Faculty Association	Georgia Suoja	March 4, 2002

Meet and Confer	Dr. Jill Peterson	March 15, 2002
Chief Academic Officer	Dr. Jill Peterson	March 15, 2002

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