

MESABI RANGE COMMUNITY & TECHNICAL COLLEGE – VIRGINIA/EVELETH

Course Outline

Course Title: Technical Drafting
Semester Course Prefix and Number: DRFT 1355
Old Quarter Course Prefix and Number: DRFT 110

Submitted By: Ray Bennick
Approval Date: March 2002
Revision Date: Feb. 2002

Number of Credits: 3 **Number of Lecture Credits:** 1
Semester(s) Offered: **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)
- 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 introduces the fundamentals of drafting: careers in drafting, instrument drafting, technical sketching and lettering, basic and advanced geometry, orthographic projection, dimensioning rules, sectional views and pictorial drawings. Techniques used include sketching, 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).

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| 0. <input checked="" type="checkbox"/> None | 6. <input type="checkbox"/> The Humanities and Fine Arts |
| 1. <input type="checkbox"/> Communications | 7. <input type="checkbox"/> Human Diversity |
| 2. <input type="checkbox"/> Critical Thinking | 8. <input type="checkbox"/> Global Perspectives |
| 3. <input type="checkbox"/> Natural Sciences | 9. <input type="checkbox"/> Ethical and Civic Responsibility |
| 4. <input type="checkbox"/> Mathematical/Logical Reasoning | 10. <input type="checkbox"/> People and the Environment |
| 5. <input type="checkbox"/> History and the Social and Behavioral Sciences | |

Learning outcomes, including any relevant competencies listed in the Minnesota Transfer Curriculum:

The student will:

- Demonstrate the correct techniques in the use of drafting equipment
- Display the skill to letter notes and dimensions on all assignments where required
- Neatly and accurately communicate and express ideas through the use of assigned sketches
- Correctly solve problems in basic and advanced geometry-drafting techniques and uses
- Correctly draw orthographic and pictorial drawings where necessary
- Display skill and accuracy in dimensioning drawings where necessary
- Correctly analyze, interpret, and identify the various components of working drawings
- Accurately enter and plot (print) assigned drawings using computer-aided drafting 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 midterm 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 some of the assignments

Outline of the major course content:

- Pre-test to determine students' status
- Careers in drafting
- Introduction to CAD
- Instrument drafting
- Tools and equipment that will be used
- Technical sketching and lettering techniques
- Geometry in technical drawing - basic and advanced
- Multi-view drawing (orthographic projection from isometric; spatial perception)
- Dimensioning fundamentals
- Section views
- Pictorial drawing - axonometric, oblique and perspective
- 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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