

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON.

COURSE OUTLINE

COURSE TITLE: Drafting and Design
COURSE CODE: ARC 111
PROGRAM: Architectural/Civil Technology
SEMESTER: I (Fall)
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DATE: May 1996

APPROVED: _____

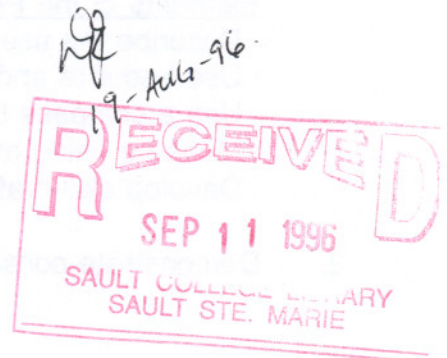
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TOTAL HOURS PER WEEK: 6

PREREQUISITES: NONE

I. COURSE DESCRIPTION

This course provides the student with an introduction to the fundamentals of drafting, engineering graphics, design, construction and drawing interpretation.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE

(Generic skills learning outcomes placement on the course outline will be determined and communicated at a later date.)

A. Learning Outcomes

1. Demonstrate correct use of drafting equipment.
2. Demonstrate consistent and suitable hand lettering.
3. Understand and use appropriate line weight in drawing.
4. Recognize and draw standard and auxiliary views.
5. Build a cardboard scale model.
6. Solve a construction design problem.
7. Prepare a freehand sketch

B. Learning Outcomes and Elements of the Performance

Upon successful completion of the course the student will demonstrate an ability to:

1. Demonstrate correct use of drafting equipment.

Elements of the Performance:

- Describe the use and care of various pieces of drafting equipment
- Use t-square and set squares to draw views of objects
- Use a compass to draw circles and arcs
- Measure using metric, architectural and engineering scales
- Develop skill drafting with pencil on paper, vellum and mylar

2. Demonstrate consistent and suitable hand lettering.

Elements of the Performance:

- Describe the function and purpose of hand lettering
 - Demonstrate consistent hand lettering
 - Develop a hand lettering technique and style
 - Draft and apply hand lettering to a drawing
3. Understand and use appropriate line weight in drawing.

Elements of the Performance:

- List and draw the common line types
 - Draw views of objects using different line weights (thickness)
 - Prepare a drawing utilizing different line weights and types
4. Recognize and draw conventional and auxiliary views.

Elements of the Performance:

- Develop freehand sketching techniques
 - Draw and develop oblique and isometric views
 - Develop and construct standard orthographic views
 - Draw views using the accepted standard arrangement
 - Construct plan, elevation and section views
 - Construct primary auxiliary views
 - Construct secondary auxiliary views
5. Build a cardboard scale model.

Elements of the Performance:

- develop techniques for scale model building
 - build a scale model using cardboard
6. Solve a construction design problem.

Elements of the Performance:

- Develop a solution to a construction design problem
- Draw and present development drawings showing the design solution
- Prepare a drawing showing the final design

III. TOPICS

Note: Topics inherently overlap and are not necessarily developed as isolated units or in the order presented.

1. Drafting Equipment Use and Techniques
2. Orthographic, Isometric and Oblique Drawing
3. Basic Working Drawings
4. Dimensioning and Detailing Construction Drawings
5. Model Building Techniques
6. Approaches to Solving Design Problems
7. Presentation Drawings using Pencil
8. Sketching Techniques and Freehand Representation

IV. REQUIRED RESOURCES/TEXTS/MATERIALSAEC Drafting Fundamentals

Jules Chiavaroli
West Publishing Company
ISBN 0-314-93452-9

Working Drawings for AEC Drafting Fundamentals

Jules Chiavaroli
West Publishing Company
ISBN 0-314-03341-6

Drafting Equipment Kit
Sault College Campus Shop

The student will be expected to supply various media and materials necessary to complete the assignments and projects.

Available in the library are a number of texts and periodicals related to drawing, drafting and engineering graphics.

V. METHOD OF EVALUATION (GRADING)

Students will be assigned a final grade based on successful completion of

tests, assignments, projects and attendance, weighted as follows:

Assignments	70%
Tests	20%
Attendance	10%
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TOTAL	100%

The course and curriculum are designed and limited to time based competency. Late assignments will receive a C (60) grade maximum. Assignments more than seven days overdue will receive a grade of zero.

A final letter grade will be assigned as follows:

A+	90-100%
A	80-89%
B	70-79%
C	55-69%
R	Repeat
X	A temporary grade limited to situations with extenuating circumstances, giving a student additional time to complete course requirements
U	Unsatisfactory (mid-term grade only)
S	Satisfactory (mid-term grade only)

VI. SPECIAL NOTES

1. Students with special needs are encouraged to discuss required accommodations in confidence with the instructor, or contact the Special Needs Office.
2. Students should refer to the "Statement of Student Rights and Responsibilities". Students engaging in any form of academic dishonesty will receive a zero grade for that assignment or test and/or other penalty which may apply.
3. The instructor reserves the right to modify the course and course outline as

deemed necessary to meet the needs of the students.

4. Students wishing to preserve their drawings for portfolio purposes should keep and/or submit photocopies or blueline prints for marking.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult with the instructor and/or the Prior Learning Assessment Office. Credit for prior learning will be given upon successful completion of the following:

1. A portfolio of representative work including design and working drawings completed by the individual that adequately demonstrates: drafting skill, knowledge of graphic representation and construction detailing.
2. Successful completion of a drafting test under the supervision of the instructor or the instructor's representative.