

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE



Course Title: DRAFTING

Code No.: DRF 101

Program: MECHANICAL TECHNOLOGY

Semester: 1

Date: AUGUST 1992

Author: COLIN RISING

New: _____ Revision: X

APPROVED: *J.P. Crozetta*
Chairperson

92.09.03
Date

DRAFTING
Course Name

DRF 101
Course Number

PHILOSOPHY/GOALS:

- a) To have the student fully aware of the reason for the methodology of producing drawings for use on the shop floor.
- b) Further to the above, the student will have a full appreciation of the fact that a drawing is a communication, and as such, must be complete, easy to read and correct with respect to all information given on the drawing.
- c) It is to be remembered that Drafting is an on going skill development.

METHOD OF ASSESSMENT (Grading Method):

A
B Grading will be done on quality of layout, drawings,
C sketches, general tidiness of presentation, time factor,
I attendance and attitude.

TESTS:

- a) There will be a minimum of one week's notice for tests.
- b) Tests will be held at intervals throughout the semester.
- c) In the event of a student being absent for a test, he/she will be given an opportunity to write a test of similar content at a time suitable to both the student and the teacher.
- d) If a student fails a test, an opportunity will be given to that student to write a make-up test at a time designated by the teacher.
- e) An 80% attendance record is required in order for a student to be eligible to write a make-up test.
- f) The maximum grade that a student will be given for a make-up test will be a "C".

ASSIGNMENTS:

- a) All assignments must be handed in for marking on the specified date and time.
- b) The marking of assignments may be on a random basis.
- c) Grades for assignments handed in late will be reduced according to degree of lateness.
- d) No assignment will be accepted if the deadline date is exceeded by more than 3 days.

TESTS - 65%
ASSIGNMENTS - 25%
ATTITUDE - 10%

TEXTBOOK(S): Engineering Drawing & Design (Jensen & Helsel)

DRAFTING

DRF 101-6

TEXTS:

Engineering Drawing and Design, Jensen & Helsel

Mechanical Engineering Drawing Standards - C.S.A. B78.1
C.S.A. B78.2

REFERENCES:

"Engineering Drawing & Design": - Jensen - McGraw-Hill

"Machinery's Handbook"

"Mechanical Drawing SI Metric" - McGraw-Hill

Mechanical Engineering Drawing Standards - C.S.A. B78.1
C.S.A. B78.2

REFERENCES:

"Design Engineering" - MacLean Hunter Publications

"Graphic Science" - Graphic Science

"Materials in Design Engineering" - Reinhold Publishing Corp.

<u>NUMBER</u>	<u>PERIODS</u>	<u>TOPIC DESCRIPTION</u>
1	4	<u>Introduction</u> Graphic Language Past and Present Drawing Office Procedures Student Evaluation Methods Use and Care of Office Equipment
2	108	<u>Basic Engineering Drawing</u> Use of instruments Alphabet of Lines Lettering Use of Scales - Metric and Architects Freehand sketching Geometric Construction Third Angle Projection Auxiliary views Sections: Half, Full, Partial, Removed, Revolved Dimensioning Introduction Isometric Drawing Limits, Fits & Tolerance Terminology Standard Abbreviations S.S.A. B78.1 Plotted Curves Simple Assembly Drawings

MECHANICAL TECHNOLOGY

MTY - 1

PERFORMANCE OBJECTIVES FOR

DRAFTING 1

DRF 100-6

The general objective of the course is to develop an understanding of Engineering Drawing as a technique of communication. The student will be able to make correct graphical representations of engineering structures, designs and data relationships showing an understanding of the fundamental principles and the grammar of the language, and will be able to execute the work with reasonable skill which is penmanship.

1. Produce good lettering, correct types of lines, pleasing layouts, accuracy and demonstrate correct selection and use of pencils and drawing instruments.
2. Complete practical geometrical problems involving straight lines, circles, helical curves and elliptical constructions.
3. Employ isometric and oblique representation for components having normal, oblique and cylindrical surfaces.
4. Apply third angle projection technique for the addition of missing lines and views involving normal, inclined and oblique surfaces. Completion of views involving plotted curves produced by inclined plane and cylindrical intersections.
5. Add missing lines to full, half, offset, aligned, phantom, revolved and detailed sections identifying materials by symbols.
6. Execute quick, accurate and clear sketches in multiview, auxiliary and pictorial of components requiring inclined, oblique and cylindrical surface analysis.
7. Produce drawings which completely describes the object and which involves the use of regular and primary auxiliary views.
8. Produce scale working drawings with size and description and demonstrating correct technique, placement and choice of dimensions.
9. Demonstrate ability to use in the correct context, the terms used in systems of limits, fits, and tolerances.
10. Produce simple assembly drawings and relative detail drawings including dimensions, general and local notes, bill of materials and numbering system.