

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

COURSE OUTLINE

Course Title: TECHNICAL SKETCHING & DRAWING INTERPRETATION

Code No.: DRF 115-3

Program: HEAVY EQUIPMENT DIESEL

Semester: TWO

Date: JANUARY, 1988

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New: _____ Revision: X

APPROVED:

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Chairperson

88/01/05
Date

CALENDAR DESCRIPTION

Technical Sketching & Drawing Interpretation

DRF 115-3

Course Name

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PHILOSOPHY/GOALS:

- 1) Help the student become aware of the standard methods used to describe mechanical details and assemblies on technical drawings.
- 2) Provide practice in the making of sketches to communicate technical information, based on the same standard methods used on technical drawings.
- 3) Provide practice in the interpretation of technical drawings.
- 4) Provide practice in the use of diagrams appearing in parts catalogs.

EQUIPMENT:

- loose-leaf notebook
- lead holder and H leads
- pencil pointer (Staedtler #502)
- freehand lettering guide (Staedtler #977-142)
- 12" ruler (inch and metric)
- circle template (977-101)
- white plastic eraser
- pad of grid paper (1/4")
- protractor

NOTE: It is not intended that a T-square, set squares, or textbook be used for this course.

REFERENCE BOOKS:

- "Interpreting Engineering Drawings"
Jensen & Hines, Delmar Publishers
- "Introduction to Technical Drawing"
Sterling, Macmillan of Canada
- Caterpillar Parts Books

GRADING SYSTEM:

The students shall be evaluated at the end of the semester by averaging all marks designated throughout the semester for assignments and tests.

Assignments not turned in by the deadline will be recorded with a zero grade. Tests not written will also be recorded with a zero grade.

It is expected that students will be present for all classes. Unusual circumstances that cause the student to be absent should be discussed with the instructor if work should have been turned in, or a test written on the date in question.

NO.	TOPIC DESCRIPTION
1.	Gothic lettering
2.	Standard line types
3.	Orthographic projection
4.	Sections
5.	Auxiliary views
6.	Dimensioning
7.	Scale
8.	Pictorial sketching
9.	Thread representation
10.	Thread specification (inch and metric)
11.	Shop terms and abbreviations used on drawings
12.	Tolerancing
13.	Drawing interpretation
14.	Interpretation of diagrams typically used in parts catalogs

OBJECTIVES:

The student should be able to:

- 1) - letter neatly, using vertical or inclined single stroke Gothic style
- use a "freehand lettering guide"
- draw, and complete an appropriate title block
- 2) - recognize and draw the standard line types (visible line, hidden line, centre line, extension line, dimension line, section line, cutting plane line, break line, phantom line)
- select an appropriate lead hardness guide for lines and lettering
- 3) - select the best "front view" of an object
- draw the necessary orthographic views that would completely describe simple shapes, using 3rd angle projection
- recognize orthographic views using 1st angle projection, and the I.S.O. symbol
- interpret shapes described by orthographic projection
- 4) - identify and interpret full, half, offset, aligned, and revolved sections
- draw the above sectional views of simple shapes
- use appropriate section lines for the specified material
- 5) - interpret information conveyed by use of auxiliary views
- 6) - describe the size of a simple object following the basic rules of dimensioning
- 7) - select an appropriate scale
- draw at full and reduced scale
- properly specify the scale on a sketch
- 8) - sketch simple shapes using isometric drawing involving isometric lines, non-isometric lines, and circles in horizontal and vertical planes
- 9) - interpret the simplified method of thread representation

- 10) - interpret unified and I.S.O. metric thread specification that could be used on a drawing
- 11) - interpret shop terms and commonly used abbreviations
- 12) - interpret terms commonly associated with tolerancing, as given on a drawing
- 13) - answer questions pertaining to industrial type drawings of mechanical parts and assemblies
- 14) - demonstrate understanding of sections and exploded views shown in the Caterpillar parts books
 - select information for the ordering of parts