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SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: DRAFTING

Code No.: DRF 115-3

Program: HEAVY EQUIPMENT

Semester: ONE

Date: JUNE, 1987

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New: _____ Revision: X

APPROVED: L.P. Arazietto
CHAIRPERSON

87/06/06
DATE

DRAFTING	DRF 115-3
Course Name	Course Number

PHILOSOPHY/GOALS:

1. Make the student aware of the standard methods usd to describe mechanical details and assemblies on technical drawings.

2. Provide practice in the interpretation of technical drawings.

3. Provide practice in the making of freehand sketches to communicate technical ideas, based on the same standard methods used in technical drawings.

TEXTBOOK(S):

Interpreting Engineering Drawings
by Jensen & Hines (Metric Edition) (Nelson Canada Ltd.)

REFERENCE TEXTS:

Blueprint Reading for Industry
by W.C. Brown (Goodheart-Willcox Co.)

Machinery's Handbook

NUMBER	TOPIC DESCRIPTION
1	Freehand Sketching 1. Techniques - proportion - straight lines - standard line types - arcs and circles 2. Practice in sketching familiar shapes on grid paper
2	Lettering - vertical single stroke gothic
3	Orthographic Projection 1. Third angle projection theory 2. Selection of appropriate views 3. Spacing of orthographic views 3. Practice in drawing orthographic views
4	Basic Dimensioning 1. Dimension Lines 2. Extension lines 3. Unidirectional and aligned systems 4. Use of leaders 5. Units of measurement, and indication of units on a drawing 6. Rules of dimensioning 7. Practice by adding dimensions to a mechanical drawing
5	Use of Drafting Instruments 1. Mounting of paper on the board 2. Use of t-square 3. Use of set squares 4. Use of lettering guide 5. Use of ruler to obtain common scales on drawings 6. Set-up and use of the compass. 7. Practice the above by making an instrument drawing of a simple mechanical part

NUMBER	TOPIC DESCRIPTION
6	Title Block 1. Usual information contained in the title block 2. Inclusion of a proper title block on an instrument drawing (such as in topic no. 4)
7	Screw Threads 1. Pictorial, schematic, and simplified thread representation 2. I.S.O. metric, and inch thread specification
8	Symbols 1. Machining symbols 2. Surface texture symbol 3. Weld symbols (fillet, plug, vee, bevel, square) 4. Designation of structural steel shades
9	Sections 1. Cutting-plane line 2. Full, offset, revolved, and half sections 3. Section lines

NUMBER	TOPIC DESCRIPTION
10	Auxiliary Veiws 1. Primary
11	Tolerancing 1. Limits 2. Bilateral tolerancing 3. Unilateral tolerancing 4. Minimum and maximum clearance between mating parts
12	Standard Abbreviations
13	Drawing Interpretation This will be an ongoing process to reinforce lessons and provide practice in blueprint reading