

# Sault College of Applied Arts and Technology sault ste. marie

## Course Outline

DRAFTING

DRF 121 - 3

revised January, 1975



INDUSTRIAL CHEMISTRY TECHNICIAN

Drafting  
1.21-3  
DRF 252-3

TEXT: "A Course of Study in Drafting for Canadian High Schools"  
-Torney et al -- Tyrell Press

REFERENCES:

"Piping Handbook" - Crocker -- McGraw-Hill

"Fundamentals of Pipe Drafting" - Thompson -- Wiley

"Electronic Drafting" - Shiers -- Prentice-Hall

## INDUSTRIAL CHEMISTRY TECHNICIAN

<u>Topic No.</u>	<u>Periods</u>	<u>Topic Information</u>
1	1	<u>Introduction</u> -the drafting room -use and care of instruments
2	2	<u>Technical Lettering</u>
3	1	<u>The Architects Scale</u>
4	3	<u>Geometric Constructions</u> - parts of a circle - arc tangent to legs of angle - arc tangent to straight line and arc - arc tangent to two arcs - ellipse by concentric circles - ellipse by four centre method
5	4	<u>Orthographic Projection</u> - three view drawings - balancing the drawing
6	2	<u>Line Conventions</u> - object lines - centre lines - hidden lines - dimension lines - extension lines etc. - cutting plane lines A.S.A., C.S.A. - break lines
7	2	<u>Basic Dimensions</u> - rectangular features - circular features - placement balance
8	6	<u>Sectional Views</u> - cutting plane, cross-hatching - full, half sections - offset, aligned sections

Topic No.	Periods	Topic Information
9	2	<u>Auxiliary Views</u> - single auxiliary views - secondary auxiliary views
10	2	<u>Drawing Conventions</u> - representation - local, general notes - commercial practices
11	2	<u>Working Drawings</u> - assembly drawings - detail drawings - bill of materials <p>Examine and discuss a set of working drawings supplied by Algoma Steel or similar.</p>
12	4	<u>Technical Sketching</u> - measure up and prepare a set of detail sketches of an existing piece of laboratory equipment.
13	6	<u>Pictorial Drawing</u> -Isometric - theory - box method - circles, radii - dimensioning -Oblique - theory - box method - centre line method - dimensioning
14	1	<u>Pictorial Sketching</u> -rendering
15	6	<u>Intersection and Development</u> -unfolment, stretchout line -parallel line development -radial line development -development of a three piece elbow

Topic No.	Periods	Topic Information
16	10	<u>Piping Drafting</u> -piping, fittings, valves, materials -orthographic, pictorial representation -single, double line drawing -design of a piping circuit for an industrial chemical process
17	4	<u>Electronic Drafting</u> -symbols, conventions -circuit design



## INDUSTRIAL CHEMISTRY

### Drafting

#### DRF 121-3

#### Performance Objectives

The general objective of the course is to develop an understanding for the use of drawings as a means of communication. The student will develop a skill to interpret given information and be able to convert this information into drawing form.

#### Specific Objectives

1. To demonstrate the use of basic drafting equipment.
2. To develop lettering techniques.
3. Use a scale rule.
4. Develop good line presentation.
5. Demonstrate ability to draw basic geometric figures.
6. Identify and apply orthographic projection.
7. Identify and apply isometric drawing.
8. Identify and apply oblique drawing.
9. Apply pictorial and orthographic drawings to piping layouts.
10. Identify flow diagrams.
11. Identify architectural, electrical and plumbing symbols.
12. Apply symbols by use of a simple architectural plan.

Text - Drafting Fundamentals 4th Edition  
Jensen-Mason  
McGraw Hill