

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: DRAFTING

Code No.: DRF 100-3

Program: Electrical/Electronic Engineering Technician

Semester: Two

Date: June 14, 1983

Author: G. MacLean

New: _____ Revision: _____

APPROVED:

J.P. Crozietto

Chairperson

Date

83/06/14

CALENDAR DESCRIPTION

DRAFTING

DRF100-3

Course Name

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PHILOSOPHY/GOALS:

1. To ensure that successful students have the basic knowledge and skill in technical drawing that will be required of them in the subsequent specialized course in electrical/electronic design.
2. To emphasize the importance of accuracy, neatness and care in the preparation of drawing and reports.
3. To ensure the students have background for the interpretation of the mechanical portion of electron-mechanical drawings.

METHOD OF ASSESSMENT (GRADING METHOD):

The final grade will be established by comining the marks obtained in regula drawing assignments with test marks. This will be an ongoing process throughout the semester.

TEXTBOOK(S):

Basic Industrial Drafting Skills, Kirkpatrick, Breton Publishers

REFERENCE TEXT:

Graphic Symbols for Electrical and Electronic Diagrams, CSA Z99-1975.

TOPIC NUMBER

TOPIC DESCRIPTION

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| 1 | <u>Technical Drawing as a means of communication</u> |
| 2 | <u>Care and use of Drafting Equipment:</u> <ol style="list-style-type: none"> 1. Selection of suitable pencil hardness grade. 2. Set-up and use of the bow compass 3. Correct use of the T-square 4. Mounting the drafting media on the board 5. Use of set squares for drawing parallel and perpendicular lines, and for drawing angles in increments of 15° 6. Various types of drawing media in common use |
| 3 | <u>Lettering:</u> <ol style="list-style-type: none"> 1. Instruction and practice in the use of vertical single stroke gothic lettering 2. Use of the "Ames" lettering guide |
| 4 | <u>Alphabet of Lines:</u> <ol style="list-style-type: none"> 1. Instruction and practice in use of standard line types |
| 5 | <u>Scale:</u> <ol style="list-style-type: none"> 1. Selection of appropriate drawing scales 2. Use of metric scale instrument |
| 6 | <u>Freehand Sketching:</u> <ol style="list-style-type: none"> 1. Recommended technique for sketching straight lines, arcs, circles, and approximation of angles 2. Practice in freehand sketching |
| 7 | <u>Orthographic Projection:</u> <ol style="list-style-type: none"> 1. Six orthographic views of an object (third angle projection) 2. Selection of the "front" view 3. Selection of additional views for complete shape description 4. Practice in orthographic projection |
| 8 | <u>Geometric Construction:</u> <ol style="list-style-type: none"> 1. Division of a line into given number of equal parts 2. Drawing of: <ul style="list-style-type: none"> hexagon arcs tangent to two straight lines arcs tangent to an arc and a straight line arcs tangent to two arcs arcs tangent to an arc, and through a given point 3. Drawing of a parabola |

TOPIC NUMBER

TOPIC DESCRIPTION

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| 9 | <p><u>Dimensioning:</u></p> <ol style="list-style-type: none"> 1. Basic rules 2. Arrowless and tabular methods |
| 10 | <p><u>Inking:</u></p> <ol style="list-style-type: none"> 1. Care and use of the technical pen 2. Preparation of the circuit drawing using ink on plastic drawing film 3. Use of the lettering instrument |
| 11 | <p><u>Sections:</u></p> <ol style="list-style-type: none"> 1. Use of the various types of sections (full, half, offset, aligned, revolved, removed, broken-out) |
| 12 | <p><u>Pictorial Drawing:</u></p> <ol style="list-style-type: none"> 1. Isometric drawing - straight lines, arcs, circles 2. Oblique drawing - cabinet and cavalier |
| 13 | <p><u>Drawing Interpretation:</u></p> <ol style="list-style-type: none"> 1. Reading of drawings - interpretation of shape and size description, bill of material, surface finish, abbreviations, symbols, screw threads |