

#288

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

COURSE OUTLINE

COURSE TITLE: TECHNICAL DRAWING

CODE NO.: DRF114-3

SEMESTER: TWO

PROGRAM: PULP AND PAPER

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M. Chan

DATE: 1991 05 09

PREVIOUS OUTLINE DATED: JUNE 1983

APPROVED:

A. Crozuth
DEAN

9/06/04
DATE

TECHNICAL DRAWING

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TOTAL CREDIT HOURS _____

PREREQUISITE(S): _____

I. PHILOSOPHY/GOALS:

To prepare the student with a suitable background of information and skill to assure that he/she will be capable of:

- a) proper use of drafting equipment
- b) preparing working drawings of simple detail parts
- 3) interpreting detail, assembly, piping and hydraulic circuit drawings.

This is a basic course including the proper use of drafting instruments, lettering, orthographic projection, use and care of the whiteprint machine, sections, dimensioning, isometric drawing, piping drawing, drawing of hydraulic circuits and interpretation of technical drawings.

II. TOPICS TO BE COVERED:

- 1) Proper Use Of Drafting Instruments
- 2) Lettering
- 3) Orthographic Projection
- 4) Use and Care of Whiteprint Machine
- 5) Sectioning
- 6) Dimensioning
- 7) Isometric Drawing
- 8) Single Line Piping Drawing
- 9) Hydraulic Circuits
- 10) Drawing Interpretation

TOPIC NUMBER

TOPIC INFORMATION

Students must be capable of, or familiar with:

- 1) **PROPER USE OF DRAFTING INSTRUMENTS**
 - mounting of drafting media on the drafting board
 - use of T-square
 - use of set squares (singly and in combination for 15° & 75°)
 - use of bow compass (including set-up and sharpening)
 - use of metric scale
 - use of architect's scale
 - pencil hardness grade selection

- 2) **LETTERING**
 - vertical upper case single stroke Gothic
 - use of lettering guide (Ames)

- 3) **ORTHOGRAPHIC PROJECTION**
 - selection of front view
 - drawing and positioning of five other principal views
 - third angle projection vs first angle, and I.S.O. symbol
 - standard line types
 - selection of standard drawing size

- 4) **USE AND CARE OF WHITEPRINT MACHINE**

- 5) **SECTIONING**
 - use of full, half, offset, aligned, revolved, partial, removed sections
 - cross matching for various materials
 - cutting plain lines, and identification

- 6) **DIMENSIONING**
 - basic rules
 - tolerancing
 - fits of mating parts
 - surface finish symbols

- T E S T**

- 7) **ISOMETRIC DRAWING**
 - isometric axis - isometric and non-isometric lines
 - isometric circles

- 8) **SINGLE LINE PIPING DRAWING**
- isometric and orthographic

T E S T

- 9) **HYDRAULIC CIRCUITS**
- graphic symbols
- cutaway diagrams
- drawing of a simple hydraulic circuit

- 10) **DRAWING INTERPRETATION**

F I N A L T E S T

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IV. EVALUATION METHODS: (INCLUDES ASSIGNMENTS, ATTENDANCE REQUIREMENTS, ETC.)

Regular drawing assignments	50% of Final Grade
Tests - Mid June	10%
- Mid July	15%
- Mid August	25%
	100%

All assignments are to be done in class and turned in at the end of class.

MARKING OF ASSIGNMENT	- SKILL-----1 = 5
	TECHNIQUE-----1 = 5
	PRESENTATION-----1 = 5
	COMPLETE-----1 = 5

TOTAL 20 MARKS

V. REQUIRED STUDENT RESOURCES

Engineering Drawing and Design, Vensen and Helsel, McGraw-Hill

VI. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY:

Book Section (TITLE, PUBLISHER, EDITION, DATE, LIBRARY CALL NUMBER IF APPLICABLE - SEE ATTACHED EXAMPLE)

Periodical Section (MAGAZINES, ARTICLES)

Audiovisual Section (FILMS, FILMSTRIPS, TRANSPARENCIES)

VII. SPECIAL NOTES

Students with special needs (eg. physical limitations, visual impairments, hearing impairments, learning disabilities) are encouraged to discuss required accommodations confidentially with the instructor.

Your instructor reserves the right to modify the course as he/she deems necessary to meet the needs of students.