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

# COURSE OUTLINE

Course Title:	SKETCHING AND BLUEPRINT READING		
Code No.:	DRF119-03		
Program:	Welding and Fabricating		
Semester:	One		
Date:	August 1988		
Author:	G. Michaud		
	New: Revision:		
APPROVED:	Chairperson Murphy. dry, 9/88 Date		

Course Name

Course

Number

#### PHILOSOPHY/GOALS:

In this course the student will learn to read Blueprints as they apply to the welding trade, also to sketch items using both the Orthographic projection method and the pictorial method.

Welding symbols as used in the welding and fabricating trade are of great importance to the students who plan to enter the trade. In this course the student will learn to draw and interpret the majority of the symbols encountered in the practice of welding.

## METHODS OF ASSESSMENT (GRADING METHOD):

- a) Sault College Policy/Procedure No. 1-G-6, Academic Section
- b) Cmputer marked tests 70% minimum
- c) Overall grading Practical 40%

Theory - 40%

Attendance, safety, attitude - 20%

GRADING:

A+ = 95 - 100%

A = 85 - 94%

B = 75 - 84%

C = 60 - 74%

#### TEXTBOOK(S):

Handbook of Steel Construction (Canadian Institute of Steel Construction)

Blueprint Reading for the Welding Trade (Derrell C. Lockhart)

Film - Orthographic Projection (McGraw Hill)

Blueprints of a Steel Shop Addition (Four prints)

#### **OBJECTIVES:**

The basic objective is to develop a student with the ability to read blueprints and do sketching and understand the principles involved as they apply to the welding trade.

# SKETCHING AND BLUEPRINT READING

Approximate minimum hours of study.

THEORY

45 HOURS PER SEMESTER

# SKETCHING AND BLUEPRINT READING

SECTION	THEORY	TOPIC INFORMATION
A	1 hour	<ul> <li>the working drawing</li> <li>main types of blueprint format</li> <li>sketching multi-view drawings</li> <li>sketching pictorial drawings</li> </ul>
В	1 hour	<ul><li>types of sectional views</li><li>auxiliary views</li></ul>
С	1 hour	<ul> <li>format of a working drawing</li> <li>material lists</li> <li>types of blueprints</li> </ul>
D	1 hour	<ul><li>dimensions and tolerances</li><li>typical dimensions</li><li>basic dimensioning system</li></ul>
Е	2 hours	<ul> <li>materials and threaded fasteners</li> <li>structural shapes and terms</li> <li>standards for structural materials</li> </ul>
	WRITE TEST MFD	Іт
F	6 hours	<ul><li>welding symbols</li><li>types of weld joints</li><li>basic weld types</li><li>weld dimensions</li></ul>
	WRITE TEST MFD	2Т
G	3 hours	<ul> <li>welding procedures</li> <li>code standards and specification</li> <li>reading and interpreting a welding procedure</li> </ul>

SECTION	THEORY	TOPIC INFORMATION
Н	4 hours	<ul> <li>pipefitting symbols for welding</li> <li>drawings for piping systems</li> <li>dimensioning piping systems</li> </ul>
	WRITE TEST MF	'D4T
I	4 hours	<ul> <li>reading welding blueprints</li> <li>procedures for reading blueprints</li> <li>interpreting shop blueprints</li> </ul>
	WRITE TEST MD	F5T
J	1 hour	<ul> <li>reading concrete and reinforcing steel drawings</li> </ul>
K	2 hours	<ul> <li>reading steel erection drawings</li> </ul>
L	4 hours	<ul><li>reading structural steel detail drawings</li><li>calculating weights in bill of material</li></ul>

WRITE TEST

TOTAL HOURS 30

### ADDITIONAL EXERCISES

	DRAFTING	EXERCISES
A1	4 hours	- detail drawing of steel column - detail drawing of steel beam (Nnafting Mank)
A2	2 hour	- detail drawing of channel iron door frame
		(Drafting Mark)
А3	2 hours	- draw template for 4 piece 90 deg. elbow
		(Drafting Mark)
A4	3 hours	- draw template for "Y" fitting
		(Drafting Mark)
A5	3 hours	- draw template for a rectangle to round transition piece
		(Drafting Mark)
A6	1 hour	- draw template for a cone
		(Drafting Mark)

TOTAL HOURS 15