# SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY SAULT STE. MARIE, ON

### **COURSE OUTLINE**

COURSE TITLE: TRADE THEORY

CODE NO: IRN 700 SEMESTER: APPRENTICESHIP

PROGRAM: INTERMEDIATE IRONWORKER

AUTHOR: P. MARTINSEN

DATE: January 1995 PREVIOUS OUTLINE DATED: January 1994

APPROVED:

Dean, School of Technical Trades

*M1z-th* Date

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TOTAL CREDIT HOURS: 10

#### PREREQUISITE(S):

#### I. PHILOSOPHY/GOALS:

During this course the student will come to understand calculations in reinforcing steel, structural rigging, etc. Theory behind the actions achieved on the job, safety in all facets of the trade.

#### II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

- 1. Have completed the Construction Safety Association's Safety and Rigging Course.
- 2. Be familiar with Reinforcing Steel, Curtain Wall, Robotics as well as becoming more involved in Blueprint Work, Trade Calculations and Safety.

#### III. TOPICS TO BE COVERED:

- **1.** Reinforcing Steel
- 2. Structural Steel
- 3. Cranes and Hoisting Equipment
- 4. Rigging
- 5. Curtain Wall
- 6. Robotics

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#### IV. LEARNING ACTIVITIES

REQUIRED RESOURCES

Unloading and Sorting
Print Reading
Types of Tie
Reinforcing Bar Placing; Footings
Re-Bar Placing; Columns
Re-Bar Placing; Walls
Re-Bar Placing; Beams
Reading Specific Drawings,
Schedules and Detail Sheets
Re-Bar Placing; Joists, Slabs,
Plates
Inspection

Wire Rope
Handling
Wire Rope Attachments
Wire Rope Splicing
Hooks
Shackles
Chokes and Slings
Guy Lines
Blocks and Tackle
Use of Portable Hoisting
Equipment

Welding Selecting Electrodes Selecting and Using Welding Equipment

Erection General Steel Erection Methods of Erection Transportation

Fitting Up

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

A test will be given on every topic. Homework assignments will be marked.

Attendance and attitude 15%.

#### VI. REQUIRED STUDENT RESOURCES

Notebooks, pens, pencils, paper, calculator.

## VII. ADDITIONAL RESOURCE MATERIALS AVAILABLE IN THE COLLEGE LIBRARY

#### VIII. SPECIAL NOTES

Students with special needs (eg. physical limitation, 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 the students.