

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ON**

**COURSE OUTLINE**

**COURSE TITLE:** TRADE CALCULATIONS

**CODE NO:** IRN 703 **SEMESTER:** N/A

**PROGRAM:** IRONWORKER - INTERMEDIATE

**AUTHOR:** D. SOCCHIA

**DATE:** Jan 1995 **PREVIOUS OUTLINE DATED:** Jan 1994

**APPROVED:**   
DEAN

$\frac{0i \wedge 06}{1}$  / 9 f 5  
DATE

> i \ i  
IW 0 3 1935  
bMU V\ :MJ > , i;:: MA.-; iARY

**Trade Calculations**

**IRN 703**

**COURSE NAME**

**CODE NO.**

**TOTAL CREDITS:** 16 Hours (8 x 2)

**PREREQUISITE(S):** Ironworker Apprenticeship

**L PHILOSOPHY/GOALS:**

To provide apprentices with the background and academic training necessary to solve job related problems that may require (or at least be made easier to resolve ) through the use of mathematical calculations giving due consideration to the degree of accuracy required by the said problem(s).

**H. STUDENT PERFORMANCE OBJECTIVES (OUTCOMES):**

**Upon successful completion of this course the student will:**

- 1) Identify and select mathematical formula appropriate to the needs of the tradesperson.
- 2) Perform typical job related calculations involving area, weight of steel, inclined planes and square roots without the use of a calculator.

**DX TOPICS TO BE COVERED:**

**Approximate Time**

1. Course Introduction and Orientation
2. Review Formula and Calculations of Area for a Square, Rectangle, Triangle, Circle and Open Cylinder.
3. Calculations of Area for Arches and Cones.  
——Theory Test # 1 and Review ——
4. Determine Square Roots w/o Calculators
5. Determine Weights of Various Steel Shapes.  
~~~~ Theory Test # 2 and Review ~~~~
6. Vector Diagrams and Inclines Planes  
——Theory Test # 3 and Review——

Total Hours: 16

**Trade Calculations**

**IRN 703**

**COURSE NAME**

**CODE NO.**

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

**General Assessment**

A = 85 to 100%  
B = 75to 84%  
C = 60to 74%  
D = 50to 59%  
F= Oto 49%

**Final Mark\***

Tests 70%  
Assignments / Quiz(s) 30%  
Attendance (\*\*See Attached )

**V. PRIOR LEARNING ASSESSMENT:**

Students who wish to apply for advanced credit in the course should consult the instructor. Credit for prior learning will be given upon successful completion of the following:

1. Written proof of me successful completion of a mathematics course with student outcomes and course topics that are at least 80% compatible with IRN 703.  
<OR>
2. The successful challenge of all three IRN 703 theory tests and a resulting average mark of at least 75%.

**VL REQUIRED STUDENT RESOURCES:**

Scientific Calculator (Basic Math Functions plus Trig Ratios )  
3 Pens - (1 blue, 1 black, 1 red)  
Binder c/w Paper  
Ironworker Texts  
Steel Tape Rule (cw Imperial and Metric Scales)

**VII. SPECIAL NOTES:**

Students with special needs (eg physical limitations, visual impairments, hearing impairments, learning disabilities etc.) 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.

Attendance to all classes is mandatory and will be recorded on an 'hour-by-hour' basis using the 'Record of Attendance Form'.