



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

COURSE OUTLINE

Course Title: ARCHITECTURAL ENGINEERING III
Code No.: ARC 205
Program: ARCHITECTURAL TECHNICIAN (DRAFTING)
Semester: IV
Date: JANUARY, 1987
Author: S. IENCO

New: _____ Revision X

APPROVED: *S. P. Crozeth* Chairperson 87-01-23 Date

CALENDAR DESCRIPTION

ARCHITECTURAL ENGINEERING III

ARC 205

Course Name

Course Number

PHILOSOPHY/GOALS:

The student will have a basic knowledge in the design of light framing and the use of structural tables. He/she will be able to design components that make up the skelton frame of a simple structure. In addition the student will be introduced to the design of retaining walls.

METHOD OF ASSESSMENT

Assignments	20%
Quizzes	20%
Mid semester test	25%
Final Semester Test	35%
	<hr/>
	100%

A	85% - 100%
B	70% - 85%
C	55% - 69%
R	Repeat
X	A temporary grade, limited to situations with extenuating circumstances, giving a student additional time to complete the requirements for the course. Note it is only used at the end of the semester.

- 1) Minimum acceptable grade is 55%
- 2) Your assignments will carry equal weight and you will be notified one week in advance prior to handouts. Late submissions will be penalized in the following fashion:

1 day late	- loss of 20%
2 day late	- loss of 10%
3 day late	- loss of 10%

NO ASSIGNMENTS will be accepted on the 4th day.

3) The in-class quizzes will cover one or two problems on a specific topic and are worked under examination conditions. Notice of a quizz is given during class at least two days in advance. Quizzes are graded and returned the following week.

4) Homework problems are assigned during lecture and the solution to selected problems is discussed subsequently. They are not graded.

5) If at the end of the semester your overall average of the combined assignments, quizzes, mid semester test and final test is below 55% then it will be up to the instructor whether you receive an "R" repeat or a re-write. The criteria employed for arriving at that decision is class attendance, class participation and overall grade.

6) In case a re-write is granted it will be permitted only once, and will be subjected to the following conditions:

- a. it will cover the entire semesters course outline
- b. the maximum obtainable grade is "C"
- c. the re-write grade weight is 100%, therefore excluding the assignments, quizzes and mid semester test from your overall average.
- d. the student must score a 60% overall average on the re-write in order to obtain a "C" grade.

PREREQUISITE: ARC 200

TEXTS:

- CISC Drafting Fundamentals
- Applied Strength of Materials
- Design of Reinforced Concrete

REFERENCES:

C.I.S.C. Steel Handbook

ARCHITECTURAL ENGINEERING III

ARC 205

TOPIC NO.	TOPIC DESCRIPTION
1.	<u>Beam Design - Steel/Wood</u> <ul style="list-style-type: none">- Selection of beam size- Loading- Design loads- Failure modes- Shear- Deflection
2.	<u>Column Design</u> <ul style="list-style-type: none">- Axial loading- Column design, steel/wood- Base plates- Eccentrically loaded columns
3.	<u>Connections</u> <ul style="list-style-type: none">- Standard connections- Special connections- Tables
4.	<u>Trusses</u> <ul style="list-style-type: none">- Loading- Determine axial loads in all members- Member design- Panel points- Splices
5.	<u>Footings</u> <ul style="list-style-type: none">- Types of footings- Soil pressures- Design of wall footings- Design of square footings- Plain concrete footings
6.	<u>Retaining Walls</u> <ul style="list-style-type: none">- Types- Loading- Design
7.	<u>Drawings</u> <ul style="list-style-type: none">- Details- Notes- Schedules