

CALENDAR DESCRIPTION

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: HEAVY CONSTRUCTION

Code No.: ARC 232-4

Program: CIVIL CONSTRUCTION


Semester: IV

Date: JANUARY, 1988

Author: S. IENCO

New: \_\_\_\_\_ Revision: X

APPROVED:

  
 \_\_\_\_\_  
 Chairperson

March 8/88  
 \_\_\_\_\_  
 Date

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HEAVY CONSTRUCTION

ARC 232-4

COURSE NAME

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PHILOSOPHY/GOALS:

To further the student's understanding of the wide variety of techniques that go to form a heavy civil engineering project.

METHOD OF ASSESSMENT:

Assignments	30%
Mid Term Examination	30%
Final Examination	40%
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	100%

- A+ 90 - 100
- A 80 - 89
- B 70 - 79
- C 55 - 69

R Repeat

X A temporary grade, limited to situations with extenuating circumstances, giving a student additional time to complete the requirements of the course.

1. Minimum acceptable grade is 55%
2. Each assignment will carry equal weight
3. If at the end of the semester your overall average of the combined assignments, mid semester examination and final semester examination is below 55%, then it will be up to the instructor whether you receive an "R" grade or a rewrite. The criteria employed for arriving at that decision in class attendance, class participation and overall grade.
4. If a rewrite is granted it will cover the entire semester course work and the maximum obtainable grade on the rewrite is a "C".

TEXTBOOK(S):

Construction Methods and Management, Nunally

TOPIC NO.	TOPIC DESCRIPTION
1	<u>Cement &amp; Concrete Technology Review</u> .physical properties of cement and concrete
2	<u>Formwork</u> .properties of concrete in the plastic state .properties of formwork material .design tables for timber forms .shoring and scaffold .causes of failure
3	<u>Concrete Construction</u> .simple and double reinforced beams .columns .floors .precast concrete .prestressing
4	<u>Structural Steelwork</u> .post and beam .trusses .rigid frame .fasteners .welding
5	<u>Foundations</u> .types of footings .earth pressures .timber, steel and concrete piles .bearing piles .sheet piling
6	<u>Earthmoving</u> .earthmoving equipment .clearing and grubbing .excavations .compaction .soil volume-change characteristics

TOPIC NO. TOPIC DESCRIPTION TOPIC NO.

7

Construction Safety

- .The Construction Safety Act
- .trenching
- .access structures

properties of concrete in the plastic state  
properties of formwork material  
design tables for timber forms  
shoring and scaffold  
causes of failure

Concrete Construction

- single and double reinforced beams
- columns
- floors
- precast concrete
- prestressing

Structural Steelwork

- post and beam
- russes
- rigid frame
- fasteners
- welding

Foundations

- types of footings
- earth pressures
- timber, steel and concrete piles
- bearing piles
- sheet piling

Earthmoving

- earthmoving equipment
- clearing and grubbing
- excavations
- compaction
- soil volume-change characteristics