

JANUARY 1991

COURSE NAME: CONSTRUCTION TECHNOLOGY
CIV 220-4

TOTAL CREDIT HOURS: 3

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON

The objective of this course is to enable the student to plan and schedule all work on a construction project and to ensure that construction methods are carried out safely and according to proper design.

COURSE OUTLINE

II. STUDENT PERFORMANCE OBJECTIVES:

COURSE TITLE: CONSTRUCTION TECHNOLOGY

CODE NO.: CIV 220-4 SEMESTER: WINTER

PROGRAM: _____

AUTHOR: KEN WALLENIUS/RS

DATE: January 16, 1991 PREVIOUS OUTLINE DATED: NEW

APPROVED: _____ DATE _____
CHAIRPERSON

III. TOPICS TO BE COVERED:

- 1) Occupational Health and Safety Act
- 2) Safety Aspects of:
 - a) Excavations
 - b) Concrete Formwork
 - c) Scaffolding
 - d) Planning and Scheduling
 - e) Highway Construction Methods
 - f) Building Construction Methods using:
 - 1) Concrete and Reinforced Concrete
 - 2) Wood
 - 3) Steel

COURSE NAME: CONSTRUCTION TECHNOLOGY CODE NO. CIV 220-4

TOTAL CREDIT HOURS: 45

PREREQUISITE(S):

I. PHILOSOPHY/GOALS:

The objective of this course is to enable the student to plan and schedule all works on a construction project and to ensure that construction methods are carried out safely and according to proper design.

II. STUDENT PERFORMANCE OBJECTIVES:

Upon successful completion of this course the student will:

- 1) Describe in detail relevant sections of the Occupational Health and Safety Regulations.
- 2) Describe foundation system and excavation stabilization.
- 3) Design concrete formwork.
- 4) Calculate wind loading.
- 5) Prepare a construction schedule.
- 6) Describe various construction methods.

III. TOPICS TO BE COVERED:

- 1) Occupational Health and Safety Act.
- 2) Safety Aspects of:
 - a) Excavations
 - b) Concrete Formwork
 - c) Windloading in Masonry Walls
 - d) Crane Loads
 - e) Blasting
- 3) Planning and Scheduling.
- 4) Highway Construction Methods.
- 5) Building Construction Methods using:
 - a) Concrete and Reinforced Concrete
 - b) Wood
 - c) Steel
 - d) Masonry

TOPIC DESCRIPTION

<u>TOPIC NUMBER</u>	<u>TOPIC DESCRIPTION</u>	<u>REFERENCE</u>
1	- Discussion of course outline: general objectives, evaluation methods, attendance requirements. - Development process. - Occupational Health and Safety Act and regulation.	- GOVERNMENT PUBLICATIONS - SPEAKER? <u>TEXT CHAPTER</u>
2	- Slope stability and protecting excavation. - Design of concrete formwork. - Windload on masonry walls. - Crane loads and characteristics. - Blasting.	- Ch. 9 pgs. 200-219 - Ch. 11 - Ch. 14 pgs. 347-352 - Ch. 3 PGS. 49-55 - Ch. 6 pgs. 131-137
3	- Planning and scheduling.	- Ch. 15
4	- Soil characteristics. - Equipment used for road construction. - Compaction. - Rock excavation.	- Ch. 2 - Ch. 3 and 4 - Ch. 5 - Ch. 6
5	- Concrete construction including steel reinforcing. - Wood construction. - Steel construction. - Masonry construction.	- Ch. 10 - Ch. 12 - Ch. 13 - Ch. 14

IV.

LEARNING ACTIVITIES (Optional)	REQUIRED RESOURCES
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Development process	Development process
Occupational Health and Safety Act and Regulation	Occupational Health and Safety Act and Regulation
Slope stability and protecting excavation	Slope stability and protecting excavation
Design of concrete formwork	Design of concrete formwork
Windows on masonry walls	Windows on masonry walls
Cross loads and characteristics	Cross loads and characteristics
Excavation	Excavation
Planning and scheduling	Planning and scheduling
Soil characteristics	Soil characteristics
Equipment used for rock construction	Equipment used for rock construction
Compaction	Compaction
Rock excavation	Rock excavation
Concrete construction including steel reinforcing	Concrete construction including steel reinforcing
Wood construction	Wood construction
Steel construction	Steel construction
Masonry construction	Masonry construction

COURSE NAME

CODE NO.

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

A final grade will be derived as follows:

Mid-term test	40%
Final Exam test	40%
Attendance	20%
	100%

The grading system will be as follows:

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

1. Tests will be given at mid-session and at final session.
2. Full attendance expected unless excused absence.

VI. REQUIRED STUDENT RESOURCES

TEXTBOOK(S):

Construction Methods and Management, S. W. Nunally,

VII. SPECIAL NOTES

Students with special needs (e.g. 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 student.

