

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

COURSE OUTLINE

Course Title: CONSTRUCTION MATERIALS
Code No.: ARC 132-3
Program: ARCHITECTURAL TECHNICIAN
Semester: II
Date: JUNE, 1984
Author: M. URSELL

New: _____ Revision: X

APPROVED: *J.P. Crozietto* 87-04-21
Chairperson Date

CONSTRUCTION MATERIALS
Course Name

ARC 132-3
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PHILOSOPHY/GOALS:

To identify the various construction materials both classical and contemporary.

To test selected construction material.

To prepare a formal report and give a seminar on a selected materials topic.

METHOD OF ASSESSMENT (GRADING METHOD):

SEE ATTACHED SHEET

REFERENCE TEXTS:

Canadian Wood Council

National Research Council

C.S.A. Standards

A.S.A. Standards

Portland Cement Association

Brick & Tile Institute

The Canadian Institute of Steel Construction

The Plywood Manufacturers Association

METHOD OF ASSESSMENT (all courses):

The following grades will be assigned:

A - 75-100%	consistently above average achievement
B - 66-74%	average achievement
C - 55-65%	satisfactory achievement
I - incomplete	
R - Repeat	the student has failed to achieve the objectives of the course and must repeat the course

The "I" grade (incomplete) designation indicates that the student has not completed the objectives required in specific course areas.

Semester work will be made up of four tests and assignments. All tests and assignments must be completed when assigned. Late assignments or projects will not be tolerated.

Attendance is also mandatory in all classes.

Tests and assignments will be given on a regular basis throughout the semester. The weighted grade between practical theoretical work will depend on the type of course. Final examinations are also mandatory for any student that does not maintain an "A" average in the course or who has not completed all assignments by their due date.

NOTE: Chronic absenteeism by any student will result in the student not being admitted to class and ultimately his failure to receive an acceptable grade in the course.

TOPIC NO.	PERIOD	TOPIC DESCRIPTION	REFERENCES
1.	2	<u>Introduction</u> <u>Terminology</u> - load - stress - strain - classical materials - contemporary materials	
2.	16	<u>Cement, Aggregates & Concrete</u> - history of cement - types of cement and their applications - cement additives - design of concrete mixes - concrete testing methods - types of aggregates - tests for aggregates - quality control of concrete - proper placing of concrete	
3.	12	<u>Wood</u> - structure and properties - uses of wood in the construction industry - types of lumber - lumber grading - tree classifications - framing lumber use - structural characteristics of various lumber samples - timber beam design - plywood manufacture - plywood types and finishes - plywood grades - plywood strength	
4.	12	<u>Steel and Nonferrous Metals</u> - history of steel production - the manufacture of steel - types of steel - steel shapes used in Architecture - structural tests on various steel samples	
5.	12	<u>Brick & Tile & Stone</u> - types of mortar - masonry terminology - types of brick and tile - types of concrete block - tests on brick and block samples - manufacture of brick and tile - acoustic, fire, and N.C.R. ratings of concrete block, brick & tile	

ARC 132-3

NOTE:

The student is also responsible for a seminar. Topics will be presented by the instructor at the beginning of the course.

All seminar information shall be related to the class in S.I. as manufacturers design literature becomes available.

Lab demonstrations and "hands-on" activities will be instituted throughout the course - see course behavioural objectives.