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

# COURSE OUTLINE

Course Title	DRAFTING & DESIGN	(R-2000)
Code No.:	ARC 202-5	
Program:	ARCHITECTURAL	
Semester:	THREE	
Date:	AUGUST, 1988	
Author:	MEL URSELL	
		X New: Revision:
APPROVED:	La Chairperson	88/08/30 Date

#### CALENDAR DESCRIPTION

DRAFTING & DESIGN (R-2000)

ARC 202

Course Name

Course Number

#### PHILOSOPHY/GOALS:

- -- To understand the principles of Energy Efficienct Design;
- -- To utilize the computer in Residential Energy Analysis and Simulation;
- -- To detail Energy Efficient Envelopes

#### TEXTBOOK(S):

- 2) "Hot 2000 Energy Analysis Software Users Manual" by National Research Council
- 3) "Students Design Handbooks"

  by Ministry of Energy & Ministry of Mines & Resources

## METHOD OF ASSESSMENT (all courses)

The following grades will be assigned:

A - 75-100% B - 66- 74% C - 55- 65% consistently above average achievement average achievement

average achievement 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 formal 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.

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ARC 202-5

# ALTERNATE

PERIODS	TOPIC INFORMATION
6	Module 1 - Introduction to the R2000 Program
	a) History b) Objectives c) Who is involved d) The Design Competition e) Impact on Builders & Designers f) Conventional vs R2000 Design
6	Module 2 - Air Leakage in Houses
	<ul><li>a) Locations</li><li>b) Implications</li><li>c) Fan Depressurization Tests</li><li>d) Air Leakage Sealing</li><li>e) Evaluation &amp; Problem Solving</li></ul>
6	Module 3 - Introduction to R2000 House Construction
	<ul><li>a) Technical Requirements</li><li>b) Pros &amp; Cons</li><li>c) Materials</li><li>d) Drawings &amp; Specifications</li></ul>
6	Module 4 - R2000 Foundation Options
	a) Externally Insulated b) Internally Insulated c) Detailing d) Problems e) Preserved Wood Foundations f) Slab on Grade

6	Module 5 - R2000 Wall Options
	<ul> <li>a) Single Stud Walls</li> <li>b) Double Stud Construction</li> <li>c) Interior Strapping</li> <li>d) Standoff Walls</li> <li>e) Truss Walls</li> <li>f) Drywall Air Barrier System</li> </ul>
6	Module 6 - Windows & Doors
	a) Types b) Location c) Wrapping d) Leakage e) Pros &Cons
6	Module 7 - Roofs
	a) Types b) Design Options c) Trussed d) Cathedral e) Detailing
12	Module 8 - Hot-2000
	<ul><li>a) Annual Targets</li><li>b) Assumptions</li><li>c) Inputs</li><li>d) Outputs</li><li>e) Simulation Exercises</li></ul>
36	Module 9 - A Complete Set of Working Drawings For A R-2000 Residence including:
	<ul> <li>a) All Floor Plans</li> <li>b) Site Orientation Plan</li> <li>c) Sections &amp; Details</li> <li>d) Elevations</li> <li>e) Schedules</li> </ul>