

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON.

COURSE OUTLINE (ALTERNATE)

COURSE TITLE: Drafting and Design
COURSE CODE: ARC 212
PROGRAM: Architectural Technology
SEMESTER: II (Winter)
AUTHOR: B. Sparrow
DATE: 7 January 1993

PREVIOUSLY DATED: *mm*

APPROVED: _____

(DEAN)

DATE: _____

93-01-14

TOTAL CREDIT HOURS: 6
PREREQUISITES: ARC 202

I. PHILOSOPHY AND GOALS

This course provides an opportunity for the student to compete in an actual architectural design competition. The focus of the competition is on innovative architectural design for residential use, with an emphasis on energy efficient, environmentally sensitive design. The students will work individually and then in groups to prepare a complete competition entry. As part of the competition requirements, the students will have to design and detail to meet R-2000 standards, and perform an energy audit using HOT-2000 software.

II. STUDENT PERFORMANCE OBJECTIVES

Upon successful completion of the course, the student will be able to:

1. Understand the requirements for design of a multi-family residential dwelling incorporating energy efficient design.
2. Prepare competition quality drawings.
3. Construct a model or draw a perspective for competition submission.
4. understand the concept of R-2000 and R-2000 technology.
5. Perform an energy analysis using HOT-2000 software.
6. Give a verbal presentation of a design project to a jury.
7. Design and present construction details meeting R-2000 requirements.

III. TOPICS TO BE COVERED

1. Competition overview and Stage 1 procedures.
2. Review of previous competition submissions.
3. Innovative residential design and alternative technologies.
4. Passive solar design.

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5. Residential site planning and landscape design.
 6. Zoning, by-laws and regulations.
 7. Ontario Building Code, Part 9 and Section 3.7.
 8. Presentation drawings.
 9. Jury presentations.
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IV. LEARNING ACTIVITIES**REQUIRED RESOURCES****1.0 Competition Overview**

Upon successful completion of this unit, the student will be able to:

Urban Innovations
Student Kit
(Supplied)

1.1 Understand the competition intent and requirements.

Drafting Equipment Kit

Architectural Details for Insulated Buildings

1.2 Develop a preliminary design concept for the competition.

1.3 Present a design concept to a jury of peers.

1.4 Develop a work schedule to achieve successful completion by competition submission deadline.

2.0 Presentation Techniques

2.1 Review entries from previous competitions.

Display of previous year competition entries.

2.2 Develop a presentation strategy as a group.

3.0 Innovative Design and Technologies

3.1 Conduct a review of current texts and periodicals concerning innovative residential design and energy efficient technology.

Texts and periodicals in library

3.2 Examine current R-2000 technology.

Slide presentations

3.3 Propose alternative design and technologies for competition incorporation.

3.4 Use HOT-2000 software to perform an energy audit.

Computer lab

3.5 Research and propose alternative mechanical systems and technologies.

4.0 Passive Solar Design

4.1 Examine examples of and apply principles of passive solar design.

Texts and periodicals in library

5.0 Residential Site Planning and Landscape Design

5.1 Discuss aspects of residential site planning.

Guest speaker

5.2 Examine and apply principles of environmental quality and landscape design.

6.0 Zoning Regulations and By-laws

6.1 Review and interpret zoning regulations for the competition site.

Guest speaker

6.2 Propose and defend non-compliance issues for the competition site.

7.0 OBC Part 9 and Section 3.7

7.1 Review and assess compliance of competition entries with the OBC.

Ontario Building Code
Part 3 and 9

7.2 Incorporate an accessible unit into the competition design.

8.0 Presentation Drawings

8.1 Develop and submit a complete presentation meeting competition requirements.

9.0 Jury Presentations

9.1 Present projects to a jury for selection of competition submission(s).

V. METHOD OF EVALUATION

Students will be assigned a final grade based on successful completion of tests, assignments, projects and attendance, weighted as follows:

Competition		
	Individual Design Phase	10%
	Group Design Phase	25%
	Presentation	25%
	Technical Audit	15%
	Jury Presentation	5%
Group Participation (Peer Mark)		10%
Attendance		<u>10%</u>
TOTAL		100%

Late assignments will be penalized. Attendance and punctuality will be considered in the student assessment.

A final letter grade will be assigned as follows:

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

VI. REQUIRED STUDENT RESOURCES

Architecture: Design Engineering Drawing
 Latest Edition
 William P. Spence
 Glencoe

Architectural Details for Insulated Buildings
 Ronald Brand
 Van Nostrand Reinhold

Architectural Drafting Equipment Kit

In addition to those materials provided in the kit, the student will be expected to supply various other media and materials necessary to complete the assignments and projects.

VII. ADDITIONAL RESOURCES AND MATERIALSArchitectural Graphic Standards

Ramsey/Sleeper
Latest Edition
John Wiley & Sons

There are available in the library a number of texts and periodicals on design, drafting and construction.

VIII. SPECIAL NOTES

1. Students with special needs are encouraged to discuss required accommodations in confidence with the instructor.
2. The instructor reserves the right to modify the course and course outline as deemed necessary to meet the needs of the students.