

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ON.

COURSE OUTLINE

COURSE TITLE: APPLIED AUTOCAD II  
COURSE CODE: CAD 222  
PROGRAM: Architectural & Civil Technology  
SEMESTER: 3  
AUTHOR: Daniel Grand  
DATE: August 26 1996  
PREVIOUSLY DATED: August 1995



APPROVED: \_\_\_\_\_

DEAN

August 28/96

DATE

*Handwritten:* JG 27-Aug-96

TOTAL CREDITS: 3  
PREREQUISITES: CAD-120  
=====

### **I. PHILOSOPHY / GOALS**

This course is intended to expand on the basic skills developed from other introductory formal Cad courses. Students should have prerequisite CAD-120 or equal industrial experience.

The student will learn how to use advanced AUTOCAD features such as customization of menus and tablets, write and integrate basic LISP programs and understand the principle of 3-D modelling wire frames and solids.

### **II. STUDENT PERFORMANCE OBJECTIVES (OUTCOMES)**

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

#### **1 Review**

Know differences between 'R13' and 'R13 for Windows'  
Setup and configure Autocad  
Setup DOS with individual user directories  
Know the structure of the text editor Edlin

#### **2 Concepts of LISP Programming**

Understand the LISP program structure  
Use the text editor (Edlin)  
Program simple LISP programs

#### **3 Analyzing and Integrating LISP Programs**

Analyze existing LISP routines  
Integrate LISP routines  
Load routines using the command line

#### **4 Customization of AUTOCAD Menus**

Know the menu codes  
Creating screen menus  
Use the DISEL menu command language

- 5 **Creating Custom Tablet Menus**
  - Creating tablet symbols
  - Configuring the tablet
  - Setup custom tablets
  - Digitizing drawings
  
- 6 **Manipulating the Coordinate System**
  - Set view ports
  - Manipulate the UCS
  - Manipulate the user coordinate system (UCS)
  
- 7 **3-D Wire-Frame Modelling**
  - Know the 3-D basics
  - Dividing and using Viewports (Vports)
  - Using Dview
  - Giving shape to a drawing
  - Change elevations and thickness
  - Know the difference between Paper space and Model space
  
- 8 **Surfaces and Meshes**
  - Make a 3D Mesh
  - Know Rulesurf
  - Know Tabsurf
  - Know Revsurf
  - Know Edgesurf
  - Apply Shading
  - Plot 3D-drawings
  
- 9 **Solids Modelling**
  - Solid thinking
  - Creating composite solids
  - Know primitives
  - Joining, intersection and subtracting of solids
  
- 10 **Creating Custom Slide Shows**
  - Write script Files
  - Construct Mslides
  - Construct Vslides
  - Apply graphic simulation
  
- 11 **Special Projects**
  - Complete assignment covering the course material

**III. TOPICS TO BE COVERED**

1. Review and R13 for Windows
2. Concepts of LISP Programming
3. Analyzing and Integrating LISP Applications
4. Customization of AUTOCAD Menus
5. Creating Custom Tablet menus
6. Manipulating the Coordinate System
7. 3-D Wire-frame Modelling
8. Surfaces and Meshes
9. Solids modelling
10. Creating custom slide shows
11. Special Projects

**V. METHOD OF EVALUATION**

Students will be assigned a final grade based on successful completion of assignments, quizzes and tests.

Assignments	(4-8)
Quizzes	(2-3)
Tests	(2-3)

A final grade will be assigned as follows:

A+	90-100%
A	80-89%
B	70-79%
C	55-69%
R	54% or less

X A rewrite will only be granted under special circumstances and then only if the combined course grade is not below 45% and attendance was above 80%. In the case of a rewrite due to an X grade the test will cover the entire course material and the highest grade obtainable is a "C".

Assignments not received on the due date will receive no more than a "C" grade.

Late assignments will be accepted up to 7 days after the due date.

APPLIED CAD II  
COURSE NAME

CAD 222  
CODE NO.

**VI. RESOURCE MATERIALS**

Recommended text:

Sham Tickoo, Customizing Auto Cad Release 13  
Autodesk Press (available in Campus Shop)

The student should also have two 3.5" high density floppy disks,  
for saving work and submitting assignments.

**VII. ADDITIONAL RESOURCES AND MATERIALS**

In addition to the recommended course text, there are numerous  
books and magazines available in the library related to AUTOCAD  
and more generally to CAD

**VIII. SPECIAL NEEDS**

Students with special needs are encouraged to discuss required  
accommodations in confidence with the instructor.

The instructor reserves the right to modify the course and course  
outline as deemed necessary to meet the needs of the students.