SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: APPLIED CAD II

Code No.: CAD 222-3

Program: ARCHITECTURAL

Semester: THREE

Date: AUGUST, 1992

Author: MEL URSELL

New: _____   Revision: ___X___

APPROVED: _L.P. Orazietto_____   _August 27/92_____
          Chairperson   Date

COURSE NAME: APPLIED CAD II

COURSE NUMBER: CAD 222-3

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 relevant industrial experience;
-   to examine and use Advanced Autocad features such as customization

-   to understand the principles of 3-D modelling - wire frame and solid

METHOD OF ASSESSMENT (GRADING METHOD):

A final grade will be derived from the results of assigned lab/project work and the ability to demonstrate specific skills related to he/her own disipline applications.

The grading system used will be as follows:

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

1)   Minimum acceptable grade is 55%

2)   Each major assignment will carry equal weight.

3)   If at the end of the semester your overall average of the combined assignments and tests is below 55%, then it will be up to the instructor whether you receive an "R" grade or a rewrite. The criteria employed for arriving at that decision is class attendance, class participation and overall grade, which must be at least 50%.

4)   If a rewrite is granted it will cover the entire semester course work and the maximum overall obtainable grade on the rewrite is a "C".

TEXTBOOK(S):

The Autocad 3-D Book   -   George O. Head
                              -   Charles A. Pietra

Ventana Press

REFERENCES:

- Advanced Techniques in Autocad - Robert Thomas

  Sybex Press

- AutoCAD Reference Manual Version 11

  Autodesk, Inc.

- Customizing AutoCAD by j. Smith & R. Gesner

  New Riders Publishing

STUDENT STUDY MATERIALS:

1 - 3.5" 720K OR 1.44K floppy diskette
(or 1 - 5.25" 360K or 1.2 meg floppy diskette)

Lecture handouts

Lab/Project handouts

TOPIC INFORMATION   **REFERENCE**

Hours   **Unit #1 – Review of Basic Autocad Commands**

       a) Getting Started
       b) Graphic Commands
       c) Editing Commands
3   d) Display Commands
       e) Layers & Line Types
       f) Blocks
       g) Dimensioning
       h) Plotting
       i) 3-D Level

Unit #2 – Review of DOS

       a) Basic DOS Commands
       b) Creating Directories
3   c) Edlin
       d) Disk Organization
       e) Files
       f) Removing & Deleting Files

Unit #3 – Customization of AutoCAD

       a) Creating Screen Menus
6   b) Utilizing the Line Editor
       c) Acad Menu Codes

Unit #4 – Creating Tablet Menus

       a) Creating Tablet Symbols
6   b) Configuring the Tablet
       c) Custom Tablets

TOPIC INFORMATION   **REFERENCE**

<u>Hours</u> <u>Unit #5 – Creating Custom Slide Shows</u>

         a) Script Files
         b) Mslide
  6   c) Vslide
         d) Graphic Simulation (animation)

<u>Unit #6 – 3-D Wireframe Modelling</u>

         a) Overview
         b) User Coordinate System
         c) Giving Shape to a Drawing
  6   d) Using DVIEW
         e) Vports
         f) 3-D Face
         g) Dividing VIEWPORTS
         h) Paper Space – Model Space

<u>Unit #7 – Dynamic View</u>

         a) Rotating using DVIEW
         b) Rotating using Camera
  3   c) Adding Perspective
         d) Target
         e) Points
         f) Twist

TOPIC INFORMATION   **REFERENCE**

Hours   Unit #8 – Autocad's User Coordinate System

           a) Positioning the UCS ICON
           b) Saving the UCS
  3   c) Pointing to a new X,Y,& Z (3 point)
           d) Rotating arount X,Y, & Z

           Unit #9 – Surfaces and Meshes

           a) What is a 3D Mesh
           b) "Rulesurf"
           c) "Tabsurf"
  6   d) "Revsurf"
           e) "Edgesurf"
           f) Shading
           g) Plotting

           Unit #10 – Solid Modelling –"Advanced
                      Modelling Extension" (AME)

           a) Solid thinking
  10   b) Creating & Composite Solid
           c) Primitives
           d) Joining & Subtracting

  8   Unit #11 – Special Projects