SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: **ADVANCED APPLICATIONS FOR AUTOCAD**

Code Number: TPC 245

Program: TECHNOLOGY UPGRADING

Semester: N.A.

Date: August 1992

Author: Mel Ursell

New: <u>yes</u>   Revision: <u>no</u>

APPROVED: _____   ^^^*MJLJI..*
                  Dean   Date

COURSE DESCRIPTION — T.P.C. 245

Advanced Application for Autocad

PREREQUISITE;   Intermediate CAD knowledge

This course will allow participants to examine and use
Advanced Autocad features such as symbol and slide libraries
and custom screen and tablet memus.

Basic 3-D Modelling, both wire frame and solid modelling will
also be studied. Shading techniques and animation will be
investigated.

SPECIAL NOTES

Students with special needs (e.g. physical limitations, visual
impairments, hearing impairments, learning disabilities) are
encouraged to discuss required accommodations confidentailly
with the instructor.

Your instructor reserves the right to modify the course as
he/she deems necessary to meet the needs of students.

COURSE NAME: **ADVANCED APPLICATIONS**

COURSE NUMBER: **TPC 245**

PHILOSOPHY/GOALS:

This course is intended to expand on the basic and
intermediate skills developed in the workplace or from other
introductory formal CAD courses. Students should have
prerequisite CAD 120 and CAD 222 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

Hours   **Unit #1 - Review of <u>Basic Autocad Commands</u>**

a) Getting Started
b) Graphic Commands
c) Editing Commands
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
c) Edlin
d) Disk Organization
e) Files
f) Removing & Deleting Files

Unit #3 - <u>Customization of AutoCAD</u>

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

Unit #4 - <u>Creating Tablet Menus</u>

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

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

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

Unit #6 - 3-D Wireframe Modelling

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

Unit #7 - Dynamic View

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

TOPIC INFORMATION   **REFERENCE**

Hours   **Unit #8 - Autocades 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 Neshes

          a) What is a 3D Mesh
          b) "Rulesurf"
          c) "Tabsurf"
          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

          Unit #11 - Special Projects