

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE MARIE ONT.

COURSE OUTLINE

COURSE TITLE: CAD 3D MODELLING

COURSE CODE: CAD 301

PROGRAM: ARCHITECTURAL TECHNOLOGY

SEMESTER: 5

AUTHOR: M. URSELL

DATE: MAY 1993

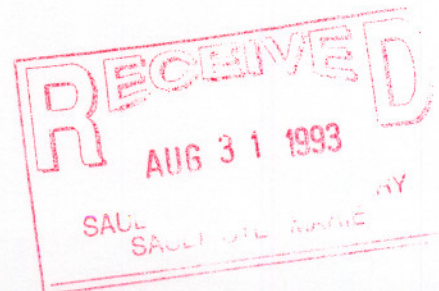
PREVIOUS DATE: NEW

APPROVED:

D. McConnel

DATE:

93 08 30



TOTAL CREDIT HOURS: 48

PREREQUISITES: CAD 120 CAD 222 CAD 323

I. PHILOSOPHY & GOALS

This course is an advanced cad course that explores the tools required to draw in 3D space. The student will learn basic 3D principles as well as how to use Autocad, s ADVANCED MODELLING EXTENSION (A.M.E) & other 3D modelling software.

II. STUDENT PERFORMANCE OBJECTIVES

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

1. To visualize and draw in 3D space.
2. To learn the appropriate tools and commands to draw in 3D utilizing the proper software.
3. To add and subtract solids geometry in the construction of solid models.



111. TOPICS TO BE COVERED

1. Review of Basic Autocad Commands
2. Autocads New Dimension
- 3 Autocads Advanced Modelling Extension (A.M.E.)
4. Solids Geometry

IV. LEARNING ACTIVITIES**REQUIRED RESOURCES****1.0 Basic Autocad Command Review**

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

- 1.1 Start & save a drawing, set limits, units, grid, snap, etc.
- 1.2 Create blocks, layers, fonts, etc.
- 1.3 Edit existing drawings utilizing array, break, fillet, change, move , copy, mirror, etc.
- 1.4 Investigate release 12 commands, such as, qsave, open, dline, wpolygon, fence, etc.
- 1.5 Draw an isometric drawing.

Autocad & its Applications

Handouts & Tutorials

2.0. AUTOCADS NEW DIMENSION

- 2.1 Who needs 3D?
- 2.2 The user Coordinate System
- 2.3 Using the " Dview" Command
- 2.4 Positioning the "UCS" Icon
- 2.5 Creating "3D Meshes" using rulesurf, tabsurf, revsurf, edgesurf, etc.
- 2.6 Using "Viewports"

The Autocad 3D Book

Handouts & Tutorials

2.7 Drawing in Paper Space & Model Space

2.8 Shading

2.8 Transferring a 3D drawing to "Autoshade"

2.9 3D drawing Commands: 3Dline, 3Dface, Elevation, Thickness, Filters, etc.

3.0 AUTOCADS ADVANCED MODELLING EXTENSION

3.1 Loading (A.M.E) Autocad AME Manual
Release 2.1 Reference

3.2 Creating Primitives

3.3 Tutorial (Region Modelling)

3.4 Creating a region primitive

3.5 Creating a composite region

3.6 Solid Modelling Tutorial

3.7 Creating solid primitives

3.8 Creating a composite solid

3.9 Editing solids

3.10 Creating solids from regions

3.11 Solid geometry commands solarea, solbox, solcone, solcyl, solext, solidify, solmesh, etc.

4.0 SOLIDS GEOMETRY

4.1 Individual Student Solids Geometry assignments and projects related to the subject discipline.

V. METHOD OF EVALUATION

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

ASSIGNMENTS	35 %
TESTS	25 %
PROJECT	30 %
ATTENDENCE	10 %
	<hr/>
	100 %

Late assignments will be deducted 10 % the first week and assignments that are more than one week late will not be accepted and will subsequently result in a failure.

A final letter grade for the course will be assigned as follows:

A+	90 - 100 %
A	80 - 89 %
B	70 - 79 %
C	55 - 69 %
R	R E P E A T

The "I" grade (incomplete) designation indicates that the student has not completed the objectives required in specific course areas.

The "X" grade (incomplete) designation indicates that the student has 30 days within which to complete certain objectives required.

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.

* Student's with special needs are encouraged to discuss required accomodations 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.

