SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY

SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: COMPUTER AIDED DESIGN
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Code No.: CAD 200-3
_____

Program: MECHANICAL TECHNICIAN/TECHNOLOGY
_____

Semester: THREE/FOUR
_____

Date: AUGUST, 1988
_____

Author: MEL URSELL
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New: _____    Revision: __X____

APPROVED: _____    __88/08/30_____
          Chairperson                 Date

CALENDAR DESCRIPTION

COMPUTER AIDED DESIGN                    CAD 200-3
_____          _____
         Course Name                      Course Number

PHILOSOPHY/GOALS:

To understand the use of the computer to develop graphic presentations.

To explore "AUTOCAD" and other software packages available for graphic presentation in various disciplines.

To understand basic computer concepts as they apply to Engineering design and drafting.

To achieve a basic knowledge of "AUTOCAD" principles by a hands on approach on the microcomputer.

METHOD OF ASSESSMENT (ALL COURSES)

The following grades will be assigned:

       A+- 86 - 100%        consistently outstanding
       A - 75 -  85%        outstanding achievement
       B - 66 -  74%        consistently above average achievement
       C - 55 -  65%        satisfactory achievement
       I - Incomplete
       R - Repeat           the student has failed to achieve the
                            objectives of the course and must repeat
                            the course

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

Semester work will be made up of tests and assignments. All tests and assignments must be completed when assigned. Late assignments or projects will not be tolerated.

Attendance is also mandatory in all classes.

Tests and assignments will be given on a regular basis throughout the semester.  Final examinations are also mandatory for any student that does not maintain an "A" average in the course or who has not completed all assignments by their due date.

REFERENCE TEXTS:

AUTOCAD, Users Reference -- by Autodesk, Inc.

Inside "AutoCAD" -- by D. Raker & M. Rice (New Riders Publishing)

CAD 200-3

| PERIODS | TOPIC INFORMATION |
|---|---|

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UNIT #1 - Introduction to CAD
a) terminology
b) what is "Autocad"?
c) what can it do?
d) system specifications
e) overview - history
f) micro technology
g) getting started
h) operating systems

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UNIT #2 - Basic Commands
Utility Commands:
a - help
b - end
c - Quit
d - save
e - end save
f - limits
g - units
h - menu
i - rename
j - keyboard use
k - command reference
l - flip screen
m - function keys
n - status

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UNIT #3 - Graphic Primitives:
a) line
b) Pline
c) circle
d) arc
e) trace
f) methods of pointing
g) snap
h) grid
i) ortho
j) coordinates
k) tutorial #1

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UNIT #4 - Editing Commands:
    a) edit
    b) erase
    c) break
    d) move and copy
    e) arrays
    f) mirror imaging
    g) copy
    h) change
    i) move
    j) fillet
    k) chamfer
    l) attedit
    m) divide
    n) explode
    o) measure
    p) offset
    q) Pedit
    r) Rotate
    s) select
    t) scale
    u) trim
    v) stretch

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UNIT #5 - Introduction to DOS
    a) files
    b) directories
    c) disk organization
    d) sub directories
    e) path
    f) the set command
    g) disk formatting
    h) other basic DOS commands

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UNIT #6 - Display
    a) Zoom
    b) pan
    c) redraw
    d) regen
    e) fill
    f) tutorial #2

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**UNIT #7 - Layers Colours & Linetypes**
a) basic concepts and properties
b) creating new layers
c) set colour
d) set linetype
e) turning layers on and off
f) scanning the library
g) freeze and thaw
h) tutorial #3

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**UNIT #8 - Blocks**
a) creating block symbols
b) inserting blocks
c) wblock
d) custom block libraries
e) listing blocks
f) nested blocks
g) tutorial #4

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**UNIT #9 - Dimensioning**
a) types of
b) tolerance
c) limits
d) variables
e) dimensioning utility commands
f) distance
g) auto dimensioning
h) units
i) dimensioning text
j) tutorial #5

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**UNIT #10 - Special Features**
a) attributes
b) editing attributes
c) tutorial #6

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**UNIT #11 - Plotting**
a) plotting to printer
b) plotting to plotter
c) plot specifications
d) plot scale
e) plotter problems

3      UNIT #12 - New Revised Autocad Features
         a) poly line
         b) shell command
         c) editing


3      UNIT #13 - 3-D Level
         a) elevation
         b) viewpoint
         c) the Z axis
         d) HIDE
         e) 3D line command
         f) 3D face command
         g) tutorial #6