

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER:	ETD 2536
COURSE TITLE:	CAD - Mechanical
PREREQUISITE(S):	CGS 2470
COREQUISITE(S):	None
CREDIT HOURS:	3
CONTACT HOURS/WEEK:	5
CONTACT HOUR BREAKDOWN:	
Lecture/Discussion:	4
Laboratory:	1
Other _____:	
FACULTY WORKLOAD POINTS:	4.50
STANDARDIZED CLASS SIZE ALLOCATION:	24
CATALOG COURSE DESCRIPTION:	
The course deals with the use of AutoCAD and/or similar software for mechanical drawings and design applications. The emphasis in the course is on the use of computer graphics for the preparation of mechanical drawings.	
SUGGESTED TEXT(S):	<u>Mechanical Desktop</u> (Latest Revision) Daniel T. Banach, AutoDESK press or equivalent, ISBN 1585030139
IMPLEMENTATION DATE:	Fall Term, 1988 (891)
LAST MODIFICATION DATE:	Fall Term, 1997 (981) Fall Term, 2001 (20021) Fall Term, 2002 (20031)

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Introduction	±5
II. User interface and command entry	±5
III. Viewing, extruding, revolving and editing parts	±5
A. Viewing a model from different viewports	
B. Using the browser for viewing and editing	
C. Using the XY orientation in 3D	
D. Extruding the profile	
E. Revolving the profile	
F. Editing features	
IV. Sketch planes, Boolean operations, fillets, chamfers, Holes, and arrays	±5
A. Face highlighting and UCS cycling	
B. Cut, join, intersect, and split operations	
C. Sketched features	
D. Editing features	
E. Failed features	
F. Deleting features	
V. Placed features	±5
A. Fillets	
B. Chamfers	
C. Holes	
VI. Drawing views and annotations	±5
A. Drawing tab	
B. Annotation tab	
C. Section views	
D. Editing dimensions	
VII. Work axis, work planes, work points, 3d path (sweep), loft and visibility	±10
A. Creating a work plane	
B. Creating work points	
C. Controlling visibility of objects	
D. Sweeping the profile	
E. Lofted parts	

COURSE TOPICS (CONTINUED)	CONTACT HOURS <u>PER TOPIC</u>
VIII. Dimensioning, Constraining and sketching techniques	±10
A. Construction geometry	
B. Multiple profiles	
C. Power dimensioning	
D. Power edit	
E. Automatic dimension	
F. Dimension display and equations	
G. Design variables	
H. Equation assistant	
IX. Modeling techniques	+10
A. Feature suppression	
B. Scaling a part	
C. Shelling	
D. Split line	
E. Face split	
F. Arrays	
G. Copying a feature	
H. Reordering	
I. Adding a second part to a file	
J. Mirroring a part	
K. Splitting a part into two parts	
L. Creating combined parts	
M. Replaying	
N. Mass properties information for the active part	
O. Mass properties for multiple parts	
X. Assemblies	+10
A. Assembly tab	
B. Creating assemblies	
C. Top approach	
D. Bottom approach	
E. Subassemblies	
F. Assembly constraints	
G. Editing assembly constraints	
H. Interference checking	
I. Scenes	
XI. Advanced drawing creation and annotations	+10
A. Tolerance modeling	
B. Creating drawing views and layouts	
C. Creating drawing views from scenes	
D. Bill of material	

PROGRAM TITLE: Industrial Management Technology

COURSE TITLE: CADD - Mechanical

CIP NUMBER: 1606.200101

LIST PERFORMANCE STANDARDS ADDRESSED:

NUMBER(S): TITLES(S):

14.0 DEMONSTRATE KNOWLEDGE OF DATA PROCESSING ACTIVITIES--The student will be able to:

- 14.01 Identify terms commonly used in information processing.
- 14.02 Identify automated business systems, equipment components, and media.
- 14.03 Sequence and define the six steps of a procession cycle.
- 14.04 Interpret operations of a flowchart of a simulated business job.
- 14.05 Check printout for error, correct, and resubmit.
- 14.06 Use an alphanumeric keyboard and a ten-key numeric pad with appropriate techniques.

7.0 APPLY BASIC QUALITY CONTROL PRINCIPLES--The student will be able to:

- 17.01 Interpret basic statistical process control charts.
- 17.02 Apply basic statistical process control principles.
- 17.03 Analyze workers' and inspectors' roles in quality production.
- 17.04 Conduct a quality circle work session.

18.0 DEMONSTRATE AN UNDERSTANDING OF TECHNICAL OR INDUSTRIAL COMPETENCIES-- The student will be able to:

- 18.01 Demonstrate an understanding of technical or industrial competencies as specified in the curriculum frameworks of any postsecondary adult or postsecondary vocational program.