Modesto Junior College
Course Outline of Record
ENGTC 210

I. **OVERVIEW**
The following information will appear in the 2010 - 2011 catalog

**ENGTC 210 Intro to Computer Assisted Drafting**  
1 Unit

*Introduction to the use of the computer as a drafting tool. Topics include basic drawing, editing, and utility commands of AUTOCAD.*

Field trips are not required. (A-F or P/NC - Student choice) Lecture /Lab

**Transfer:** (CSU)

II. **LEARNING CONTEXT**
*Given the following learning context, the student who satisfactorily completes this course should be able to achieve the goals specified in Section III, Desired Learning:*

**A. COURSE CONTENT**

1. **Required Content:**

   a. Introduction
      i. User interface
      ii. File management
      iii. Toolbars
      iv. Command line
      v. Status bar

   b. Basic functions
      i. View manipulation - zoom, pan
      ii. Printing

   c. Draw commands
      i. Lines
      ii. Rectangles
      iii. Circles and arcs
      iv. Construction lines

   d. Edit commands
      i. Erase
      ii. Move and copy
iii. Scale
iv. Fillet
v. Rotate
vi. Trim and extend

e. Object snap
   i. Settings
   ii. Symbol identification and use of
   iii. Object snap toolbar

f. Text commands
g. Basic dimensioning

2. **Required Lab Content:**

In lab, students perform the CAD functions listed in the lecture content section. Assignments are given that require application of the content.

a. Introduction
   i. User interface
   ii. File management
   iii. Toolbars
   iv. Command line
   v. Status bar

b. Basic functions
   i. View manipulation - zoom, pan
   ii. Printing

c. Draw commands
   i. Lines
   ii. Rectangles
   iii. Circles and arcs
   iv. Construction lines

d. Edit commands
   i. Erase
ii. Move and copy  
iii. Scale  
iv. Fillet  
v. Rotate  
vi. Trim and extend  

e. Object snap  
i. Settings  
ii. Symbol identification and use of  
iii. Object snap toolbar  
f. Text commands  
g. Basic dimensioning  

B. HOURS AND UNITS  

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C. METHODS OF INSTRUCTION (TYPICAL)  
Instructors of the course might conduct the course using the following method:  

1. Lectures and demonstrations to explain/illustrate use of commands in AutoCAD.  
2. In-class review/critique of professional drawings.  
3. In-class review of drawing standards and industry accepted "best practices."  

D. ASSIGNMENTS (TYPICAL)  

1. EVIDENCE OF APPROPRIATE WORKLOAD FOR COURSE UNITS  
Time spent on coursework in addition to hours of instruction (lecture hours)  
  a. Weekly computer assignments based on lecture content. Students will create various AutoCAD drawings which require the use of multiple commands.  
  b. Students will prepare for periodic quizzes/exams based on assignments given.  

2. EVIDENCE OF CRITICAL THINKING  
Assignments require the appropriate level of critical thinking  
  a. Assignments will include creation of drawings in AutoCAD given an existing drawing or sketch.  
  b. Example assignments include:
i. For the figure given, reproduce in AutoCAD using the circle, arc and copy commands only. Print 1:2 when completed.

ii. For the drawing given, reproduce in AutoCAD including the given dimensions. Print 1:1 when completed.

iii. Reproduce the drawing in AutoCAD and include the note block. Use "Verdana" text at a height of .1".

E. TEXTS AND OTHER READINGS (TYPICAL)

1. Other: No textbook required

III. DESIRED LEARNING

A. COURSE GOAL

As a result of satisfactory completion of this course, the student should be prepared to:

use AutoCAD software to create drawings using basic draw and edit commands. Drawings will include dimensioning and text.

B. STUDENT LEARNING GOALS

Mastery of the following learning goals will enable the student to achieve the overall course goal.

1. Required Learning Goals

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

a. Execute the AutoCAD commands and directions discussed in a laboratory setting. See "Lab Student Learning Goals" for details.

2. Lab Learning Goals

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

a. Locate various commands using the command line, toolbars and menus.

b. Use AutoCAD to draw lines, circles, arcs and figures of specified shape and location.

c. Use AutoCAD to properly position, size and construct text.

d. Use AutoCAD commands to draw predefined objects.

e. Compare various ways of executing AutoCAD commands.

f. Use AutoCAD editing commands to correct and modify drawings.

g. Use AutoCAD to create basic dimensions on a drawing.

h. Use AutoCAD to plot drawings.

IV. METHODS OF ASSESSMENT (TYPICAL)

A. FORMATIVE ASSESSMENT

1. Weekly grading of instructor-assigned CAD drawings.
2. Periodic quizzes/exams

B. SUMMATIVE ASSESSMENT

1. Final project