

College of San Mateo Course Outline

- New Course
 Update/No change
 Course Revision (Minor)
 Course Revision (Major)

Date: 11 Nov. 09

Department: Drafting Technology Number: 122

Course Title: Computer-aided Drafting II Units: 3

Total Semester Hours Lecture: 32 Lab: 64 Homework: 48 By Arrangement: 0

Length of Course

- Semester-long
 Short course (Number of weeks ___)
 Open entry/Open exit

Grading

- Letter
 Pass/No Pass
 Grade Option (letter or Pass/No Pass)

Faculty Load Credit (To be completed by Division Office; show calculations.): $2 + 4 \cdot 7 = 4.8$ FLCs

- Prerequisite** (Attach Enrollment Limitation Validation Form.)
DRAF 121 or equivalent with grade C or higher.
- Corequisite** (Attach Enrollment Limitation Validation Form.)
None
- Recommended Preparation** (Attach Enrollment Validation Form.)
None.
- Catalog Description** (Include prerequisites/corequisites/recommended preparation. For format, please see model course outline.)

122 Computer Aided Design/Drafting II (3) (Pass/No Pass or letter grade option)
Thirty-two lecture and sixty-four lab hours. Prerequisite: Draf 121 or equivalent with a grade of C or higher. Intermediate computer aided drafting for students who have completed a basic course in AutoCAD. Includes plotting, wireframe modeling, AutoCAD 3D modeling, render, slide shows, blocks and attributes. A materials fee in the amount shown in the Schedule of Classes is payable upon registration. (AA, CSU)
- Class Schedule Description** (Include prerequisites/corequisites/recommended preparation. For format, please see model course outline.)

DRAF 122 Computer Aided Design/Drafting II
Intermediate computer aided drafting for students who have completed a basic course in AutoCAD. Includes plotting, wireframe modeling, AutoCAD 3D modeling, render, slide shows, blocks and attributes. A \$___ materials fee is payable upon registration. Prerequisite: Draf 121 or equivalent with a grade of C or higher. (AA, CSU)
- Student Learning Outcomes** (Identify 1-6 expected learner outcomes using active verbs.)

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

The student will be able to do the following:

- a. Apply appropriate software file management procedures.
- b. Create drawings using the drawing and edit commands of the AutoCAD drafting software.
- c. Apply ASME Y14 Standards in dimensioning and tolerancing in drawings.
- d. Create and use symbol libraries in drawings.
- e. Create architectural drawings for a residential structure.
- f. Develop mechanical drawings.
- g. Archive (electronic files) and output drawings with printers and plotters.
- h. Cultivate and assess an active commitment to finding creative and inventive solutions and integrate their technical computer graphics knowledge to achieve viable solutions in producing CAD drawings. CAD drawings.

7. **Course Objectives** (Identify specific teaching objectives detailing course content and activities. *For some courses, the course objectives will be the same as the student learning outcomes. In this case, "Same as Student Learning Outcomes" is appropriate here.*)

Same as SLOs

8. **Course Content** (Brief but complete topical outline of the course that includes major subject areas [1-2 pages]. Should reflect all course objectives listed above. In addition, a sample course syllabus with timeline may be attached.)
See attached outline.

9. **Representative Instructional Methods** (Describe instructor-initiated teaching strategies that will assist students in meeting course objectives. Describe out-of-class assignments, required reading and writing assignments, and methods for teaching critical thinking skills. **If hours by arrangement are required, please indicate the additional instructional activity which will be provided during these hours, where the activity will take place, and how the activity will be supervised.**)

a. Communication: Students will read and translate data relative to geometry, fabrication and assembly/installation requirements into a graphical form easily understood by others with similar technical understanding.

b. Reading assignments: Instructor will assign reading from course text and syllabus each week

c. Computation: Students will use basic mathematical operations as required to define graphic geometry parameters.

d. Writing/drawing assignment:

i) Student will be required to submit one research paper on a CADD drafting topic. The paper will include a clear general and specific purpose, introduction, body, and conclusion, use of effective organizational format, and smooth transitional devices

ii) Students will keep a portfolio of drawings that reflect their progress throughout the semester.

- e. Skill building:
 - i) Instructor will demonstrate various CADD drawing processes.
 - ii) Students will be asked to perform specific drawing exercises at increasingly challenging levels.
- f. Multimedia:
 - i) Students will watch powerpoint presentations of drawing constructions and techniques and analyse them according to theory and concepts taught in class.
- g. Critical thinking and problem solving:
 - i) Lecture/discussion to understand use of specific drawing techniques.
 - ii) Students will select and apply appropriate spatial relationship principles to determine problem solutions.

10. Representative Methods of Evaluation (Describe measurement of student progress toward course objectives. Courses with required writing component and/or problem-solving emphasis must reflect critical thinking component. If skills class, then applied skills.)

- a. Written homework - to reflect students' ability to write procedures that meet evidence and reasoning skills objectives
- b. Presentations - to demonstrate students' ability to inform and use evidence and reasoning skills when appropriate
- c. Written exams/timed drawing exams - to reflect students' knowledge of theories, concepts, recognize and use evidence and skills presented in class demonstrations, lectures, text and discussions
- d. Participation - to reflect students' involvement in class discussions, giving feedback on projects to fellow classmates, doing lab projects and homework assignments
- e. Final Project - to reflect students' knowledge of theories, concepts, skill level, ability to organize information, and apply reasoning skills presented in demonstrations, class discussions, lectures and text.

11. Representative Text Materials (With few exceptions, texts need to be current. Include publication dates.)

Sham Tickoo. AutoCAD 2010: A Problem Solving Approach. Clifton Park, NY: Thompson-Delmar Learning, 2010

Prepared by: _____
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