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: 121**

Course Title: Computer-aided Drafting I **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*.7 = 4.8 FLC**

1. **Prerequisite** (Attach Enrollment Limitation Validation Form.)
None.

2. **Corequisite** (Attach Enrollment Limitation Validation Form.)
None

3. **Recommended Preparation** (Attach Enrollment Validation Form.)
None.

4. **Catalog Description** (Include prerequisites/corequisites/recommended preparation. For format, please see model course outline.)

121 Computer-Aided Design/Drafting I (3) (Pass/No Pass or letter grade option)
Minimum of 32 lecture and 64 lab hours per term. A beginning AutoCAD course. Covers basic entities, edit commands, display controls, layering, text, dimensioning and isometric drawing. A materials fee in the amount shown in the Schedule of Classes is payable upon registration. (AA, CSU, UC)

5. **Class Schedule Description** (Include prerequisites/corequisites/recommended preparation. For format, please see model course outline.)

DRAF 121 Computer-Aided Design/Drafting I
A beginning AutoCAD course. Covers basic entities, edit commands, display controls, layering, text, dimensioning and isometric drawing. A $___ materials fee is payable upon registration. Pass/No Pass or letter grade option. (AA, CSU, UC)

6. **Student Learning Outcomes** (Identify 1-6 expected learner outcomes using active verbs.)

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

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 of 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.

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 smiliar technical understanding.

b. Reading asignments: 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 porfolio of drawings that reflect their progress throughout the semster.

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 realationship 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 homeowrk 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: _____
(Signature)

Email address: vorobey@smccd.edu

Submission Date: 11 Nov 09