# College of San Mateo
# Course Outline

☐ New Course
☐ Update/No change
☒ Course Revision (Minor)
☐ Course Revision (Major)

Date: 11 November 09

**Department:** Drafting Technology **Number:** 110

**Course Title:** SoldiWorks 1 **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 + .7*4 = 4.8 FL**

**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.)

110 SolidWorks I (3) (Pass/No Pass or letter grade option)
Minimum of thirty-two lecture hours and sixty-four lab hours per term. SolidWorks software is used to generate 3-dimensional solid models, assemblies, and detailed drawings of mechanical objects used in industrial design and engineering. Sketching, dimensioning, part creation, assemblies, drawing creation and printing will be covered. A materials fee in the amount shown in the Schedule of Classes is payable upon registration. (AA, CSU)

**5.** **Class Schedule Description** (Include prerequisites/corequisites/recommended preparation.)

DRAF 110 Solidworks I
SolidWorks software is used to generate 3-dimensional solid models, assemblies, and detailed drawings of mechanical objects used in industrial design and engineering. Sketching, dimensioning, part creation, assemblies, drawing creation and printing will be covered. A $___ materials fee is payable upon registration. Pass/No Pass or letter grade option. (AA, CSU)

**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. Use SolidWorks drawing and detailing options.

b. Apply ANSI drafting standards to projects using SolidWorks tools.

c. Construct problem-solving skills to master the creation of drawings and assemblies.

d. Judge and select correct drawing processes and procedures to synthesize and integrate information in drawings and assemblies.

e. Create user-defined drawing templates and sheet formats.

f. Apply the appropriate types and styles of drawing views to various models.

g. Demonstrate ability to create surface modeling basics such as datum points, datum curves and 3D sketches.

h. Utilize SolidWorks surfacing features and methods to create complex solid geometry.

i. Evaluate his/her commitment to personal achievement via the new knowledge gained in this subject.

**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. If this is the case, please simply indicate this in this section).*

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, you may attach a sample course syllabus with a timeline.)

See attached outline.

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

a. Reading assignments: Instructor will assign 10-20 pages of reading from course text and syllabus each week.

b. Writing assignments: Student will be required to submit one research paper on a CAD related topic. The paper will include a clear general and specific purpose, introduction, body, and conclusion, use of effective organizational format, and smooth transitional devices.

c. Multimedia: Students will watch PowerPoint presentations and analyze them accordingly to theory and concepts presented in class.

d. Critical thinking:

i) Lecture/discussion to understand specific processes used in production drawings of the manufacturing and design of products.
ii) Students will locate types of evidence in design, architectural, engineering magazines, on line, etc. and evaluate them on criteria for reasonable evidence for their term report.

**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. Sketches of Planned Drawings- to reflect students' ability to summarize a strategy in drawing assembly strategies.

b. Completion of Timed Assigned Drawings – to demonstrate students' ability to use evidence and reasoning skills to complete work.

c. Written Exams – to reflect students' knowledge of theories, concepts, recognize and use evidence and skills presented in class lectures, text and discussions.

d. Participation – to demonstrate 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, ability to organize information, and apply reasoning skills presented in class discussions, lectures, and text.

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

•Planchard, D. C., Planchard, M. P., SolidWorks 2009 Tutorial; Schroff, 2009
••The following publications available in the CSM library:
Industrial Design magazines
Engineering Design magazines
Architectural magazines
Furniture and product design texts

Prepared by: _____
(Signature)

Email address: vorobey@smccd.edu

Submission Date: _____