

EGN182 Introduction to SolidWorks

Course Meetings: Tuesdays, 2:00 – 3:50
Course Mode: Blended
Course Location: JMC 270

Materials & Books

Required Textbook

- “Beginner’s Guide to SolidWorks 2020”, Alejandro Reyes, SDC Publications.

Technology Requirements

- Software:
 - SolidWorks 2020 Education Edition (provided by department)
 - MySolidWorks online account
- Hardware
 - A windows laptop or desktop capable of running the required software, with a 3 button scroll wheel mouse.

Course Description

An introduction to SolidWorks and its use as a design tool for engineering. Students will use hands-on labs to create three dimensional solid models together with their orthographic views and convert them to computer design files. Students will learn the basics of building parts, dimensioning, tolerances, manufacturing drawings, assemblies, assembly drawings, and bills of material. They learn best practices, essential parametric sketching techniques, and time-saving shortcuts for making 3D parts and assemblies. Lab 1 hrs., Credits: 1

Course Learning Objectives

Upon completion of this course, students will be able to...

1. Communicate mechanical designs via orthographic hand sketching
2. Read and interpret mechanical drawings

3. Apply a Parametric Solid Modeling CAD package to:
 - a. Construct robust sketches that reflect appropriate design intent
 - b. Construct mechanical parts using extrude and revolve
 - c. Modify parts using fillets, chamfers, holes, and patterns
 - d. Construct assemblies of parts
 - e. Produce engineering drawings of mechanical parts and assemblies, in accordance to a specified drafting standard

ABET Student Outcomes Achieved

2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Structure & Format

- All of the learning content (the "lecture" in a traditional course) will be online and posted in Brightspace. The scheduled class time will be face-to-face in the computer lab, and will be used for clarifying questions and working on homework assignments. It is expected that BEFORE coming to the face-to-face meetings, you will have completed that week's readings and tutorials.
- This course will utilize Brightspace extensively. All course communications, assignments, grading, etc are through the course Brightspace website.

Grading Criteria

- Quizzes 10 %
- Homework 50 %
- Group Project 20 %
- CSWA Exam 20 %

Course Evaluations

At the end of each semester, every student has the opportunity to provide constructive feedback on their courses. It is important to me that you take the time to let me know your thoughts about the course. I use your feedback to make improvements to the course materials, assignments, and outcomes.

Course Policies

Grading Scale

100-93%	=	A	79-77%	=	C+
92-90%	=	A-	76-73%	=	C
89-87%	=	B+	72-70%	=	C-
86-83%	=	B	69-60%	=	D
82-80%	=	B-	60% or lower	=	F

Attendance and Late Work

You may turn in assignments early. However, work submitted after an assignment due date, unless otherwise cleared by the instructor, will be penalized. Assignments submitted more than 5 days after their due date without prior contact with the instructor will not be accepted.

Withdrawal from the Course

The last day to drop this course for a full refund is 9/13/2020. The last day to withdraw from the course (grade of "W") is 11/4/2020.

For more information, review [USM's Add/Drop and Withdrawal Policies](#).

Class Cancellation

If class is cancelled for any reason you will be notified via e-mail and an announcement of Brightspace.

Inclement Weather

From time to time, USM will determine to close the university due to inclement weather. When the cancellation is for an entire day, the class content will be made up at another time or through additional, outside-of-class assignments.

When the university opens late or closes early and the time selected is during the middle of class, we will still hold the class unless you are otherwise notified by me. Two examples:

- If class starts at 1pm but the University is closing at 1:30pm, we will still have class unless you hear from me.
- If class starts at 1pm but the University is opening at 1:30pm, we will still have class unless you hear from me.

Academic Integrity / Plagiarism

Everyone associated with the University of Southern Maine is expected to adhere to the principles of academic integrity central to the academic function of the university. Any breach of academic integrity represents a serious offense. Each student has a responsibility to know the standards of conduct and expectations of academic integrity that apply to academic tasks. Violations of student academic integrity

include any actions that attempt to promote or enhance the academic standing of any student by dishonest means. Cheating on an examination, stealing the words or ideas of another (i.e., plagiarism), making statements known to be false or misleading, falsifying the results of one's research, improperly using library materials or computer files, or altering or forging academic records are examples of violations of this policy which are contrary to the academic purposes for which the University exists. Acts that violate academic integrity disrupt the educational process and are not acceptable.

Evidence of a violation of the academic integrity policy will normally result in disciplinary action. A copy of the complete policy may be obtained from the Dean of Students Office website at usm.maine.edu/community-standards-mediation/academic-integrity or by calling and requesting a copy at (207) 780-5242.

Final Examinations

The final exam for this course is the CSWA (Certified SolidWorks Associate) exam. The CSWA Association is an industry-wide accepted credential demonstrating critical SolidWorks skills.

It is a USM academic policy that no tests or exams may be scheduled during the last week of classes.

University Policies & Support Resources

ADA & Electronic Accessibility Notification & Accommodations

The university is committed to providing students with documented disabilities equal access to all university programs and services. If you think you have a disability and would like to request accommodations, you must register with the Disability Services Center. Timely notification is essential. The Disability Services Center can be reached by calling 207-780-4706 or by email at dsc-usm@maine.edu. If you have already received a faculty accommodation letter from the Disability Services Center, please provide me with that information as soon as possible. Please make a private appointment so that we can review your accommodations.

Learning Commons

Tutoring at USM is for all students, not just those who are struggling. Tutoring provides active feedback and practice, and is available for writing, math, and many more subjects. Walk-in tutoring is available at the Glickman Library in Portland, the Gorham Library, and the LAC Writing Center.

- For best service, we recommend making an appointment at: usm.maine.edu/learningcommons/schedule-tutoring-appointment
- Questions about tutoring should be directed to Naamah Jarnot at 207-780-4554.
- Interested in becoming a more effective, efficient learner? Check out usm.maine.edu/agile!

Counseling

Counseling is available for USM students. The best way to schedule an appointment is to email usm.health@maine.edu. More information is available on the [University Health and Counseling Services website](#).

Non-Discrimination Policy

The University of Southern Maine is an EEO/AA employer, and does not discriminate on the grounds of race, color, religion, sex, sexual orientation, transgender status, gender expression, national origin, citizenship status, age, disability, genetic information or veteran's status in employment, education, and all other programs and activities. The following person has been designated to handle inquiries regarding non-discrimination policies: Sarah E. Harebo, Director of Equal Opportunity, 101 North Stevens Hall, University of Maine, Orono, ME 04469-5754, 207.581.1226, TTY 711 (Maine Relay System).

Statement of Religious Observance for Students

Absence for Religious Holy Days: The University of Southern Maine respects the religious beliefs of all members of the community, affirms their rights to observe significant religious holy days, and will make reasonable accommodations, upon request, for such observances. If a student's religious observance is in conflict with the academic experience, they should inform their instructor(s) of the class or other school functions that will be affected. It is the student's responsibility to make the necessary arrangements mutually agreed upon with the instructor(s).

Title IX Statement

The University of Southern Maine is committed to making our campuses safer places for students. Because of this commitment, and our federal obligations, faculty and other employees are considered mandated reporters when it comes to experiences of interpersonal violence (sexual assault, sexual harassment, dating or domestic violence, and stalking). Disclosures of interpersonal violence must be passed along to the University's Deputy Title IX Coordinator who can help provide support and academic remedies for students who have been impacted. More information can be found online at the web address below or by contacting Sarah E. Holmes at sarah.e.holmes1@maine.edu or 207-780-5767.

usm.maine.edu/campus-safety-project

If students want to speak with someone confidentially, the following resources are available on and off campus: University Counseling Services (207-780-4050); 24 Hour Sexual Assault Hotline (1-800-871-7741); 24 Hour Domestic Violence Hotline (1-866-834-4357).