University of Southern California
Viterbi School of Engineering
Department of Aerospace and Mechanical Engineering

AME 308 – Computer Aided-design for Aero-Mechanical Design

Practical Information

Class number:	Lecture - Lab 28732, 28733, 28734
Number of Units:	3 units
Hour/Day:	2:00 p.m. – 4:50 p.m. M/T 3:30 p.m. – 6:20 p.m. W
Room:	SAL 127 (M/T) WPH B36 (W)

Instructor: Dr. Yann D. Staelens
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Office Hours:	Monday:	5:00 p.m. –6:00 p.m.
	Tuesday:	11:00 a.m. – 1:00 p.m. & 5:00 p.m. – 6:00 p.m.
	Wednesday:	1:00 p.m. – 3:00 p.m.

Textbook: James D. Bethune; Engineering Design and Graphics with SolidWorks 2011; Prentice Hall, Boston, 2011 (Suggested)

Sham Tickoo; Solid Edge ST3 for Designers; CADCIM Technologies, Schererville, 2011 (Suggested)

Course Objective

This course will introduce you to some of the CAD tools widely used in industry today. The tools will include two solid modeling packages Solid Edge ST6 and SolidWorks 2013 and at least one finite element package. We'll see how these tools enable you to perform in hours a variety of analysis tasks that would otherwise take weeks.

Course Outline

1) How to create properly constrained sketches using sketch tools, dimensions, and geometrical relationships.
2) How to create part features from sketches.
3) How to create technical drawings with the appropriate symbols.
4) How to create assemblies from parts and assembly relationships.
5) How to apply motion to an assembly.
6) How to simulate the response of a structure to applied loads.

Course Grading

Grades will be determined from a combination of homework scores, project scores, and exam scores. Typically, homework will be assigned each week. There will be two extended project assignments. All homework and project assignments will require both electronic and hardcopy submittals. Due dates/times will be posted with each assignment. We will make every effort to return graded assignments within one week. Homework will contribute 30% of the grade; projects 30%; and exams 40%.

Statement for Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to the instructor as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that an individual will submit his or her own work unless otherwise allowed by an instructor, and the dual obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. SCampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A (http://scampus.usc.edu/files/2013/05/appendix_a.pdf). Should there be any suspicion of academic dishonesty, an automatic grade of F will be given for the given assignment or exam and students will be referred to the Office of Student Judicial Affairs and Community Standards for further review. The Review process is described at: http://www.usc.edu/student-affairs/SJACS/pages/students/review_process.html

Course Schedule

Week	Date	Topic	Homework Due
1	26-Aug	Introduction, Solid Edge ST6 - Basics, Sketches (Ordered)	
	27-Aug		
	28-Aug		
2	2-Sep	**No Lecture – Lab (Labor Day)** **Make-up session Thursday 09/05/2013 from 2.00pm-4.20pm SAL 127**	HW #1
	3-Sep	Solid Edge ST6 - Features (Ordered)	
	4-Sep		
3	9-Sep	Solid Edge ST6 - Drafts, Technical Drawing and Nomenclature	HW #2
	10-Sep		
	11-Sep		
4	16-Sep	Solid Edge ST6 - Features (Synchronous)	HW #3
	17-Sep		
	18-Sep		
5	23-Sep	Solid Edge ST6 - Assemblies and Fasteners	HW #4
	24-Sep		
	25-Sep		
6	30-Sep	Solid Edge ST6 - Assemblies (advanced)	HW #5
	1-Oct		
	2-Oct		
7	7-Oct	Solid Edge ST6 – Project	HW #6
	8-Oct		
	9-Oct		
8	14-Oct	Solid Edge ST6 – Project	-
	15-Oct		
	16-Oct		
9	21-Oct	**Solid Edge ST6 – Final**	-
	22-Oct		
	23-Oct		
10	28-Oct	Solid Works 2013 – Sketches and Features	SE Project
	29-Oct		
	30-Oct		
11	4-Nov	Solid Works 2013 - Assemblies, Fasteners	HW #7
	5-Nov		
	6-Nov		
12	11-Nov	Solid Works 2013 - Drafts, Technical Drawing	HW #8
	12-Nov		
	13-Nov		
13	18-Nov	Solid Works 2013 - Finite Element Analysis	HW #9
	19-Nov		
	20-Nov		
14	25-Nov	Solid Works 2013 - Project	-
	26-Nov		
	27-Nov	**No Lecture – Lab (Thanksgiving Weekend) Make-up session TBD**	
15	2-Dec	Solid Works 2013 – Project	HW #10
	3-Dec		
	4-Dec		

Note: The above schedule is tentative and is subject to change if needed.

Important Dates

Solid Edge ST6 Final : Week 9 – 21-22 Oct. 2013 from 2-4.50 p.m. in SAL 127
23 Oct. 2013 from 3.30-6.20 p.m. in WPH B36

Solid Works CSWA Exam: During Finals week
Monday section: Friday Dec. 13th 2013 from 2-5 p.m. in TBD.
Tuesday section: Thursday Dec. 12th 2013 from 2-5 p.m. in TBD.
Wednesday section: Monday Dec. 16th 2013 from 2-5 p.m. in TBD.

Solid Edge ST6 Project due: Week 11 – 4-6 Nov. 2013 by 2 p.m. or 3.30 p.m.
Solid Works 2013 Project due: Monday Dec. 16th 2013 by 10 a.m.

Last day to drop class without mark of "W": Friday Sept. 13th 2013.
Last day to drop class with mark of "W": Friday Nov. 15th 2013.