University of Southern California
Viterbi School of Engineering
Department of Aerospace and Mechanical Engineering
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AME 308 – Computer Aided-design for Aero-Mechanical Design

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Practical Information

Class number:	Lecture - Lab 28732, 28733
Number of Units:	3 units
Hour/Day:	2:00 p.m. – 4:50 p.m. M/T
Room:	SAL 127

Instructor: Dr. Yann D. Staelens
                      RRB 211
                      (213) 740-7754
                      staelens@usc.edu

Office Hours:	Tuesday:	9:30 a.m. – 11:30 a.m.
	Thursday:	9:30 a.m. – 11:30 a.m.

Textbook: Sham Tickoo; NX 9.0 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 a solid modeling package NX and a 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 surface features from sketches.
4) How to create technical drawings with the appropriate symbols.
5) How to create assemblies from parts and assembly relationships.
6) How to simulate the response of a structure to applied loads.
7) How to apply motion to assemblies.

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/2015/03/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	24-Aug	Introduction, NX 10 - Basics, Sketches (Ordered)	
	25-Aug		
2	31-Aug	NX 10 - Features (Ordered)	HW #1
	1-Sep		
3	7-Sep	**No Lecture – Lab (Labor Day)**	
	8-Sep		
4	14-Sep	NX 10 - Drafts, Technical Drawing and Nomenclature	HW #2
	15-Sep		
5	21-Sep	NX 10 - Features (Synchronous) + Assembllies	HW #3
	22-Sep		
6	28-Sep	NX 10 - Assemblies and Fasteners (Advanced)	HW #4
	29-Sep		
7	5-Oct	NX 10 – Project I	-
	6-Oct		
8	12-Oct	NX 10 – Project I	HW #5
	13-Oct		
9	20-Oct	**NX 10 – Midterm**	-
	21-Oct		
10	26-Oct	NX 10 - Surfaces	NX Project I
	27-Oct		
11	2-Nov	NX 10 - Geometric Dimensioning and Tolerancing (GD&T)	HW #7
	3-Nov		
12	9-Nov	Solid Edge - Finite Element Analysis I	HW #8
	10-Nov		
13	16-Nov	Solid Edge - Finite Element Analysis II	-
	17-Nov		
14	23-Nov	Solid Edge - Project II	HW #9
	24-Nov		
15	30-Nov	Solid Edge - Project II	-
	1-Dec		

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

Important Dates

NX Midterm: Week 9 – 20-21 October 2015 from 2-4.50 p.m. in SAL 127

NX Final: During Finals week
                Monday section: Friday December 11th 2015 from 2-4 p.m. in TBD.
                Tuesday section: Thursday December 10th 2015 from 2-4 p.m. in TBD.

NX Project I due: Week 10 – 26-27 October 2015 by 2 p.m.
NX Project II due: Friday December 11th 2015 by 10 a.m.

Last day to drop class without mark of "W": Friday September 11th 2015.
Last day to drop class with mark of "W":   Friday November 13th 2015.