



CE 2110-001 Applied Mechanics I
Department of Civil and Environmental Engineering
School of Engineering
University of Connecticut

Spring Semester 2010

Course Description (from undergraduate catalog):

Fundamentals of statics using vector methods. Resolution and composition of forces; equilibrium of force systems; analysis of forces acting on structures and machines; centroids; moment of inertia.

Required Text: *Vector Mechanics for Engineers: Statics* (or Combined Static and Dynamics) by F.P. Beer, E.R. Johnston, D.F. Mazurek, and E.R. Eisenberg, 9th Edition, McGraw-Hill, 2009.

Instructor: Jaehun Ahn, jahn@engr.uconn.edu, CAST 202

TA: Aditi Misra, adm09005@engr.uconn.edu

Lectures: Monday, Wednesday, Friday, 1:00 – 1:50 pm, CAST 212

Office Hours: TA (Samantha): Tuesday, Thursday, 9:00 – 11:00 am, CAST 301
TA (Aditi): Tuesday, Thursday, 1:00 – 3:00 pm, CAST 301

Course Requirements:

- Attendance: Attendance will be checked. 10% of final course grade.
- Homework: Homework is graded based on completeness. Late homework will not be accepted. Homework should meet the following requirements to be graded. 10% of final course grade.
 - Use only one side of the letter size (8.5''×11'') paper. Use the pencil. Write the course number/section, your name, the assignment/problem number. Begin each problem on a new page. Staple!
- Pop Quiz: Announced/unannounced pop quizzes will be given over the semester. 5% of final course grade.
- Quiz: Two 50-minute quizzes will be given. 25% of final course grade for each quiz.
- Final Exam: More information will be announced before the exam. 35% of final course grade.

Grading: Total score is 110 out of 100.

Homework	10%
Attendance	10%
Pop Quizzes	5%
Quiz 1	25%
Quiz 2	25%
Final Exam	35%

Course Schedule: Updated on 2/12

Dates	Class No.	Sections	Topics	Homework Problem and Due	
1/20	1	1.1-6	Introduction		
1/22	2	2.1-8	Addition and Resolution of Forces		
1/25	3	2.9-11	Equilibrium of a Particle	No 1	2.9,18,34
1/27	4	2.12-14	Forces in Space	No 2	2.46,57,70
1/29	5	2.15	Equilibrium in Space	No 3	2.75,90,95
2/1	6		Review and Pop Quiz	No 4	2.101,109,119
2/3	7	3.1-8	Vector Product: Moment about a Point		
2/5	8	3.9-11	Scalar product: Moment about an Axis	No 5	3.1,2,14,26
2/8	9	3.12-16	Couples	No 6	3.37,45,53
2/10			Class canceled due to inclement weather		
2/12	10	3.17-20	Equivalent Systems of Forces	No 7	3.79,87,93
2/15	11	4.1-4	Equilibrium in Two Dimensions	No 8	3.98,115,123
2/17	12	4.1-5	Equilibrium in Two Dimensions	No 9	4.4,21,23
2/19	13	4.6-7	Two and Three Force Bodies (Make-up class)	No 10	4.14,35,45
2/22	14		Review for Quiz 1 (or Make-up Class)	No 11	4.67,78,92
2/24	16		Quiz 1		
2/26	17	4.8-9	Equilibrium in Three Dimensions		
3/1	18	4.8-9	Equilibrium in Three Dimensions	No 12	4.104,116,120
3/3	19	6.1-5	Trusses: Method of Joints	No 13	4.100,144,146
3/5	20	6.7	Trusses: Method of Sections	No 14	6.1,11,30
			Spring Recess		
3/15	21		Review and Pop Quiz	No 15	6.45,57,63
3/17	22	6.9-11	Frames and Machines		
3/19	23	6.12	Frames and Machines	No 16	6.86,94,100
3/22	24	5.1-5	Centroids of Areas and Lines	No 17	6.129,141
3/24	25	5.6-7	Centroids by Integration	No 18	5.4,14,25
3/26	26	5.8	Beams: Distributed Loads	No 19	5.32,48,53
3/29	27		Review for Quiz 2 (or Make-up Class)	No 20	5.62,64,69
3/31	28		Review for Quiz 2 (or Make-up Class)		
4/2	29		Quiz 2		
4/5	30	5.10-12	Centroids of Volumes		
4/7	31	9.1-5	Moment of Inertia of Areas	No 21	5.99,109,114
4/9	32	9.6-7	Composite Areas	No 22	9.1,13,21
4/12	33	9.8-9	Product of Inertia	No 23	9.35,38,50
4/14	34	9.10	Mohr's Circle	No 24	9.75,82,88
4/16	35	7.1-2	Internal Forces in Members	No 25	9.94,102,109
4/19	36	7.3-5	Internal Forces in Beams	No 26	7.6,15,21
4/21	37	7.6	Internal Forces in Beams	No 27	7.34,37,39
4/23	38	8.1-4	Laws of Friction	No 28	7.62,68,71
4/26	39	8.5,10	Wedges and Belt Friction	No 29	8.6,11,16
4/28	40		Review for Final (or Make-up Class)	No 30	8.49,51,118
4/30	41		Review for Final (or Make-up Class)		
TBA			Final Exam		

** As things tend to get hectic during the semester, the actual schedule may change.