

Course: ES 2013-1 Statics – Fall 2007

Office: KEP L137, Phone: 631-2026

Instructor: Jesse French

jf@utulsa.edu

Course Description: First course in solid mechanics, intended to give engineering students the ability to analyze a variety of problems including: Statics of particles and rigid bodies, equilibrium of rigid bodies, distributed forces, centroids, forces in beams and cables, friction, and moments of inertia. Prerequisite: Phys2053.

Location: Keplinger Hall, Room M3 Tuesday & Thursday 9:30 – 10:45am

Necessary Materials: Engineering Paper (Quadruded, nonspiral bound),
Scientific Calculator, Pencil(s)

Text: Vector Mechanics for Engineers – Statics, Beer & Johnston, 8th Edition
McGraw Hill ISBN: 0073212197

Homework: Homework will be assigned during each class period and collected at the beginning of the next meeting of the class. Generally four problems will be assigned per set and one problem will be chosen for grading. Please begin each problem on a separate sheet of paper. Each student is responsible for individual and on time submission of each assignment. Early submission of homework for excused absences is permitted. No late homework will be accepted. Homework will be graded using the following scale: (See homework template)

Format	2 points	(Paper, Template, Name, Date, Neatness)
Diagrams	3 points	(Appropriate, Accurate, Complete Drawings)
Method	2 points	(Problem Solving Technique)
<u>Solution</u>	<u>3 points</u>	(Correct Answer, Boxed or Double Underlined)
Total	10 points	

Grading: The final course grade will be comprised of the elements listed below.

Attendance	5%	
Homework	20%	
Tests	50%	
Final Exam	25%	(Comprehensive)

Final Course Letter Grades will be assigned based on the following scale:

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
Below 60	F

Cheating: Copying another's work during an individual test as well as turning in homework other than one's own original production without appropriate annotation with or without the permission of the original problem solver constitutes academic misbehavior and is grounds for a failing grade and/or dismissal from the University.

CSAS: Students with disabilities should contact the CSAS (Ext 2315, Holmes Student Center, Room 59) in order to self-identify their needs and facilitate their rights under the Americans with Disabilities Act. CSAS also provides tutoring, academic counseling and confidential consultations to any student with academic concerns.

**ES2013
Section 1**

**Course Schedule, Lecture Topics and
Reading Assignments**

**French
Fall 2007**

Class Number	Date	Text Section	Lecture Topic	Homework Set
1	21 Aug 07	1.1-6, 2.1-6	Units, Addition and Resolution of Forces	1
2	23 Aug 07	2.7-11	Rectangular components & Particle Equilibrium	2
3	28 Aug 07	2.12-15	Forces and Equilibrium in Space	3
4	30 Aug 07	3.1-8	Vector Product, Moment of a Force about a Point	4
5	04 Sep 07	3.9-11	Scalar Product, Moment about an Axis	5
6	06 Sep 07	3.12-16	Couples	6
7	11 Sep 07	3.17-20	Equivalent Systems of Forces	7
8	13 Sep 07	4.1-5	Equilibrium in 2 Dimensions, Indeterminate Reactions	8
9	18 Sep 07	4.6-4.9	2 & 3 Force Bodies, Equilibrium in 3 Dimensions	9
10	20 Sep 07		Test #1	None
11	25 Sep 07	5.1-5	Centroids and First Moments of Areas and Lines	10
12	27 Sep 07	5.6-8	Centroids by Integration, Surfaces of Rotation	11
13	02 Oct 07	5.10-12	Centroids of Volumes	12
14	04 Oct 07	6.1-4	Trusses by method of Joints	13
15	09 Oct 07	6.4-7	Joints under Special Loads, Method of Sections	14
16	11 Oct 07	6.9-12	Frames and Machines	15
17	16 Oct 07	7.1-2	Internal Forces in Members	16
18	18 Oct 07	7.3-5	Shear and Moment Diagrams	17
19	23 Oct 07	7.6	Relations among Load, Shear and Moment Diagrams	18
20	25 Oct 07		Test #2	None
21	30 Oct 07	8.1-4	Laws of Friction and Applications	19
22	01 Nov 07	8.5-6	Wedges and Screws	20
23	06 Nov 07	9.1-3	Moments of Inertia of Areas	21
24	08 Nov 07	9.4-6	Polar Moment of Inertia, Radius of Gyration	22
25	13 Nov 07	9.7	Moments of Inertia of Composite Areas	23
26	15 Nov 07	9.11-13	Moments of Inertia of Masses and Thin Plates	None
-	20 Nov 07		Thanksgiving Break	None
-	22 Nov 07		Thanksgiving Break	None
27	27 Nov 07	9.14-15	Moments of Inertia of Composite Bodies, Review	24
28	29 Nov 07		Test #3	None
	06 Dec 07	9:00 AM	Final Exam	