INFORMATION SHEET FOR FALL 2008 - ALL SECTIONS

INSTRUCTORS

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TEACHING FELLOWS

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TEXTBOOK AND REFERENCES

Required: Bedford and Fowler, Engineering Mechanics: Statics and Dynamics, 5th Edition, Pearson Prentice Hall, 2007.

ISBN: 013-241871-1
ISBN for e-Book version (available from the publisher's web site): 013-604364-X

References:

R.C. Hibbler, Engineering Mechanics: Statics and Dynamics, 11th Edition, Peason Prentice Hall, 2006.
S.D. Sheppard and B.H. Tongue, Statics. Analysis and design of systems in equilibrium, Wiley, 2005.
B.H. Tongue and S.D. Sheppard, Dynamics. Analysis and design of systems in motion, Wiley, 2005.
J.L. Meriam and L.G. Kraige, Engineering Mechanics: Statics, 6th edition, Wiley, 2005.
J.L. Meriam and L.G. Kraige, Engineering Mechanics: Dynamics, 5th edition, Wiley, 2001.
F.P. Beer and E.R. Johnston, Vector mechanics for engineers: statics and dynamics, 8th edition, 2006.

WEBSITES

The web site for the overall course is on CourseInfo and is labeled 'EK301 ALL ENG Mechanics I'. http://courseinfo.bu.edu/courses/09fallengek301all/index.html Material for all students will be posted there. This includes this info sheet, the syllabus, the truss project,

homework assignments and their solutions. In addition, individual sections will have their own CourseInfo web site at the discretion of the section instructor.

GRADING

Sections will be graded separately to a common course standard. The design project and final exam will be the same for all sections. The two midterm exams will be given during lecture and will therefore be different for each section. The two lowest quiz grade will be dropped.

Your overall grade will be determined according to the weightings below. Nominally, the mean of the overall score in a section will set the dividing line between a C+ and a B-.

Design project	25%
Weekly quizzes	20%
Homework	5%
Midterm 1	15%
Midterm 2	15%
Final exam	20%

To ensure uniformity between sections, the average performance of each section on the final exam will be compared to the performance of the entire class on the final exam and may be used to adjust the section grading. Sections that perform significantly better/poorer on the final exam may have their final grades raised/lowered compared to what they would have received based purely on the section mean. (That is, the section mean may indicate the dividing line between a B- and a B if the section performs exceptionally well on the final with respect to the other sections.)

Because the project is such an integral part of the course, **any student who does not participate in the project will automatically receive an F for the course.**

PROBLEM SETS AND QUIZZES

The single most effective technique for learning the concepts and methods of the course is to work out problems involving them. To help you with this, weekly problem sets, i.e. exercises, will be given through the main web site. A perfect homework solution should (a) be legible and well organized, (b) demonstrate a clear and extensible thought process, and (c) be correct. A "satisfactory attempt" at a solution is one which meets these criteria at a minimal level. Your homework will be graded based on the number of satisfactory solutions.

On the day that homework is due (typically Wednesday or Thursday), you will have a short (approximately 15-20 minute) in class quiz. The quiz will consist of problems similar to the homework just turned in. Your lowest two quiz scores will be dropped.

Makeup quizzes will not be given without **prior** arrangement with your instructor. If you miss a quiz, you will simply receive a zero.

PROJECT

Engineers are people who do, not just study. The goal of an engineering education is to develop the ability to apply your course work to recognize, define, and solve real problems in creative but

practical ways. There are many aspects of engineering practice which are as important as writing and solving equations. In this course, we will introduce you to some of these aspects through an exciting design contest.

The contest will involve designing, building, and testing a truss made from soda straws and straight pins. The truss will have to bridge a pre-specified distance and support a minimum load. You will have to determine certain physical properties of the soda straws experimentally and use that information to analyze and optimize your design to carry as much weight as possible. At the end of the project, there will be a contest in each section in which your truss will be loaded until it collapses. Your grade will depend, in part, on how close the results of your failure analysis come to the actual failure results. In addition the team in each section with the highest successfully held load will receive a prize (in the past this has been a $10 gift certificate to the Espresso Royale Cafe for each team member).

Further details will be provided later in the semester.

EXAMS

There will be two midterm exams during the semester during lecture. These exams will be made by the individual instructors and may differ from section to section, though the concepts covered will be the same. The first exam will be on October 21/22 and the second on December 2/3. **DO NOT MAKE TRAVEL PLANS FOR THE TEST DATES.**

The final exam will be the same for all sections and will be given during the final exam period. The date will be set by the registrar. **DO NOT MAKE TRAVEL PLANS FOR BEFORE THE END OF THE EXAM PERIOD UNTIL THE DATE OF THE FINAL EXAM IS KNOWN.**

Make-up exams will be given only in extreme circumstances and should be arranged for well in advance of the scheduled exams.

GTF TUTORING CENTER

Discussion sections for EK 301 have been replaced by an open GTF Tutoring Center in ENG202. The center will begin operating on Tuesday, September 8. The hours of operation are:

Monday	6-10 pm
Tuesday	4-10 pm
Wednesday	4-10 pm

There will always be at least one teaching fellow in the tutoring center during these times. You may go to the tutoring center at any time during the above hours.

ADDITIONAL HELP

If you have questions or need additional help, please see the GTFs and/or the instructors as soon as possible. Do not wait until the day before a test to "figure it all out." GTFs are available at the Tutoring Center and the instructors are available during their office hours or by appointment.

ETHICAL RESONSIBILITIES

Cheating on homework, quizzes, exams, project reports, or any assignment, is a form of plagiarism and is an infringement of every code of engineering ethics. Understanding your ethical responsibilities is an integral part of becoming a professional. A copy of the Code of Ethics of engineers, promulgated by the Accreditation Board for Engineering and Technology (ABET) and the National Society of Professional Engineers can be found on the main course web site.

Please recall that when you enrolled at Boston University, you agreed to an Academic Honesty Pledge. A copy of this pledge can be found your student handbook. It details your responsibilities as well as the results of code violations.

DROP AND WITHDRAWAL DATES

Last day to DROP (with no "W" on your record): 10/7/2007
Last day to WITHDRAW (with a "W" on your record): 11/12/2007

INCOMPLETES

Incompletes will be permitted only for extenuating circumstances. They must be arranged for with your instructor prior to the final exam.

COURSE EVALUATIONS

There will be a standard course evaluation near the end of the semester, including a written evaluation on how well you believe the course accomplished its stated learning outcomes. These outcomes are described on the ABET course syllabus.

The faculty will also be happy to discuss your comments and concerns throughout the semester during our office hours.

SYLLABUS FOR FALL 2009

All sections

WEEK	DATES	READING	TOPICS/CLASSROOM ACTIVITIES	Events
1	9/2-3	Ch. 1,2	Introduction, force vectors	-
2	9/8-10	Ch. 2,3	Force vectors, point equilibrium Holiday on 7 Sep (Labor Day)	Quiz 1 (ethics) on 9/9,10
3	9/14-17	Ch. 4	Moments, equivalent systems	Quiz 2 on 9/16,17
4	9/21-24	Ch. 4,5	Equivalent systems, rigid body equilibrium	Quiz 3 on 9/23,24
5	9/28-10/1	Ch. 5,6	Rigid body equilibrium, trusses	Quiz 4 on 9/30,10/1
6	10/5-8	Ch. 6	Trusses *Design project teams formed and design project assigned 10/6,7*	Quiz 5 on 10/7,8 *Straw testing begins on 10/8*
7	10/12-15	Ch. 9	Dry friction and exam review Holiday on 10/13 (Columbus Day) but Tuesday (10/14) is a Monday schedule	Quiz 6 on 10/14,15 *Straw testing ends on 10/16*
8	10/19-22	Ch. 13	**Exam 1**, particle kinematics *Exam 1 covers through trusses.*	*Exam 1 on 10/21,22*
9	10/26-29	Ch. 13	Particle kinematics	Quiz 7 on 10/28,29 *Project peer evaluation forms and straw testing report due 10/28,29*
10	11/2-5	Ch. 14	Particle kinetics	Quiz 8 on 11/4,5
11	11/9-12	Ch. 14,15	Particle kinetics, work and energy Holiday on 11/11 (Veterans Day)	Quiz 9 on 11/12,11/16
12	11/16-19	Ch. 15	Work and energy	Quiz 10 on 11/19,11/23
				Project progress report due 11/16,17
13	11/23-24	Ch.15, 16	Work and energy, Linear momentum *Thanksgiving holiday 11/25-29*	
14	11/30-12/3		Linear momentum, and **Exam 2** *Exam 2 covers through work and energy*	*Exam 2 on 12/2,3* *Project final report due Friday 12/4* *Truss testing on Saturday, 12/5*
15	12/7-10	Ch. 16	Angular momentum and review	Quiz 11 on 12/9,10

Reading refers to the corresponding chapters in the course textbook:

Bedford, Fowler, Engineering Mechanics: Statics and Dynamics, 5th Edition, Pearson Prentice Hall, 2008.

Note that we will not be covering everything in every chapter listed. Details will be given in lecture.