

ENGR 2001 – Statics

Fall 2008, TR: 11:10 – 12:35, 116 Rogers Hall (3 credit hours)

Instructor: Dr. Sarah P. Formica, ext: 2701, office: 107 Rogers Hall,
spformica@ngcsu.edu

Office Hours: MWF: 8:00 – 9:00, 11:10 – 11:40, TR: 10:10 – 11:05

Course Syllabus

Goals for the Course: By the end of this course, students should be able to systematically *examine* complex static systems, *evaluate* all the loads, support forces and internal forces associated with the systems, and *assess* the quality of their evaluations.

Text: The main textbook for this course is: Vector Mechanics for Engineers: Statics, 8th Ed., by Beer, Johnston and Eisenberg. It is available to buy from the university bookstore. There are some times when I may refer to another text, but I will make copies of these other texts for you.

Topics Covered: Statics of Particles, Rigid Bodies: Equivalent Systems of Forces, Equilibrium of Rigid Bodies, Stress, Strain and Deformation, Distributed Forces: Centroids and Centers of Gravity, Analysis of Structures, Friction.

Scheduled Course Events:

Problem Sets

PS1	2.4, 2.7, 2.11, 2.19, 2.22, 2.25, 2.35, 2.41	Due: 08/28/08 at 5:00 PM
PS2	2.44, 2.57, 2.70, 2.73, 2.81, 2.87, 2.103, 2.127	Due: 09/04/08 at 5:00 PM
PS3	3.3, 3.7, 3.23, 3.37, 3.45, 3.53, 3.55, 3.69, 3.71	Due: 09/11/08 at 5:00 PM
PS4	3.79, 3.87, 3.93, 3.105, 3.113, 3.117, 3.125, 3.131, 3.135	Due: 09/18/08 at 5:00 PM
PS5	4.1, 4.5, 4.17, 4.27, 4.50, 4.67, 4.71, 4.79, 4.89, 4.97, 4.122, 4.137	Due: 09/25/08 at 5:00 PM
PS6	5.7, 5.16, 5.27, 5.37, 5.41, 5.43	Due: 10/09/08 at 5:00 PM
PS7	5.61, 5.64, 5.68, 5.69, 5.73, 5.75, 5.85	Due: 10/16/08 at 5:00 PM
PS8	6.2, 6.5, 6.11, 6.25, 6.42, 6.46, 6.60, 6.67	Due: 10/23/08 at 5:00 PM
PS9	6.76, 6.82, 6.85, 6.95, 6.122, 6.125, 6.145	Due: 11/11/08 at 5:00 PM
PS10	7.5, 7.6, 7.15, 7.19, 7.31, 7.32, 7.40, 7.54	Due: 11/20/08 at 5:00 PM

Exams

Exam 1	Chapters 1 – 4	10/02/08 at 11:10 AM – 12:35 PM
Exam 2	Chapters 5 – 6	11/18/08 at 11:10 AM – 12:35 PM
Final Exam	Comprehensive	12/04/08 at 10:30 AM – 12:30 PM

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Course Resources: All course announcements, reading assignments and necessary course documentation can be accessed via the Statics course webpage, located at:

<http://polaris.deas.harvard.edu/galileo/students/?courseID=1935>.

To access all the course resources, you must first create an account. In the upper right corner of the course webpage, click the Sign In link. This is where you will register. Below the Login button, click Not registered? Enroll to set up your account. Please register your account today! Your first reading assignment is already posted.

When you login to the course webpage, you will be able to access your reading assignments by clicking the READINGS title at the top of the page. There will be a reading assignment before every lecture. Along with the reading, there will be questions to answer about the reading, *a.k.a.* the lecture warm-up. Your answers will be submitted electronically via the course webpage. **All warm-ups are due by 9:10 A.M. on the day of lecture.**

Teams: You will be assigned to a team on the first day of class. You and your teammates will work together on problems and projects in class and on the problem sets. Twice during the semester you will grade your teammates in a peer assessment process. This peer assessment will count toward your final grade. I reserve the right to change any peer assessment grade for any reason.

Problem Sets (PS): Each problem set will consist of approximately 8 – 10 problems and will be due at the time and date listed above. Only **one copy per team** of the solutions to each problem set will be accepted for grading.

Exams: There will be two in-class exams and one two-hour final exam given. The final exam will be comprehensive. Only **non-programmable calculators** are allowed during exams and cannot be shared. A cell-phone cannot be used as a calculator. Absence from any exam will result in an automatic grade of zero. The only exception is if you notify me at least one day prior to the exam with a reasonable excuse for missing the exam and I approve your excuse. If you are sick the day of the exam, you will be allowed to make up the exam with some written proof of your illness, such as a Dr.'s note with the doctor's phone number.

Grading: Warm-up exercises will be worth 10% of your final grade. Each in-class exam will be worth 15%. The final exam will be worth 25%. Problem sets will be worth 20%. Your team bridge-building project will be worth 10% and your peer assessment will be worth 5% of your final grade. A = 90 -100; B = 80 – 89; C = 70 – 79; D = 60 – 69; F = < 60.

Class Evaluations: Class evaluations at NGCSU are now conducted on-line through Banner. Evaluation of the class is considered a component of the course and students will not be permitted to access their course grade until the evaluation has been completed. The evaluations will be accessible beginning one week prior to Final Exam week.

Early Intervention: I am committed to your success in this course and at this university. I may, therefore, refer you to other persons and/or services available to help you achieve academic success. In turn, if you are referred, you will be expected to comply with the referrals. Please understand that such referrals are not a form of punishment, rather, they are intended to help you.

Academic Honesty: NGCSU's integrity code- "On my honor, I will not lie, cheat, steal, plagiarize, evade the truth, or tolerate those who do" -reflects the university's commitment to academic integrity. The "Academic Integrity Policy" (2004-2006 Undergraduate Bulletin, pp. 78-81) is incorporated herein by reference.