

UNIVERSITY OF PITTSBURGH
SCHOOL OF ENGINEERING

ENGR0135 - Statics and Mechanics of Materials 1

Text

W. F. Riley, L. D. Sturges, and D. H. Morris
Statics and Mechanics of Materials: An Integrated Approach
2nd Edition
John Wiley & Sons, Inc.

Syllabus for 2005 Fall Term (Term Code 2061)

Instructor:

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Office hours: M & T 3:00 – 5:00 pm

Administrative Policy

- The URL for the official course web site is

<http://www.engr.pitt.edu/mechanical/courses/ENGR0135>

In addition to all of the information contained in this handout, the official web site is also the place to find contact information for instructors and teaching assistants, solution sets for homework assignments and midterm examinations, and assorted other useful downloadable items.

- Each student's final grade will be determined based on the following contributions:

Assessment Method	Percent of Final Grade
Homework Assignments	10%
Team Quizzes	10%
3 Term Test	30%
2 Design Problems	20%
Final Examination	30%

- There are weekly homework assignments. Assignments are due at 6 pm before class. No late homework will be accepted. Only three problems from each assignment will be graded. Copies of solutions to all assigned problems will be made available online at the official course web site.
- The three (3) term tests and final examination will be closed book, closed notes.
- The three tests will be on **Sep. 27th**, **Oct. 25th**, and **Nov. 15th**.
- The final examination will be on Tuesday, **Dec. 13th**, from 6:00 to 7:50 P.M. in 525 Benedum Hall.
- An official crib sheet will be provided during the examination (and is also available at the official course web site).
- The two (2) team quizzes are on **Sep. 13th** and **Oct. 11th**. The team quizzes are open book, open notes.
- Each design problem will be allocated approximately one lecture hour (**Sep. 27th** and **Nov. 15th**). The specific instructions for the study, solution, and submission of the various design problems will be included in the respective assignments.
- Attendance Policy:
 - Attendance of classes is mandatory. If a student has a valid excuse for missing a class, they must inform the instructor beforehand.
 - There is to be NO TALKING during the lecture. If students disrupt the class by talking, they will be asked to leave.
 - Cellular phones must be turned OFF during class. Repeated disruptions will be asked to leave.

Week	Topic	Reading Assignment Sections	Homework Assignment Problems Due
8/30	Introduction Concurrent Force Systems	1.1 – 1.7 2.1 – 2.7	
9/6	Equilibrium of Concurrent Force Systems Axial Loading: Stress	3.1 – 3.4 4.1 – 4.3	1-3, 21, 31, 41 2-5, 20, 37, 44, 46, 49, 55
9/13	Axial Loading: Strain Axial Loading: Deformation	4.4 4.5 – 4.7	3-1, 7, 15, 22 4-3, 4, 12, 23, 28
9/20	Axial Loading: Deformation Axial Loading: Design	4.8 – 4.9 4.10 – 4.11	4-37, 41, 42, 49, 51, 56, 61, 68
9/27	Test 1 <i>Design Problem 1</i>		
10/4	Moments	5.1 – 5.5	4-73, 76, 77, 83, 85, 95, 96
10/11	Equivalent Systems Centroids, Centers of Mass, and Distributed Loads	5.6 5.7 – 5.8	5-3, 7, 13, 22, 37, 42, 46
10/18	Centroids, Centers of Mass, and Distributed Loads Free-body Diagrams	5.9 – 5.11 6.1 – 6.2	5-50, 56, 62, 72, 77, 81
10/25	Test 2 Equilibrium of Rigid and Deformable Bodies	6.3	
11/1	Equilibrium of Rigid and Deformable Bodies Frames and Machines	6.3 6.4 – 6.5	5-96, 100, 106, 108, 110 6-1, 6, 11
11/8	Plane Trusses Equilibrium in 3D	6.6 6.7	6-14, 16, 19, 22, 44, 54, 69
11/15	Test 3 <i>Design Problem 2</i>		
11/22	Torsion	7.1 – 7.8	6-83, 85, 90, 91, 103, 105
11/29	Friction	6.8 – 6.9	7-1, 11, 16, 30, 36, 42, 53, 62
12/6	Learning Assessment Review		6-111, 114, 123, 136