

# PHY307

## Mechanics: Statics

Dillard University - Spring 2003

Meeting Times:

**STERN 219**

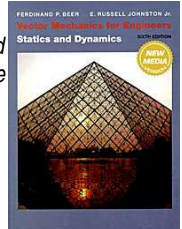
**M W F 3:00p - 3:50p**

<p>Instructor: <b>Rob Salgado</b></p> <p>Office: <b>Stern 307A</b></p> <p>Voice: <b>(504)-816-4510</b></p>	<p>E-mail: <b>rsalgado@dillard.edu</b></p> <p>instant-messengers: AOL, MSN, Yahoo: <b>dillardphysics</b> (do not email here)</p>	<p>Office hours: STERN 307A <b>M W 11:00a-12:00p</b> <b>5:00p- 6:00p</b> <b>F 11:00a- 2:00p</b></p> <p><b>LEARNING CENTER t.b.a.</b></p> <p>or drop by my office or make an appointment by email.</p>
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### Catalog Description: **PHY307 Mechanics: Statics**

*A study of fundamental concepts of static and dynamics, two or three-dimensional forces on rigid bodies in equilibrium and in motion, structured analysis (simple trusses, methods of joints and sections, zero force system, space trusses, frame and machines). The course will also cover the concepts of kinematics. Class meets three hours per week. [Prerequisite: PHY 220 and MAT 203. Continuation of PHY 201.]*

Required Textbook: **Vector Mechanics for Engineers: Statics and Dynamics**, 6/e by **Ferdinand P. Beer & E. Russell Johnston Jr.**  
(McGraw-Hill: ISBN: 0072395141 (6th edition))



Electronic Materials: The textbook has a useful web site: <http://www.mhhe.com/engcs/engmech/beerjohnston/vm/index.mhtml>  
I will maintain a web page that lists the assigned problems and solutions: (temporarily at) <http://physics.syr.edu/~salgado/307/>

### Homework:

Homework will be assigned but will not be collected. We will discuss the homework in class on the week ly **"Problem Day"**.  
*Students will be randomly asked to present homework problems on the board. Unprepared students will earn a penalty.*  
Exam and quiz problems are generally based on homework problems, textbook problems, and textbook examples. Most of the learning you do in this class is done by doing homework problems outside of class! You are encouraged to work on the homework with other students. However, be sure that you can do the problems *by yourself* since you'll be working on quizzes and exams *by yourself*. If you need help with your homework, please visit me (with your textbook and your notebook and with proof that you have tried the problems) during Office Hours... the sooner the better.

### Classroom Rules:

Comet to class **ON TIME**. (Tardiness will earn a penalty.)  
Attendance is **REQUIRED**, in accordance with University regulations (page 17):  
*"Unexcused absences in any course shall be limited to the number of semester hours of credit given to the course."  
... "A student incurring an excessive number of absences may be dropped from the roster." ... "The course instructor will record as two unexcused absences those absences that occur on the day immediately preceding or following an official holiday recess."*  
Note that your attendance is recorded on the official midterm and final gradesheets.  
Academic dishonesty will not be tolerated, in accordance with University regulations (page 18).  
Comet to class **PREPARED**, having read or written any assignments.  
Limit all discussion to the **PHYSICS** topic under discussion.  
Turn OFF all phones, pagers, radios, and other disruptive devices. (Disruptiveness will earn a penalty.)  
Treat each other with **RESPECT**.

### Grades:

20% **PROBLEM DAY PARTICIPATION** (FORMAT: student presentation of homework problems)  
30% **REGULAR EXAMS** (FORMAT: computational problems)  
20% **MIDTERM EXAM** (FORMAT: like a regular exam but cumulative)  
30% **FINAL EXAM** (FORMAT: like two regular exams but cumulative)  
A ≥ 88, B ≥ 76, C ≥ 64, D ≥ 50, F < 50. This class is not graded on a curve.  
Borderline cases (between two letter grades): If you see an exam showing an upward trend, your grade may be nudged upwards.

Missed exams: There are **no** makeup exams. There are **no** exceptions.

If you are absent for an exam, you must present an official written excuse to me. **Only if** that excuse is valid, your **next** scheduled exam will carry the weight of your missed exam. Otherwise, you will get no credit for the missed exam.

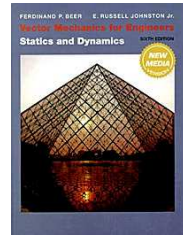
Dates you should be aware of:

Martin Luther King Jr. day: Monday, Jan 20  
Mardi Gras break: Monday, Mar 3 - Wednesday, Mar 5  
Spring Break: Monday, Mar 24 - Friday, Mar 28  
Good Friday: Friday, Apr 18  
Last Day of Classes: Wednesday, Apr 30  
Exam Period: Friday, May 1 - Thursday, May 8 [the final is only given on the date and time assigned by the University --- do not make early travel plans]

**Sequence of PHY307 topics:**

<b>Chapter 2</b>	<b>STATICS OF PARTICLES</b>
<b>Chapter 3</b>	<b>RIGID BODIES: EQUIVALENT SYSTEMS OF FORCES</b>
<b>Chapter 4</b>	<b>EQUILIBRIUM OF RIGID BODIES</b>
<b>Chapter 5</b>	<b>DISTRIBUTED FORCES: CENTROIDS AND CENTERS OF GRAVITY</b>
<b>Chapter 6</b>	<b>ANALYSIS OF STRUCTURES</b>
<b>Chapter 7</b>	<b>FORCES IN BEAMS AND CABLES</b>
<b>Chapter 8</b>	<b>FRICTION</b>
<b>Chapter 9</b>	<b>DISTRIBUTED FORCES: MOMENTS OF INERTIA</b>
<b>*Chapter 10</b>	<b>METHOD OF VIRTUAL WORK</b>
<b>*Chapter 11</b>	<b>KINEMATICS OF PARTICLES</b>

(\*time permitting)



Here's a suggestion for a supplementary book:

**Schaum's Outline of Engineering Mechanics**  
 by E. W. Nelson, Charles L. Best, W. G. McLean (Contributor)  
 Publisher: McGraw-Hill Trade; 5th edition (May 1, 1997)  
 ISBN: 0070461937  
 (List \$15.95)

