Physics 213

Updated 08/11/2015

Instructor: Dr. Cecille Labuda
Class time/location: 8:00 am Lewis 101
Office: Lewis 211 / 1031 NCPA

Office Hours: MWF 09:00 – 10:00 am Lewis 211
Email: cpembert@olemiss.edu
Phone: +16629153945

Text

Giancoli, D. (hardback, e-book and Mastering Physics Access Code)
Physics: Principles and Applications and Modified MasteringPhysics with eText and Access Card, 7/E
ISBN: ***978-0321985286***

OR

Giancoli, D. (e-book and Mastering Physics Access Code)
MasteringPhysics with Pearson eText for Physics: Principles with Applications, 7/E, 2013.
ISBN: ***Purchase using Pearson MyLab and Mastering link on Blackboard.***

IMPORTANT: *You* ***MUST*** *set up MasteringPhysics through Blackboard or you will NOT be able to access the class.*

Description

This is the first semester of a two-semester sequence in an introductory level general physics course. Topics to be covered include motion, forces, fluids, simple harmonic motion and waves.

Prerequisites / Corequisites

Students enrolled in Physics 213 must have passed Math 121 and Math 123 or Math 125 or Math 261. Students must also be concurrently enrolled in or have passed Physics 223.

Course Objectives

- Develop and improve analytical reasoning and problem solving skills. Students will be able to:
  - Analyze problems to reduce the problem to its fundamentals and determine the related physics concepts.
  - Identify methods of solving problems.
  - Apply various problem solving techniques.
- Learn and apply physics concepts. Students will be able to:
  - Describe linear motion observed in everyday life in terms of kinematics and Newton's laws of motion.
  - Understand fluid pressure and buoyancy and explain how they arise.
  - Apply energy conservation principles and describe the forms that energy can exist in.
  - Describe general oscillatory motion and distinguish simple harmonic motion from other types of oscillatory motion.
  - Describe waves and the relation between waves and oscillatory motion.
  - Describe certain everyday phenomena in terms of in terms of physics concepts.

Grading: Weighted average, Plus-Minus

- $92\% \leq \mathbf{A} \leq 100\%$
- $88\% \leq \mathbf{A}- < 92\%$
- $84\% \leq \mathbf{B}+ < 88\%$
- $80\% \leq \mathbf{B} < 84\%$
- $76\% \leq \mathbf{B}- < 80$
- $72\% \leq \mathbf{C}+ < 76\%$
- $68\% \leq \mathbf{C} < 72\%$
- $64\% \leq \mathbf{C}- < 68\%$
- $50\% \leq \mathbf{D} < 64\%$
- $\mathbf{F} < 50\%$

Evaluation

Tests

- 3 closed-book tests: 17% each
- *Total test weighting:* ***51%***

Homework

- Online homework will be completed on Pearson MyLab and Mastering.
- A complete write-up of the homework problems must also be submitted in class the day after the homework is due. One or more of written problems may be graded by a grader in which case, these grades will be assigned for the problems graded while the online grades will be assigned for the remainder of the problems. If no written homework is turned in, the total assignment grade will be zero.
- Problems MUST be written up according to the rubric posted on Blackboard or the grade will be zero.
- No late homework will be accepted.
- *Total homework weighting:* ***15%***

Preparatory and Comprehension Exercises

- Pre-lecture online and in-class exercises will be given. Online exercises will be on MyLab and Mastering.

- *Total quiz weighting:* ***9%***

Final exam

- Comprehensive, closed-book final.
- *Final exam weighting:* ***25%***

Total: 100%

Policies

Attendance

- Students are expected to attend all classes.
- On test days, absences due to illness, unexpected emergency or university sanctioned activities may be excused and the test rescheduled. A doctor's note is required for an illness. In the case of an unexpected emergency, you must contact me as soon as possible and provide documentation from a parent or guardian with a contact number on your return to the university. For university sanctioned activities, an official notification must be submitted before the activity. For ALL absences on test days, you must contact me by email or telephone within 24 hours of the absence or no tests will be rescheduled under any circumstances.
- Homework is intended for you to practice application of the concepts discussed in class. Students are encouraged to work together on homework assignments. Copying is unhelpful to achieving mastery of the material and to good test performance.
- Tests are designed to determine whether you have learned and understood the concepts covered in class. Typically, test problems will not be identical to the homework problems. Tests will be returned in class typically within 7 days after the test. There is no guarantee that a test will be returned later if it is not picked up at the time the test is handed back in class.
- Cheating on homework, tests or any assignments is not allowed and will result in a zero grade for the given assignment. If a second case of cheating is discovered, the student will receive a grade of F for the course. Consult the Olemiss M Book for clarification of what constitutes cheating.
- Important information pertinent to the course will be communicated to students via his/her university email address. Students are responsible for information communicated via email.

Resources

- Homework discussion session with instructor
    - Discussion session will be held once a week from 5 – 6 pm on Tuesdays.
    - Students may ask questions about homework problems that they are having difficulty with. Students may NOT just show up and ask how to do a problem without having looked at it at all.
    - Discussion and solutions to problems will be given by other students who have worked on the problems under discussion or by the instructor.
- Course grades will be posted on Blackboard. Grades posted on Blackboard are intended to keep students up to date with their grades and are NOT an official record of the grades. The posted midterm and final grades are the only official grade records. These grades are based on the grade record that I keep on my computer. Any differences between Blackboard grades and my grade record will be overridden by my record
- Free tutoring by graduate students is provided in the Tutoring Room in Lewis Hall.

Important Dates

- August 24 – classes begin
- September 4 – last day to add
- October 5 – last day to withdraw
- October 12 – Midterm grades
- November 23 - 27 - Fall Break
- December 4 – last day of class
- Monday December 7 (8:00 am) - final exam

Examinations

Test dates and topics are subject to change. The final exam date is fixed and cannot be changed.

Exam 1: Chapters 1 - 4	09/16
Exam 2: Chapters 4 – 6	10/14
Exam 3: Chapters 7 – 12	11/18

Final Exam: Chapters 1 - 12
Monday December 7, 8:00 am

Tentative Course Schedule:

About one chapter of the textbook will be covered each week. The following schedule is subject to change.

Week	Topic	Textbook Sections
01: 08/24 – 08/28	Measurement, Kinematics in 1-D	Ch 1, Ch 2
02: 08/31 – 09/04	Kinematics in 1-D, Kinematics in 2-D	Ch 2, Ch 3
03: 09/07 – 09/11	Kinematics in 2-D, Dynamics	Ch 3, Ch 4
04: 09/14 – 09/18	Dynamics	Ch 4
04: 09/16	**Test 1**	**Ch 1-4**
05: 09/21 – 09/25	Dynamics, Circular Motion	Ch 4, Ch 5
06: 09/28 – 10/02	Circular Motion, Energy	Ch 6
07: 10/05 – 10/09	Energy, Linear Momentum	Ch 6, Ch 7
08: 10/12 – 10/16	Linear Momentum	Ch 7
08: 10/14	**Test 2**	**Ch 4-6**
09: 10/19 – 10/23	Rotational Motion	Ch 8
10: 10/26 – 10/30	Static Equilibrium, Fluids	Ch 9, Ch 10
11: 11/09 – 11/13	Fluids, Vibrations and Waves	Ch 10, Ch 11
12: 11/16 – 11/20	Vibrations and Waves, Sound	Ch 11, Ch 12
12: 11/18	**Test 3**	**Ch 7-12**
13: 11/23 – 11/27	*THANKSGIVING BREAK*	
14: 11/30 – 12/04	Sound	Ch 12