

Physics 214

Updated 01/07/2015

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

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

Text

Giancoli, D. (hardback, e-book and Mastering Physics Access Code)
Physics: Principles With Applications Plus MasteringPhysics with eText -- Access Card Package, 7/E, 2013.
ISBN: **978-0321625915**.

OR

Giancoli, D. (e-book and Mastering Physics Access Code)
MasteringPhysics with Pearson eText -- Standalone Access Card -- for Physics: Principles with Applications, 7/E, 2013.
ISBN: **978-0321921734**

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

Description

This is the second semester of a two-semester sequence in introductory general physics. Topics include electricity and magnetism, geometric and wave optics and thermodynamics.

Prerequisites / Corequisites

Students enrolled must have passed Physics 213 and be enrolled in or have passed Physics 224.

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 electromagnetic phenomena.
 - Describe electromagnetic fields and explain how they arise.
 - Describe the properties of light and the electromagnetic spectrum.
 - Explain what temperature and heat are and how they are related.
 - Describe certain everyday phenomena in terms of physics concepts.

Grading: Weighted average, Plus-Minus

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

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 the homework problems will be graded and the grade will replace the online grade for those problems. If no written homework is turned in, the total assignment grade will be zero.
- Problems MUST be written up according to the rubric 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 Blackboard.
- **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. It is difficult to do well in this course with poor attendance.
- 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, 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

- January 21 – classes begin
- February 3 – last day to add
- February 4 – last day to drop
- March 3 – last day to withdraw
- March 9 – Midterm grades
- March 9 - 13 - Springbreak
- May 1 – last day of class
- Monday May 4 (8:00 am) - final exam

Examinations

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

Test 1: Chapters 16 - 19 02/25

Test 2: Chapters 19 – 23 04/01

Test 3: Chapters 23 – 24, 13 – 14 04/22

Final Exam: Chapters 13 - 25

Monday May 4, 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: 01/21 – 01/23	Electric charge, field	Ch 16
02: 01/26 – 01/30	Electric charge, field, potential	Ch 16, Ch 17
03: 02/02 – 02/06	Electric potential, current	Ch 17, Ch18
04: 02/09 – 02/13	Current, DC circuits	Ch 18, Ch19
04: 02/16 – 02/20	DC Circuits	Ch 19
05: 02/25	Test 1	
06: 02/23 – 02/27	DC Circuits, Magnetism	Ch 19, Ch 20
07: 03/02 – 03/06	Magnetism, induction, Faraday's law	Ch 20, Ch 21
08: 03/09 – 03/13	SPRING BREAK	
08: 03/16 – 03/20	Induction, Faraday's law, electromagnetic waves	Ch 21, Ch 22
09: 03/23 – 03/27	Geometric optics	Ch 23
10: 04/01	Test 2	
11: 03/30 – 04/03	Geometric optics, optical instruments	Ch 23, 25
12: 04/06 – 04/10	Wave nature of light, temperature, kinetic theory	Ch 24, Ch 13
12: 04/13 – 04/17	Temperature, kinetic theory, heat	Ch 13, Ch 14
13: 04/22	Test 3	
14: 04/20 – 04/24	Heat, laws of thermodynamics	Ch 14, Ch 15
15: 04/27 – 05/01	Laws of thermodynamics	Ch 15