

PHYS 2212 – Principles of Physics II

Fall 2008, MWF: 9:05 – 10:00, 109 Rogers Hall

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

Catalog Description: Prerequisite or corequisite: MATH 2450. The Principles of Physics sequence (PHYS 2211 and PHYS 2212) is a survey of the primary fields of physics: mechanics, electromagnetism, optics, thermodynamics, and modern physics. Elementary calculus will be used in this course. The second course of the sequence will include material from electromagnetism, optics and modern physics. (3 credit hours)

Text: The main textbooks for this course are: Understanding Physics, Part 3 and Part 4, by Cummings, Laws, Redish, and Cooney. They are 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.

Course Syllabus

Course Calendar*:

August 20 th – August 22 nd	Course Introduction and Chapter 22: Electric Charge
August 22 nd – August 25 th	Chapter 23: Electric Fields
August 27 th – August 29 th	Chapter 24: Gauss' Law
September 1 st	<i>Labor Day Holiday – No Classes</i>
September 3 rd – September 5 th	Chapter 25: Electric Potential
September 8 th – September 12 th	Chapter 26: Current and Resistance
September 15 th – September 17 th	Chapter 27: Circuits
September 19 th – September 24 th	Chapter 28: Capacitance
September 26 th – October 1 st	Chapter 29: Magnetic Fields
October 3 rd – October 6 th	Chapter 30: Magnetic Fields due to Currents
October 8 th – October 15 th	Chapter 31: Induction and Maxwell's Equations
October 10 th	<i>Fall Break – No Classes</i>
October 17 th – October 20 th	Chapter 32: Inductors and Magnetic Materials
October 22 nd – October 27 th	Chapter 33: Electromagnetic Oscillations and Alternating Current
November 3 rd – November 5 th	Chapter 34: Electromagnetic Waves
November 7 th – November 12 th	Chapter 35: Images
November 14 th – November 17 th	Chapter 36: Interference
November 19 th – November 21 st	Chapter 37: Diffraction
November 26 th – November 28 th	<i>Thanksgiving Break – No Classes</i>

Exams:

Exam 1	Chapters 22 – 25	September 10 th
Exam 2	Chapters 26 – 28	September 29 th
Exam 3	Chapters 29 – 33	October 31 st
Exam 4	Chapters 34 – 37	November 24 th
Final Exam	Comprehensive	December 8 th , Monday, 8:00 AM – 10:00 AM

* All dates are tentative and subject to change.

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Resources: Course Webpage

The course webpage provides course information, assignments, online discussion forums, announcements, and handouts. You can access the course webpage at:

<http://polaris.deas.harvard.edu/galileo/students/?courseID=1929>

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.

WebAssign Webpage

Problem sets for each chapter will be assigned and submitted through WebAssign. You can access this page through a link on the course webpage, or directly:

<https://www.webassign.net/login.html>

I have already created a WebAssign account for you. Your username is the same as your NGCSU email ID. The institution is NGCSU. The first time you login, your password will be your NGCSU ID# (ie: your 9000#). You must change your password the first time you login.

Homework: You will be responsible for two types of homework assignments in this course: Lecture warm-ups and WebAssign problems.

1. Lecture warm-ups. 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 3-5 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 no later than 7:05 A.M. on the day of lecture.**

2. WebAssign problems. Problem sets for each chapter will be posted on a webpage (using WebAssign). This is also where you will complete the problem sets. There will be extensive homework assignments with each chapter covered. Each assignment will consist of approximately 10 - 12 problems and will be due on the specified due-date. **Do not wait until the last minute to complete the assignment**, you will regret it. Homework problems are intended for you to learn how to apply the skills you are taught in class. Therefore, it is useful to work on the problems while we are covering the corresponding material in lecture. No late homework assignments will be accepted.

Attendance: Regular class attendance and class participation is essential to satisfactory completion of this course. If you miss a lecture, you will be responsible for the material covered that day and for the homework assigned. A grade of WF may be given for six or more absences at the discretion of the instructor.

Exams: There will be four in-class exams and one two-hour final exam given. The final exam will be comprehensive. A calculator may be used during the exams, but calculators 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: Each in-class exam will be worth 15% of your final grade. Homework will also be worth 15%. The final exam will be worth 25%. 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.