

PHYS 2211 – Principles of Physics I

Spring 2009, 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 first course of the sequence will focus on the field of classical mechanics and its applications. (3 credit hours)

Text: The main textbooks for this course are: Understanding Physics, Part 1 and Part 2, 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*:

January 7 th	Course Introduction
January 9 th	Chapter 1: Measurement
January 12 th – January 14 th	Chapter 2: Motion Along a Straight Line
January 16 th – January 21 st	Chapter 3: Forces and Motion Along a Line
January 23 rd	Chapter 4: Vectors
January 26 th – January 28 th	Chapter 5: Net Force and Two-Dimensional Motion
January 30 th – February 2 nd	Chapter 6: Identifying and Using Forces
February 4 th – February 8 th	Chapter 7: Translational Momentum
February 11 th	Chapter 8: Extended Systems
February 13 th – February 15 th	Chapter 9: Kinetic Energy and Work
February 18 th – February 23 rd	Chapter 10: Potential Energy and Energy Conservation
February 23 rd – February 27 th	Chapter 11: Rotation
March 2 nd – March 4 th	Chapter 12: Complex Rotations
March 6 th	Chapter 13: Equilibrium and Elasticity
March 9 th – March 11 th	Chapter 14: Gravitation
March 23 rd – March 25 th	Chapter 16: Oscillations
March 27 th – March 30 th	Chapter 17: Transverse Mechanical Waves
April 1 st	Chapter 18: Sound Waves
April 3 rd – April 8 th	Chapter 19: The First Law of Thermodynamics
April 10 th – April 13 th	Chapter 20: The Kinetic Theory of Gases
April 15 th – April 17 th	Chapter 21: Entropy and the Second Law of Thermodynamics

Exams:

Exam 1	Chapters 1 – 6	February 6 th
Exam 2	Chapters 7 – 10	February 25 th
Exam 3	Chapters 11 – 14	March 13 th
Exam 4	Chapters 16 – 18	April 6 th
Final Exam	Comprehensive	April 24 th , Friday, 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=2110>

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 Student ID#. 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. Lecture Warm-ups will be worth 5% and WebAssign problems sets will be worth 15%. The final exam will be worth 20%. 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.