

Syllabus
Physics 211
Mechanics, Gravitation, Materials, and Waves
Spring Semester 2008

Instructor: Timothy J. Gay

Behlen Laboratory SB59

Phone: 472-2773

Email: tgay1@unl.edu

Combined Sections 150/250 Office Hours: Monday 1000-1230; Tuesday 1530-1730
(or by appointment)

Student Union Burger King® hours: 1400-1530 Monday

Prerequisites: High school physics or PHY 141 or 151; Math 106 or parallel

Section 150 Lecture Tu,Th 1230-1345, Brace 211	Section 250 Lecture Tu,Th 1400-1515pm, Brace 211
---	---

Course Objectives:

Physics 211 is the first semester of the calculus-based introductory physics sequence. This course focuses on the topics of kinematics, mechanics, gravitation, the mechanical properties of solids and liquids, and waves. We will emphasize developing both conceptual understanding and problem-solving skills for these topics and understanding how they fit into the broader picture of science. Calculus will be used where appropriate.

Textbook (required)

University Physics, 12th Edition (Vol. 1), Young and Freedman (Pearson/Addison-Wesley 2008)

WWW – Blackboard and Mastering Physics (Required)

Blackboard. Much class information including the syllabus, sample exam questions, *etc.* will be posted on the UNL Blackboard Page. See the separate instruction sheet for gaining access to Blackboard.

Mastering Physics®. You are expected to read the relevant sections in the textbook **before** coming to class. (See the course schedule and weekly planner.) Beginning on Tuesday, January 22, 2008, and every lecture day following, you will be assigned a brief on-line quiz on the reading material. These quizzes are taken using the Mastering Physics® (MP) software (www.masteringphysics.com) which you purchased access to when you bought your textbook. The five of the six weekly homework problems will also be accessed (and graded) by MP. Details of gaining MP access and taking these quizzes are given in a separate handout.

Lectures and Recitation

The course will have two weekly lectures each lasting 75 minutes. The “lecture” will consist of a mix of presentations and demonstrations led by the instructor along with active discussion and problem-solving by the students. Attendance at lectures and reading the text **before** class is essential for success in the

course. The PRS “clickers” (both RF and IR are OK) will be used both for instructor assessment of where the class is in terms of its understanding, but also to provide answers to “mini-quizzes” which will be graded for credit.

Each student must also enroll in one of the Wednesday recitation sections. The recitation sections will focus on problem-solving and applying the course material in a variety of new situations. Attendance in recitation is important as well.

Homework

There will be a homework assignment due each Thursday consisting of five MP problems taken from the textbook, due at noon, and one written problem to be handed in at Thursday’s lecture. The written problems will be posted on Blackboard. You are encouraged to print these off and hand in your work on this sheet. The first problem set will be due 24 January, the last one on 1 May. The written problem will be graded and handed back in recitation the next week. MP problem solutions will be posted on the Mastering Physics website after the homework deadline. The hand-in solutions will be posted on Blackboard. **No late homework will be accepted** unless excused personally by Professor Gay no later than 1800 Wednesday. The written problems will be very similar in style and content to questions that will be asked on the tests. Indeed, some of them will be taken from old tests. Grades for these problems will be given roughly as follows:

9-10 points	correct/very close to correct answer <u>with a reasonable explanation of your reasoning.</u>
5-8 points	very close to correct answer with most of the basic steps indicated
2-4 points	A good start on the problem, but no “follow-through”
0-1 points	no significant attempt to solve the problem

Points may be taken off for sloppy and/or illegible work.

Examinations

There will be three one-hour mid-term tests and a two-hour final scheduled as follows:

Examination 1	Wednesday, February 6, 6:00 – 7:00 PM
Examination 2	Wednesday, March 5, 6:00 – 7:00 PM
Examination 3	Wednesday, April 9, 6:00 – 7:00 PM
Final Exam	Wednesday, May 7, 6:00 – 8:00 PM

Before each exam sample exam questions will be provided for review. Review sessions will be held before each exam.

There will be one comprehensive make-up examination given at the end of the semester during finals week. To be eligible to take this test, you must receive permission from Professor Gay before the test you miss. The make-up test may not be used to replace a midterm test grade.

Grading

We will use the following weightings in determining your grades:

One-hour tests (each 150 points)	450 points
Final Examination	250 points
Pre-class MP quizzes	100 points
Lecture Participation	75 points
Recitation (Participation, homework)	125 points
Total	1000 points

Any request for grade changes **must** be made within **2 weeks** after the graded work is available to the student. The lowest two weekly homework grades (each consisting of the sum of the 5 Mastering Physics scores, the written problem score, and any attendance/participation points given by the TA) will be dropped. The four lowest Lecture Participation scores will be dropped. The four lowest MP pre-class quiz grades will be dropped.

Grading will **not** be done on a “curve.” Course grades will be assigned according to the following point scale:

962-1000	A ⁺
920-961	A
878-919	A ⁻
836-877	B ⁺
794-835	B
752-793	B ⁻
710-751	C ⁺
668-709	C
626-667	C ⁻
584-625	D ⁺
542-583	D
500-541	D ⁻
less than 500 points	F