INTRODUCTORY PHYSICS FOR SCIENTISTS AND ENGINEERS

Physics 1211  Tu & Th  Period 4  12:30-1:45pm  Room 202  Spring Semester 2009

PHYS 1211 is the first semester of a two semester course in introductory physics. PHYS 1211 requires a working knowledge of calculus, trigonometry, algebra, and geometry. PHYS 1211 is a four credit hour course.

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email: mgeller@uga.edu

Web Page  www.physast.uga.edu/courses
Refer to the this web page for general announcements, homework assignments, course schedule modifications, exam information, and syllabus updates.

Course Format

This course consists of two lectures and one laboratory per week. The lectures will be used primarily to supplement the material discussed in the book, not present it comprehensively. You will be expected to study assigned material (see schedule below) and be quizzed on it before it is discussed in class. If you do not study the assigned material on your own or do not do the assigned reading before coming to class you will have difficulty in this course. You will be responsible for all the assigned material—it may appear in the homework or on an exam—even if it is not discussed in class.

You must also be registered for one of the laboratory sections which will meet once a week for two hours. The laboratory is required. Graduate teaching assistants will be assigned to be your lab instructors. They will assign you a laboratory grade at the end of the semester. I will include that grade in your overall grade for the course. Questions about the laboratory exercises should be directed to your lab instructor.

Office Hours  Tuesdays 11:30am-12:30pm and Thursdays 5:30pm-6:30pm
Room 251 Physics Building

Required Course Materials


Experiments for an Introductory Physics Course, by R. M. Wood and S. P. Lewis. 5th edition. Required for the laboratory section of the course. Available at the bookstore.

InterwritePRS clicker. Required for in-class participation. Available at the bookstore.

Mastering Physics online homework system. Access code included with the Knight text or available from www.masteringphysics.com.

Scientific calculator.
Homework

Homework will be assigned in class and graded using the Mastering Physic online grading system.

Exams

There will be four in-class midterm exams and a cumulative final exam. The three best midterm scores will be used to determine your course grade, the remaining one will be dropped. All midterm exams will be open book and open notes. Calculators are allowed, but the use of laptop or other computers is forbidden. Texting or the use of cell phones during exams is considered cheating. There will no make-up exams given: If you miss a midterm exam it will count as your dropped exam, regardless of whether or not the absence is excused and approved by the university. The in-class midterm exam schedule is provided below. The final exam will be at 12:00-3:00pm on Thursday, May 7, at a location to be announced.

Quizzes

Unannounced quizzes on assigned reading material will be given in class. The scores on the quizzes will be used to assign extra credit to the participating students.

Grading

Your final grade will be determined according to:

- 3 best midterm exams (15% each) 45%
- homework 10%
- lab grade 15%
- final exam 30%

The grading scale is as follows (points rounded to the nearest integer):

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>89 - 100%</td>
</tr>
<tr>
<td>A-</td>
<td>86 - 88%</td>
</tr>
<tr>
<td>B+</td>
<td>83 - 85%</td>
</tr>
<tr>
<td>B</td>
<td>79 - 82%</td>
</tr>
<tr>
<td>B-</td>
<td>76 - 78%</td>
</tr>
<tr>
<td>C+</td>
<td>73 - 75%</td>
</tr>
<tr>
<td>C</td>
<td>69 - 72%</td>
</tr>
<tr>
<td>C-</td>
<td>66 - 68%</td>
</tr>
<tr>
<td>D</td>
<td>50 - 65%</td>
</tr>
<tr>
<td>F</td>
<td>0 - 49%</td>
</tr>
</tbody>
</table>

Course Schedule

date  | topic covered (tentative) | material to study BEFORE class |
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Th Jan 8 | concepts of motion        |                               |
Tu Jan 13 | one-dimensional kinematics (sub) | 1.1–2.3                       |
Th Jan 15 | one-dimensional kinematics (sub) | 2.4–2.7                       |
Tu Jan 20 | vectors                   | 3.1–3.4                       |
Th Jan 22 | two-dimensional kinematics | 4.1–4.4                       |
Tu Jan 27 | two-dimensional kinematics | 4.5–4.6                       |
Th Jan 29 | **exam 1**                |                               |
Tu Feb 3  | forces and newton’s second law | 5.1–5.7                        |
Th Feb 5  | one-dimensional dynamics  | 6.1–6.3                       |
Tu Feb 10 | one-dimensional dynamics  | 6.4–6.6                       |
Th Feb 12 | newton’s third law        | 7.1–7.4                       |
Tu Feb 17  two-dimensional dynamics  8.1–8.4
Th Feb 19  exam 2
Tu Feb 24  momentum  9.1–9.6
Th Feb 26  energy  10.1–10.3
Tu Mar  3  energy  10.4–10.5
Th Mar  5  collisions  10.6
Tu Mar 17 exam 3 (sub)
Th Mar 19  work  11.1–11.9
Tu Mar 24  rigid-body rotation  12.1–12.8
Th Mar 26  gravity  13.1–13.6
Tu Mar 31  oscillations  14.1–14.7
Th Apr  2  first law of thermodynamics  16.1–17.4
Tu Apr  7  first law of thermodynamics  17.5–17.8
Th Apr  9  temperature  18.1–18.3
Tu Apr 14 exam 4
Th Apr 16  second law of thermodynamics  18.6
Tu Apr 21  second law of thermodynamics  19.1
Th Apr 23  traveling waves  20.1–20.5
Tu Apr 28 superposition (last lecture)  21.1–21.6

Academic Honesty

All academic work must meet the standards contained in the document *A Culture of Honesty*, available at [www.uga.edu/honesty](http://www.uga.edu/honesty). Every student is responsible for knowing and understanding this policy. If you have any questions concerning this you are obligated to ask me for clarification. Anyone caught cheating will be reported to the university and will receive an F for the course.

General Information

This syllabus is a general plan for the course and deviations may be necessary. You are responsible for attending every lecture. Each student is responsible for the material discussed in class and the announcements made in class. Absence from class does not relieve one of this responsibility.

If you are retaking the course and are happy with the final lab grade you received previously, you do not have to attend the lab. You do have to remain registered for the lab, but you do not have to attend. Please contact Tom Barnello, the Lab Coordinator (email: tjbar@physast.uga.edu, tel: 706-542-2903) before the end of the drop/add period so that your seat may be made available to another student. If you would like to improve your lab grade, you must attend the lab and do all of the lab exercises again and take another lab final.