DEPARTMENT OF PHYSICS

Spring 2011

Physics 1C

Web page:  http://physics.ucsd.edu/students/courses/spring2011/physics1cc/main.html

INSTRUCTOR:
Professor Herbert Levine (hlevine@ucsd.edu)
Office:  7230 Urey Hall
Office Hours:  M 12-1, Th 2pm – 3pm
Phone:  534-4844

COURSE COORDINATOR:
Patti Hey  plhey@physics.ucsd.edu

1C TEACHING ASSISTANT:
Scott Gustafson  s1gustaf@ucsd.edu
TA Office Hours: Wed 4-6PM Physics Tutorial Center

CLASS SCHEDULE:

Lecture:  MWF  5:00 – 6:00 PM  York 2722

Quizzes:  F (various)  5:00 – 6:00 PM  York 2722

Problem Session:  To be arranged

Labs:  Once a week for 10 weeks starting the week of March 28.

Final Exam:  Friday,  June 10 – 7:00-10:00 PM, location TBA

TEXT:
Serway and Jewett, Physics I; Vols. I and II

PREREQUISITES:  Math 10C, concurrent enrolment in 1CL.

COURSE FORMAT:  Physics 1A-B-C is a lecture course covering mechanics, electricity and magnetism, waves and modern physics.  This sequence is not suitable for students majoring in Physics, MAE, ECE, or CSE.  Other majors should check with their departments for the appropriate sequence.  Physics 1C deals with Waves, Optics and Modern Physics.  Concurrent enrollment in the 1C lab is required.  Lab information can be found at http://www-physics.ucsd.edu/students/courses/spring2011/.  In addition, the lab instructor will be spending about 10 minutes discussing lab details during the first course lecture on March 28.

HELP IS AVAILABLE:  A problem session will be held biweekly where problems are worked out and weekly lectures are discussed.  Attendance is voluntary, but students are encouraged to use these meetings to help master course material and prepare for quizzes.  Individual assistance is available during office hours.

HOMEWORK ASSIGNMENTS:  Problem sets are assigned as selections from each text
chapter. Solutions will be available on the course website. The problems will be worked in detail during the problem session. The homework will not be graded, but problems in the quiz may resemble homework assigned.

**QUIZZES:** Quizzes will be held on various Fridays beginning 3rd week (April 15, 29, May 13 and 27). There will be no quiz during the last (10th) week. The lowest quiz score will be dropped. Students may bring in one sheet of notes for each quiz and calculators are allowed. **You must purchase your own scantron forms for quizzes (No. 101864-PAR). They are available at the Bookstore and the general store co-op for $0.15 each. You will need a No. 2 pencil to fill in the scantron. You are allowed to bring in one sheet of written material.**

**FINAL EXAMINATION:** The final examination will cover all of the material of the course. You will be allowed to bring in four sheets of written material. **Please check your final exam schedule and inform instructor of any conflicts within the first two weeks of the quarter.**

**GRADING POLICY**

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<thead>
<tr>
<th></th>
<th>Quizzes</th>
<th>60%</th>
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<tbody>
<tr>
<td></td>
<td>Final Exam</td>
<td>40%</td>
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**ADD/DROP**

Use WebReg to add/change/drop, drop from waitlists. See the Physics Department, Student Affairs Office if you have problems with WebReg. If you need advice, see the TA or the instructor, **but they do not sign any add/drop cards.**

**ACADEMIC DISHONESTY:** Please read “UC Policy on Integrity of Scholarship” in the UCSD General Catalog.

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**Tentative Course Schedule**

<table>
<thead>
<tr>
<th>Week of</th>
<th>Topic</th>
<th>Chapters</th>
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<tbody>
<tr>
<td>3/38</td>
<td>Oscillations and waves</td>
<td>12,13</td>
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<tr>
<td>4/4</td>
<td>Interference, standing waves</td>
<td>14</td>
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<tr>
<td>4/11</td>
<td>EM waves, polarization quiz on Friday April 15</td>
<td>24</td>
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<tr>
<td>4/18</td>
<td>Reflection and Refraction, mirrors</td>
<td>25</td>
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4/25  Lenses
     quiz on Friday April 29  26

5/2  Interference; optical resolution  27

5/9  Photoelectric effect; photons  28

5/16 de Broglie waves, uncertainty principle
    Quiz Friday May 20

5/23 Bohr atom, atomic theory  29

5/30 Memorial Day Holiday
    Nuclear physics, radioactivity
    quiz on Friday June 3  30

Recommended Problems

Ch 12: 20,24,53
Ch 13: 10,13,21,26,33,42,54
Ch 14: 7,8,10,21,23,29,40,47
Ch 24: 10,15,28,39,41,43
Ch 25: 7,8,16,19,22,33,41
Ch 26: 7,12,19,29,34,37,51
Ch 27: 3,6,16,19,23,26,29,33,39
Ch 28: 5,6,10,20,25,29,33,41