Course Syllabus
Physics 221- Section 009
Elements of Physics
Fall 2012

Meeting Time: Thursday 9:40-12:25

Location: Nielsen Physics Building 207

Instructors: Ronald Allen (rallen25@utk.edu)
             Patrick Copinger (pcopinge@utk.edu)

Office Hours: Ronald Allen, 2:30-3:30 Wednesday Nielsion 201 or by appointment.
              Patrick Copinger, 2:20-3:20 Tuesday Nielsion 201 or by appointment.

Textbook: Jay Newman, Physics of the Life Sciences
           This textbook is online at the UT library.
           http://www.springerlink.com/content/978-0-387-77258-5/#section=679089&page=11&locus=0
           You can also find the chapters as PDF files at the Blackboard site of the 222 lecture section,
           under Books.

Class Expectations:

- Before each section meeting student are required to study the web-based material and read the
  accompanying chapter in the textbook. Students then test their understanding by completing an
  on-line pre-lab assignment. This is very important. Without having already gone through the
  material at least once, it is nearly impossible to follow the material covered in the studio sessions.
  There WILL be reading quizzes every week.

- In the section meetings students will work in small groups. They will perform experiments and
  participate in other activities to further explore the physics concepts introduced in the reading
  assignments to gain an understanding of how these concepts apply to a wide range of real world
  problems and situations. Students will discuss the outcomes of the experiments and activities
  with their group members or the whole section. Students will turn in a lab record for each group
  at the end of the lab.

Lab Groups: Labs will be performed in groups of three. Initial groups can be chosen by the students but
may be reassigned by the instructors.

Grading:
Lab reports: 70 %
Blackboard Quizzes: 30%

The lab overall grade counts for 25% of your final grade in this course!!

Cell Phones/Technology: Please be respectful. Use of electronic devices to supplement the lab is fine,
but use of electronic devices for other purposes is not. While on the computers social networking
is not allowed. Repeated abuse will result in being dismissed from that lab and asked to return next week. No credit will be given for such dismissal.

**University Disability Statement:** Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Office of Disability Services at 865-974-6087 in Hoskins Library to coordinate reasonable accommodations for students with documented disabilities.

**Attendance:** Is mandatory; there will not be any make-up labs. However, both the lowest lab report and quiz will be dropped. Quizzes will be used to take attendance.

**Lab Schedule:**

<table>
<thead>
<tr>
<th>Activities and Laboratories</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding motion - distance and time</td>
<td>January 22/23</td>
</tr>
<tr>
<td>Newton's laws</td>
<td>January 29/30</td>
</tr>
<tr>
<td>Motion under the influence of a constant and a &quot;Hooke's law&quot; force</td>
<td>February 5/6</td>
</tr>
<tr>
<td>Work and energy</td>
<td>February 12/13</td>
</tr>
<tr>
<td>Motion and forces in more than one dimension</td>
<td>February 19/20</td>
</tr>
<tr>
<td>(Test 1) Impulse and momentum</td>
<td>February 26/27</td>
</tr>
<tr>
<td>Rotational motion</td>
<td>March 5/6</td>
</tr>
<tr>
<td>Ideal fluids and buoyancy</td>
<td>March 12/13</td>
</tr>
<tr>
<td>Measuring viscosity</td>
<td>March 19/20</td>
</tr>
<tr>
<td>(Test 2) Mechanical waves</td>
<td>April 2/3</td>
</tr>
<tr>
<td>Sound waves</td>
<td>April 9/10</td>
</tr>
<tr>
<td>Thermometric properties and changes of phase</td>
<td>April 16/17</td>
</tr>
<tr>
<td>The mechanical equivalent of heat</td>
<td>April 23/24</td>
</tr>
</tbody>
</table>

*Syllabus subject to change. Any changes will be posted on Blackboard and/or emailed to you.*