Designed for non-Science majors, Elementary Physics I deals with fundamentals of Mechanics, including Newton’s Laws of Motion, Energy and Momentum, and Electricity and Magnetism.

**Lecture:** MTWRF 9:45-11:15

**Laboratory:** MW 11:30-1:15, 1:15-3:15

**Instructor:** Dr. George Irwin

Office: Archer 100 E  Lab: Geology 212 A  Phone: 880-8243

**Materials Needed for Class:** Scantron forms (#882), Sensible calculator

Textbook: *Conceptual Physics, 10th* edition, Paul Hewitt

**Drop dates:**
Last day to drop with refund: June 7
Last day to drop or withdraw: June 22

**Grading Policy**
Grades will be based on five exams (100 pts each) and the laboratory (100 pts). Letter grades will be assigned according to:

- A = 540 - 600 pts (>90%)
- B = 480 - 539 pts (>80%)
- C = 420 - 479 pts (>70%)
- D = 360 - 419 pts (>60%)
- F = below 360 pts (<60%)

*The Instructor reserves the right to alter the grading policy as long as students’ grades are improved.*

**Physics Core Learning Outcomes** – After completing this course the student will demonstrate

1) critical thinking skills by applying fundamental physical principles to real world examples,

2) quantitative analysis skills by applying basic mathematical principles to the solution of real world examples,
3) the ability to work with others in a common effort to achieve an outcome through cooperation and teamwork in a laboratory exercise,

4) communication skills by reporting the process and results of a laboratory exercise in a written laboratory report.

Attendance: Attendance is required, and a student may have no more than 5 unexcused absences or they must drop the course or receive a failing grade. Under extreme circumstances excused absences may be granted by the instructor, if appropriate documentation is presented.

Exams (100 pts each): Students will be allowed to use a calculator for exams, and may also prepare a single 3 inch by 5 inch note-card to use for reference during the exam. It is recommended that students purchase a simple scientific calculator allowing scientific notation. Cell phones must be turned off and out of sight for exams. A Scantron form #882 will be required for exams. Exams will consist of 50 questions (2 pts each) in a multiple choice format. These questions will be based heavily on the reading assignments, homework, and laboratory concepts.

If a student has a compelling reason for missing any of the five scheduled exams, the instructor must be notified and documented evidence must be presented to the instructor as soon as possible. If the instructor finds this acceptable, other arrangements may be allowed. Failure to give earliest possible notification and documentation as soon as possible will result in a grade of zero for the exam.

Laboratory (10 pts each): There are 10 scheduled laboratory sessions. In order for a student to pass the course, at least 8 laboratory sessions must be completed. If 10 labs are successfully completed, the student will receive the full 100 points for lab. If three labs are missed, the student must drop the course or receive a failing grade. Tardiness is disruptive and will not be tolerated, and may result in lost points at the instructor’s discretion. Makeup labs generally will not be allowed, although a makeup lab may be scheduled near the end of the semester.

Classroom Disturbances: Tardiness to class will not be tolerated, and may result in unexcused absences or loss of points at the instructor’s discretion. Cell phones and pagers must be turned off prior to class. On the other hand, classroom discussion is encouraged within the constraints of the lecture format. Students should feel free to ask questions and to comment about the material covered in class and lab. However, classroom participation is not required and will not be a consideration in assigning final course grades. All other classroom disturbances will be limited to the instructor...

Academic Honesty Policy: It is expected that students will adhere to the Academic Honesty Policy as detailed in the Student Handbook or face failure and subsequent disciplinary action.
Students with Disabilities: Students requiring special accommodations should contact the instructor in the first week of classes. All reasonable effort will be made to ensure that students with disabilities enjoy a full educational experience.

Important Dates:

- No Class: W. July 4
- Last day to drop with refund: Th. June 7
- Last day to drop or withdraw for the semester: F. June 22
- Last Class Day: M. July 9

PHYS 1405 Summer 2014
Course Schedule

Students are expected to complete reading assignments in advance of class according to the schedule below. This course schedule should be considered tentative and is subject to change by the instructor. You should pay particular attention to all Review Questions (RQ), and selected Exercises (EX) and Problems (P) to be assigned by the instructor. The instructor will choose many of these to discuss in class, and may assign others during lectures. Homework will not be collected for credit, but students are responsible for solutions nonetheless. Answers to homework will periodically be posted on my.lamar.edu. You should feel free to ask questions about other exercises in the text, or any other relevant topic. Students should also become familiar with the “Summary of Terms” at the end of each chapter, which is cross-referenced with the Glossary at the end of the textbook.

UNIT I  Newton’s Laws I—Kinematics

M June 4  Introduction
Appendix A, Systems of Measurement
Ch. 1 About Science

T June 5  Ch. 2 Newton’s First Law of Motion—Inertia

W June 6  Ch. 3 Linear Motion
Th June 7    Ch. 3 Linear Motion

EXAM I (Unit I) Friday June 8 (Ch. 2, 3)

Unit II Newton’s Laws II - Dynamics
M June 11    Ch. 4 Newton’s Second Law of Motion
T June 12    Ch. 4 Newton’s Second Law of Motion
W June 13    Ch. 5 Newton’s Third Law of Motion

Unit III Momentum and Energy
Th June 14    Ch. 6 Momentum

EXAM II (Unit II) Friday June 15 (Ch. 4, 5)
M June 18    Ch. 6 Momentum
T June 19    Ch. 7 Energy

Unit IV Rotational Motion and Gravity
W June 20    Ch. 8 Rotational Motion

EXAM III (Unit III) Thursday June 21 (Ch. 6, 7)
Th June 21    Ch. 8 Rotational Motion
F June 22    Ch. 9 Gravity
M June 25    Ch. 10 Projectile and Satellite Motion
T June 26    Ch. 10 Projectile and Satellite Motion
### Unit V  Electricity and Magnetism

<table>
<thead>
<tr>
<th>Day</th>
<th>Chapter</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>W June 27</td>
<td>Ch. 22</td>
<td>Electrostatics</td>
</tr>
<tr>
<td>Th June 28</td>
<td>Ch. 22</td>
<td>Electrostatics</td>
</tr>
<tr>
<td>F June 29</td>
<td>Ch. 23</td>
<td>Electric Current</td>
</tr>
<tr>
<td>M July 2</td>
<td>Ch. 23</td>
<td>Electric Current</td>
</tr>
<tr>
<td>T July 3</td>
<td>Ch. 23</td>
<td>Magnetism</td>
</tr>
<tr>
<td>W July 4</td>
<td>NO CLASS</td>
<td>(Independence Day)</td>
</tr>
<tr>
<td>Th July 5</td>
<td>Ch. 24</td>
<td>Magnetism</td>
</tr>
<tr>
<td>F July 6</td>
<td>Ch. 25</td>
<td>Electromagnetic Induction</td>
</tr>
</tbody>
</table>

### EXAM V (Unit V) Monday July 9 (Ch. 22, 23, 24, 25)
<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>M June 4</td>
<td>NO LAB</td>
</tr>
<tr>
<td>W June 6</td>
<td>1. Dropped Objects</td>
</tr>
<tr>
<td>M June 11</td>
<td>2. and 3. Dropped objects (energy/momentum)</td>
</tr>
<tr>
<td>W June 13</td>
<td>4. Pendulum</td>
</tr>
<tr>
<td>M June 18</td>
<td>5. Density</td>
</tr>
<tr>
<td>W June 20</td>
<td>6. and 7. Rotation/Rolling objects</td>
</tr>
<tr>
<td>M June 25</td>
<td>8. Circuits</td>
</tr>
<tr>
<td>W June 27</td>
<td>9. Circuits – Series and Parallel</td>
</tr>
<tr>
<td>M July 2</td>
<td>10. Magnetics</td>
</tr>
<tr>
<td>W July 4</td>
<td>NO LAB (Independence Day)</td>
</tr>
<tr>
<td>M July 9</td>
<td>TBA</td>
</tr>
</tbody>
</table>