Instructor Contact Information
Keith Warren
NC State University
421 Riddick Hall
Raleigh, NC 27695-8202
(919) 513-2708
keith_warren@ncsu.edu (Always add PY 131 and your section number to the subject line).

Office Hours (Riddick Hall):
I am generally in my office and available around 9am each day. Please feel free to schedule an
appointment or just drop by. I will also be available immediately after class each day.

Course Description
This course covers the fundamentals of physics from a conceptual rather than a mathematical viewpoint. Students will learn how physics underlies their everyday experiences. Real-life applications, which every student can relate to, are used to explain concepts such as gravity, motion, sound, electricity, and magnetism. Numerous discussions, video demonstrations, and discovery-based laboratories further enrich the learning experience.

Course Goals
This course is designed to help students:
・ enhance the way they see the world by wondering about things they may have once taken for granted;
・ begin to think about the physics in everything they see around them; and
・ gain a richer understanding of everyday physical phenomena.

Required Materials to purchase for the course

   You may use an older edition if you can find one. The older versions have some different homework and the chapter numbers are moved around some. The material however is comparable. If you have an older version, ensure you are in the correct chapter.

2. Clicker. You can purchase a new clicker from the bookstore for $50. The bookstore offers a buyback program. Clickers will be used each day to engage students with peer instruction. Recent studies have shown that students master physics concepts more efficiently when they are actively engaged in the discussion. The clicker allows you to answer questions anonymously and also immediately see if you understanding matches that of your classmates.

3. WebAssign for the class section 001. This will be for homework assignments and your course grades will be stored here.

4. WebAssign for the lab section 20x. Your pre-lab and lab assignments will be submitted here for your TA to grade.
Course Organization
This course contains seven modules. Each Module is then made up of specific chapters in the book.

1. Linear Motion, Kinematics and Newton’s Laws
2. Momentum, Energy and Rotational Motion
3. Projectile Motion, Orbits and Gravity
4. Phase, Temperature and Heat
5. Vibrations and Waves
6. Electricity and Magnetism
7. Optics and Relativity

Course Schedule
The following dates are subject to change:

1/10 Course Introduction
1/12 Newton’s 1st Law
1/17 Linear Motion
1/19 Newton’s 2nd and 3rd Laws
1/24 Momentum
1/26 Energy
1/31 Rotational Motion
2/2 TEST 1
2/7 Gravity
2/9 Projectiles
2/14 Solids and Liquids
2/16 Gases
2/21 Temperature, Heat and Expansion
2/23 Heat Transfer
2/28 Phase Change
3/1 TEST 2
3/6 Spring Break
3/8 Spring Break
3/13 Vibrations and Waves
3/15 Sound
3/20 Electrostatics
3/22 Electric Current
3/27 Magnetism
3/29 Electric Induction
4/3 TEST 3
4/5 Spring Holiday
4/10 Properties of Light
4/12 Color
4/17 Reflection and Refraction
4/19 TEST 4
4/24 Special Relativity
4/26 Course Review
5/3 9-11AM Final Exam (same room)

Course Requirements
You are expected to:

- Complete all assignments by the due date, and participate in all class discussions.
- Complete all module tests and the final exam.

Readings – For each lecture, you will be responsible for reading assigned textbook chapters and reviewing other online material or articles that may be provided.
**Homework** – All lectures have an accompanying homework assignment that will be graded. If you do not complete your homework on time, you may request one automatic extension per homework assignment during the first seven days after the assignment is due. Should you use your extension, you will automatically lose 50% on any uncompleted questions.

**Labs** – You are also registered for a lab (section 20x). You are required to register for WebAssign for the lab. When you do, you will have access to your lab manual. You will have pre-lab assignments due prior to attending lab each week. Please read the physics lab web page to find important information regarding lab.

http://www.physics.ncsu.edu/pylabs/131/

Because lab is an integral part of the course as a whole, **if you receive a grade below 50% in lab, you will fail the whole course.**

**Final Exam** – The final exam is required for all students and covers all content in the textbook for chapters covered in class. The final exam is worth 15% of your final grade.

**Missed Test Policy** – **NO MAKEUP TESTS for any reason.** If you miss a test and present university accepted documentation within 1 week of missing the test, I will assign your final exam grade to the missed test (this will weigh your final more). Without university-accepted documentation, you will receive a zero for that test.

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<thead>
<tr>
<th>Assignment Percentage</th>
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<tbody>
<tr>
<td>Class Participation 5%</td>
</tr>
<tr>
<td>Homework 10%</td>
</tr>
<tr>
<td>Lab 10%</td>
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<tr>
<td>Test 1 16%</td>
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<tr>
<td>Test 2 20%</td>
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<tr>
<td>Test 3 16%</td>
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<tr>
<td>Test 4 8%</td>
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<tr>
<td>Final Exam 15%</td>
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<tr>
<td><strong>TOTAL 100%</strong></td>
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**A+ ~ 97.0 A ~ 93.0 A- ~ 90.0**

**B+ ~ 87.0 B ~ 83.0 B- ~ 80.0**

**C+ ~ 77.0 C ~ 73.0 C- ~ 70.0**

**D+ ~ 67.0 D ~ 63.0 D- ~ 60.0**

**Extra Credit at the End of the Term?**

There is none. You are given ample opportunities throughout the semester to obtain a good grade for the course. Monitor your grades throughout the semester. If you are not receiving the grades you think you should be, make an appointment to discuss your grades and study habits with your professor. It is far easier to fix problems early in the semester than after the last test has been taken.

**Communicating with Your Instructor** - For questions regarding your individual grade, please email me. I will generally respond to emails within 48 hours, with the exception of holidays and holiday weekends. On regular weekdays, responses will typically be sooner than 48 hours.
Academic Integrity
Students are expected to abide by the principles outlined in NC State University’s “Code of student Conduct.” See
http://www.ncsu.edu/policies/student_services/student_conduct/POL445.00.1.htm. The university has
procedures in place for academic integrity violations. A RAIV form may be used to adjust student grades.
By the conclusion of each examination, students will be required to sign the University Honor
Pledge: “I have neither given nor received unauthorized aid on this test or assignment.” Although no
honor pledge appears on the homework assignments, it is expected that students will complete
assignments themselves with only a reasonable amount of assistance from other students, TA’s, tutors or
the instructor.