
Lecturer: Prof. Stephanie Majewski – smajewsk@uoregon.edu
Office Hours (402 Willamette): Mondays 2pm–3pm, Wednesdays 3pm–4pm

GTFs:
Maira Amezcua, mamezcua@uoregon.edu, 217 Willamette Hall, Tuesday: 10am–12pm
Sudarshan Karki, skarki@uoregon.edu, 220 Willamette Hall, Wednesday: 4pm–6pm
Jingtao Zhang, jingtao@uoregon.edu, 261 Willamette Hall, Monday: 3pm–5pm

Course (CRN 36970): Tues/Thurs 2:00-3:50pm
Prerequisites: High school algebra. No prior physics assumed.

Required Materials:
• WileyPLUS (www.wileyplus.com) for online homework, e-book, etc
• i>Clicker

Course Content:
This course will serve as an introduction to physics, demonstrating how a rich variety of complex natural phenomena can be explained using a framework of fundamental forces and laws that allows us to understand why things happen. Physics often has the reputation of being a “hard” science littered with confusing jargon and mathematics. Hopefully this course will undo that reputation and provide you with tools to understand how the world around us works.
The course is primarily conceptual in nature, using only simple high school algebra to help illuminate the underlying physical phenomena. Simple numerical and conceptual problems will be assigned in homework sets, and use of a calculator will be helpful but not essential.

Blackboard:
At https://blackboard.uoregon.edu you may login and access course documents such as this syllabus. In addition, you may view announcements, course materials, scores on homework and tests at any time. Use your Username i.e. Duck ID without "@uoregon.edu" and Password to login to Blackboard. Be sure to log out when done – use the "Logout" button at the top of most blackboard pages. If you have problems of logging in please contact: blackboard@ithelp.uoregon.edu.

Email:
You must use your uoregon.edu email address when corresponding with the instructor and TAs by email. Please mention PHYS 101 in the subject line.
i>Clicker:
There will be several clicker questions in each lecture. You will get credit for being in class and clicking on each question. 10% of your overall grade will be devoted to the clicker questions. The two lowest clicker scores will be dropped.

Register your i>Clicker:
1) Log in to Blackboard
2) Click on “PHYS 101 (Spring 2013; 36970), Essentials of Physics” course
3) In the upper left corner (green rectangle) of the “Home Page” click on “Course Information”
4) Fill in all fields of “UO i>clicker Registration”
5) Click on the “Registration” button

Homework:
We will be using a web-based homework system through the WileyPLUS website. You will submit your homework answers via computer. This is to give quick feedback to homework questions. **THE DUE DATES ARE WEDNESDAYS AT MIDNIGHT. NO LATE HOMEWORK WILL BE GRADED.** Note: the numbers for the problems in the web question will be different for each student. If you figure out how to solve the problem as a group, you will still have to calculate your values for your own answer. The lowest homework grade will be dropped.

Group Work:
I highly recommend that you work together, and learn from each other, but all assignments must be submitted individually - based on your own merits.

Quizzes:
We'll have 10 – 15 minute quiz on Tuesdays with the exception of midterm exam weeks. Your lowest quiz grade will be dropped.

Exams:
1) Midterm Exam 1: Tuesday, April 30th (Week 5)
2) Midterm Exam 2: Thursday, May 23rd (Week 8)
3) Final Exam (Comprehensive): Tuesday, June 11th at 1:00pm (Week 11)
There will be no makeup exams. If there is a serious (e.g. involving illness) and well-documented (e.g. with a doctor’s note) reason for missing a midterm, the final exam score will count extra, in place of the missed tests.

Course grade:
Homework: 20%
i>clicker problems: 10%
Quizzes: 10%
2 midterm exams: 15% + 15%
Final exam (comprehensive): 30%
Final Grade:
A+  97% or higher    B+  87% to 89.9%    C+  77% to 79.9%
A   93% to 96.9%    B   83% to 86.9%    C   73% to 76.9%
A–  90% to 92.9%    B–  80% to 82.9%    C–  70% to 72.9%
D   63% to 69.9%    D–  60% to 62.9%    F   lower than 60%

Curving Grades:
There will be a small adjustment at the end of the term if the course grades on the whole don’t meet my expectations. I will not make this decision until after all the work for the term is done (including the final exam) – the individual assignments will not be graded on a curve.

Student Conduct:
Mutually respect in class is paramount. Academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, and plagiarism, devalues the reputation of our institution, its faculty, its students, and the degrees we offer. Moreover, academic misconduct is particularly unfair for the students who do their work with integrity and honor. Violations of the student conduct code result in the incident being included on your student conduct record and can result in a failing grade on any course work related to the violation or a failing grade in the course. The University of Oregon requires all instances of cheating be reported, no matter how small. Cheating includes, but is not limited to:

- Looking at another student’s exam during a test
- Copying the work of another person (student or otherwise) and submitting it as your own
- Copying and pasting from the textbook, Google, Wikipedia, Yahoo, or any external sources
- Using any materials except those explicitly approved during a test-taking situation
- Resubmitting graded work that was altered after being returned

Every effort will be made in this class to deter dishonesty through classroom procedures. **Suspected academic dishonesty will be reported.**

**For a list of other descriptions of cheating, see the Student Conduct Code.**

Special Accommodations:
If you are currently registered with AEC (Accessible Education Center), for a documented disability, please present your paperwork to me as close to the beginning of the term as possible so that we can design a plan for you. If you have a disability but are not registered with AEC, you should contact them as soon as possible (http://aec.uoregon.edu). It is much more likely that measures can be taken to provide adequate special accommodation if the organization is done through AEC.
Suggestions for Successful Study:

1. Don’t get behind on readings or homework. Physics is like a ladder, one step at a time.
2. Participate in class, ask questions, and make use of my office hours and Graduate Teaching Fellows (GTFs).
3. **Complete the assigned readings before lecture.**
4. Keep your old quizzes and midterms. You’ll find them useful when you’re studying for future tests.
5. University courses, in general, require at least 3 hours/week of work outside the course for each credit hour. This means you should devote **at least 12 hours/week** working outside class to do well in this course!
6. By devoting adequate time, managing your time effectively, and practicing good study/problem solving skills you should succeed in this course.
7. **BIG HINT FOR DOING PHYSICS PROBLEMS:** LEARN THE PHYSICS, UNDERSTAND THE CONCEPTS, PARTICIPATE IN CLASS DISCUSSION, AND READ THE BOOK!!! It will make things so much easier!

**Successful Problem solving:**

1. Draw a clear diagram(s) indicating the situation – if needed
2. Think about the principles involved. Write them down!
3. Write down the quantities that are known and the quantities you want to know
4. Write down numbered steps indicating the logical progression of your reasoning
5. Clearly mark your answer (underlined or in a box)
6. Don’t forget **units**! Check your significant figures.
7. Check your answer to see if it is reasonable

**Help Sessions:**
Drop-in Help Sessions are available at Willamette Room 147, just off the big atrium. Please make sure to pick up a schedule in the Physics Office.

**Laptops and Cell Phones in Class:**
The use of laptop computers and phones in class is discouraged. Why? Several studies show that students using laptops in class spend a great deal of time on non-class-related activities (texting, FB, playing games, etc.) and that these distractions negatively impact both learning and grades. This alone isn’t a reason to ban laptops – you’re responsible for your own performance in class. In addition, however, studies have shown that laptop use distracts and impacts the learning of **other students nearby.** (E.g. Fried, C. B. *Computers & Education* **50**, 906-914 (2008).) Plus, **students** have complained about the environment created by their classmates’ laptop use. Taking notes by hand, by the way, is more effective in cementing concepts in your mind – you can always take a quick photo of your notes if you want a digital copy.
## Physics 101 - Tentative Course Syllabus

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Section</th>
<th>Topic</th>
<th>Chapter</th>
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<tbody>
<tr>
<td>1</td>
<td>Tu Apr 2</td>
<td></td>
<td>Introduction to Science</td>
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<tr>
<td>2</td>
<td>Th Apr 4</td>
<td></td>
<td>Skating, Falling Balls</td>
<td>1.1,1.2</td>
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<td>3</td>
<td>Tu Apr 9</td>
<td></td>
<td>(Q) Projectile Motion, Ramps</td>
<td>1.2,1.3</td>
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<td>4</td>
<td>Th Apr 11</td>
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<td>Seesaws, Wind Turbines</td>
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<td>5</td>
<td>Tu Apr 16</td>
<td></td>
<td>(Q) Wheels</td>
<td>2.2</td>
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<td>6</td>
<td>Th Apr 18</td>
<td></td>
<td>Bumper Cars</td>
<td>2.3</td>
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<tr>
<td>7</td>
<td>Tu Apr 23</td>
<td></td>
<td>(Q) Spring Scales, Bouncing</td>
<td>3.1,3.2</td>
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<td>8</td>
<td>Th Apr 25</td>
<td></td>
<td>Carousels and Roller Coasters</td>
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<td>9</td>
<td>Tu Apr 30</td>
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<td>In-Class Midterm Exam</td>
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<td>10</td>
<td>Th May 2</td>
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<td>Rockets and Space Travel</td>
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<td>11</td>
<td>Tu May 7</td>
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<td>(Q) Balloons, Water Distribution</td>
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<td>12</td>
<td>Th May 9</td>
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<td>Garden Watering</td>
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<td>13</td>
<td>Tu May 14</td>
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<td>(Q) Curve balls, Airplanes</td>
<td>6.2,6.3</td>
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<td>14</td>
<td>Th May 16</td>
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<td>Clocks</td>
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<td>15</td>
<td>Tu May 21</td>
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<td>Musical Instruments, The Sea</td>
<td>9.2,9.3</td>
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<td>16</td>
<td>Th May 23</td>
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<td>In-Class Midterm Exam</td>
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<td>17</td>
<td>Tu May 28</td>
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<td>(Q) Sunlight</td>
<td>14.1</td>
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<td>18</td>
<td>Th May 30</td>
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<td>Nuclear Weapons</td>
<td>16.1</td>
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<tr>
<td>19</td>
<td>Tu Jun 4</td>
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<td>(Q) Medical Imaging &amp; Radiation</td>
<td>16.3</td>
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<td>20</td>
<td>Tu Jun 6</td>
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<td>Modern Physics</td>
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<td>21</td>
<td>Tu Jun 11</td>
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<td>Final Exam (1pm)</td>
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“(Q)” indicates the dates a quiz will be given in class.

The given schedule is tentative; changes will be discussed in class and posted online.

**Important Dates:** (academic calendar)

- April 8th: Last day to drop without a “W”
- April 10th: Last day to add a class
- May 19th: Last day to withdraw (drop with a “W”) or change grading option to P/N