PHYSICS 201 (General Physics), Fall 2005

Instructor:
Professor Richard Taylor
Office: 173 Willamette Hall, telephone: 346 – 4741, email: rpt@darkwing.uoregon.edu
Office hours*: Monday, Wednesday and Friday 12.00-1.00pm
(*these are the times when I am guaranteed to be available. You can also try my office at other times or pre-arrange a meeting).

Lectures: (begin on Monday 26th September)
Objectives: to learn the basic laws of physics in the area of mechanics AND to see that physics can be interesting and relevant to your daily experiences!
Prerequisites: MATH 111 and 112 or equivalent (you must know algebra and trigonometry)


Website: http://materialscience.uoregon.edu/taylor/teaching/phys201.html
This website contains information about the lectures, tutorials, homework assignments and homework solutions.

If you need access to a computer see: http://cc.uoregon.edu/campuslabs.html

Tutorials: (begin on Friday 30th September)
Objectives: Tutorials give you the opportunity to discuss the physics you have met in lectures with your classmates and teaching assistants. With the support of the teaching assistants, you will work collaboratively with your classmates to develop and practice your problem solving skills. Each week’s tutorial problems are designed to help you with your homework. You will be given a solution set to the tutorial problems at the end of each tutorial. The teaching assistants will also discuss approaches to solving several of the homework problems.

Registration: you must register for one of the weekly tutorial sessions using duckweb (http://duckweb.uoregon.edu/) or duckcall (346-1600). You must finalize your choice of tutorial session by the end of the first week of term. Each week you should attend the tutorial session in which you are registered unless you have permission from the teaching assistants to attend another session (see grading section below).

Further help: in addition to your tutorial session, you can meet with your teaching assistant during his/her weekly office hour. The name of your teaching assistant and the time of their office hours will be arranged during your first tutorial. You can also use the “drop in help-center: (http://hendrix.uoregon.edu/~dlivelyb/TA_assign/index.html)
Contact details of the teaching assistants:
Ted Martin, tmartin1@darkwing.uoregon.edu
Qi Li, qli@darkwing.uoregon.edu
Vladimir Tskhvaradze, vtskhvar@uoregon.edu
Khodadad Dinyari, kdinyari@uoregon.edu
Nathan Kuwada, nkkuwada@uoregcn.edu
Lawrence Davis, ldavis@uoregon.edu
Daniel Parks, dparks@uoregon.edu
Ricky Fok, rfok@uoregon.edu
Ellyne Kutschera, ekutschec@uoregon.edu
Run Su, rsu@uoregon.edu

(Each tutorial has a lead Teaching Assistant. See the class website for information of which tutorials each teaching assistant leads)

Weekly schedule: subject matter covered in a particular week (i.e. on the Monday, Wednesday and Friday lectures), will then be reviewed and developed in the following tutorial session. Your tutorial will take place either on the Friday of that week or the following Wednesday or Thursday. The Homework deadline is the next day on the Friday at 11.00am (see details below).

Grading:

Tutorials (10%) + Homeworks (35%) + 2 Mid-term exams (15% each) + 1 Final exam (25%)

Tutorial marks. 10% of your grade will be based on tutorial attendance as follows: miss none or one =10%, miss two=8%, miss three=7%, miss four=6%, miss five=5% etc. You may make up for a tutorial during the same cycle in another session if you have advance permission from the relevant teaching assistant. A tutorial cannot be made up by attending a tutorial in the next cycle.

Homework marks. About 10-15 homework questions and problems will be assigned for grading each week. Each Wednesday, the homework assignment will be both posted on the class website and also announced in class. The completed assignment should be placed in your teaching assistant’s slot in the basement of Willamette Hall no later than 11.00am on Friday morning of the next week (i.e. you have 9 days to complete your assignment). Late homework will not be accepted because solutions to the homeworks will be posted on the class website at precisely 11am on the Friday (if you have an exceptional reason for not handing in a homework contact your teaching assistant as soon as possible). Your lowest homework score will be dropped. The marked homeworks will be handed back to you during your next tutorial session.

Exams: there will be two mid-term exams (on 19th Oct. and 9th Nov. in Willamette 100). The final exam time depends on whether you are registered for the 9am or 2pm class. For students in the 9am class, the final will take place at 10.15-12.15 on Tuesday 6th December. For students in the 2pm class, the exam will take place at 3.15-5.15pm on Monday 5th December.

Laboratory: those who are registered in the laboratory PHYS 204 will find that the laboratory exercises will also help you to understand the physics concepts. For more information on this course contact Prof. Dean Livelybrooks: 225 Willamette Hall, email: dlivelyb@hendrix.uoregon.edu. Website: http://hendrix.uoregon.edu/~dlivelyb/uo_ipl/index.html. Labs meet the first week of term.

Syllabus:

Reading the textbook will greatly enhance your understanding. To help you, the following is an approximate schedule:

<table>
<thead>
<tr>
<th>Week</th>
<th>Chapter</th>
<th>Topics</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Date</td>
<td>Pages/Sections</td>
<td>Topics</td>
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<td>------------------------------------------------------------------------</td>
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<tr>
<td>1: Sept. 26</td>
<td>1(all), 2-1 to 2-3, 2-8</td>
<td>Experimental science, measurements, position and velocity in one dimension, kinematics, graphical representation</td>
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<tr>
<td>2: Oct. 1</td>
<td>2-4 to 2-7, 4-1 to 4-4</td>
<td>Motion with constant acceleration, falling objects, Newton’s First and Second Laws of Motion</td>
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<td>3. Oct. 10</td>
<td>4-5 to 4-6, 3-1 to 3-4</td>
<td>Newton’s Third Law, weight, vectors</td>
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<tr>
<td>4. Oct. 17</td>
<td>3-5 to 3-8, 4-7 to 4-9</td>
<td>Projectile motion, Newton’s laws in two dimensions</td>
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<td>5. Oct. 24</td>
<td>5(all)</td>
<td>Circular motion, gravitation</td>
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<tr>
<td>6. Oct. 31</td>
<td>7-1 to 7-3, 6-1 to 6-3</td>
<td>Impulse and momentum, work and kinetic energy</td>
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<tr>
<td>7. Nov. 7</td>
<td>6-4 to 6-10, 7-4 to 7-6</td>
<td>Potential energy, conservation of energy, power, elastic and inelastic collisions</td>
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<td>8. Nov. 14</td>
<td>7-8, 8(all)</td>
<td>Center of mass, rotational motion</td>
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<td>9. Nov. 21</td>
<td>9-1 to 9-5</td>
<td>Bodies in equilibrium</td>
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<tr>
<td>10. Nov. 28</td>
<td>10-1 to 10-9</td>
<td>Fluids, pressure, Pascal’s principle, Archimedes Principle, Bernoulli’s equation</td>
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**Tutorial information:**

**Tutorials associated with the 9am (15119) class**
- 15120  9am, Thursday, 112 Willamette
- 15121  10am, Thursday, 112 Willamette
- 15122  11am, Thursday, 112 Willamette
- 15123  1pm, Thursday, 112 Willamette
- 15126  11am, Friday, 112 Willamette
- 15127  12(noon), Thursday, 112 Willamette
- 15130  3pm, Thursday, 112 Willamette
- 15137  2pm, Thursday, 112 Willamette

**Tutorials associated with the 2pm (15118) class**
- 15128  11am, Wednesday, 112 Willamette
- 15129  12(noon), Wednesday, 112 Willamette
- 15131  1pm, Wednesday, 112 Willamette
- 15132  3pm, Wednesday, 112 Willamette
- 15133  4pm, Wednesday, 112 Willamette
- 15134  1pm, Friday, 112 Willamette
- 15135  5pm, Wednesday, 112 Willamette
- 15136  12(noon), Friday, 112 Willamette
Successfull Problem solving:

Here’s a few guidelines on solving problems:

Draw a clear diagram(s) indicating the situation

Think about the principles involved. Write them down!

Write down the quantities that are known and the quantities you want to know

State any appropriate equations

Write down numbered steps indicating the logical progression of your reasoning

Clearly mark your answer (underlined or in a box)

Don’t forget units! Check your significant figures!

Check your answer to see if it is reasonable. eg perform an “orders of magnitude” estimate.
Contact details/office hours:

Richard Taylor, Willamette Hall room 173, tel: 346 - 4741, (rpt@darkwing.uoregon.edu)
Office hours: 12.00-1.00pm, MWF

Ted Martin, Willamette Hall room 72, tel: 346-4771 (tmartin1@darkwing.uoregon.edu)
Tutorials: Wed 3pm (15132)
Office hours: Tue 12:30-1:30pm

Run Su, Willamette Hall room 219, (rsu@uoregon.edu)
Tutorials: Wed 11am (15128), Thus 9am (15120), Fri 11am (15126)
Office hours: Mon 10:00-11:00am

Vladimir Tsikhvaradze, Willamette Hall room 231, (vtskhvar@uoregon.edu)
Tutorials: Wed 11am (15128), Thu 1pm (15123), Thu 2pm (15137)
Office hours: Tue 1:00-2:00pm

Niina (Khodadad) Dinyari, Willamette Hall room 217, tel: 346-4793 (kdinyari@uoregon.edu)
Tutorials: Wed 4pm (15133), Wed 5pm (15135), Thu 11am (15122)
Office hours: Tue 12:30-1:30pm

Nate Kuwada, Willamette Hall room 217, tel: 346-4793 (nkuwada@uoregon.edu)
Tutorials: Thu 2pm (15137), Thu 3pm (15130), Fri 11am (15126)
Office hours: Wed 11:00am-12:00pm

Mick (Lawrence) Davis, Willamette Hall room 231, (ldavis9@uoregon.edu)
Tutorials: Wed 1pm (15131), Wed 4pm (15133), Fri 1pm (15134)
Office hours: Mon 10:00-11:00am

Daniel Parks, Willamette Hall room 219, tel: 346-4780 (dparks@uoregon.edu)
Tutorials: Wed 1pm (15131), Thu 12pm (15127), Fri 1pm (15134)
Office hours: Thu 1:00-2:00pm

Ricky Fok, Willamette Hall room 220, (rfok@uoregon.edu)
Tutorials: Thu 9am (15120), Thu 10am (15121), Thu 11am (15122)
Office hours: Fri 10:00am-12:00pm

Elyne Kutschera, Willamette Hall room 217, tel: 346-4793 (ekutschera@uoregon.edu)
Tutorials: Wed 5pm (15135), Thu 12pm (15127), Thu 1pm (15123)
Office hours: Wed 11:00am-12:00pm

Qi Li, Willamette Hall room B34, (qli@darkwing.uoregon.edu)
Tutorials: Wed 12pm (15129), Thu 10am (15121), Thu 3pm (15130), Fri 12pm (15136)
Office hours: Mon 2:00-3:00pm

Pete Erslev, Willamette Hall room 78, (perslev@darkwing.uoregon.edu)
Tutorials: Wed 12pm (15129), Wed 3pm (15132), Fri 12pm (15136)