

Portland State University - Department of Physics

Physics 211 – General Physics Part I: Mechanics

SYLLABUS – Fall 2007 / UPDATED 10/01/2007

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Office hours: **Wednesday 11.30-13.30 at SB2 314**

Text book: *Halliday / Resnick / Walker - 8th edition* (EXTENDED EDITION), Wiley,
ISBN: 9780470179482

(includes **Wiley Plus Access**)

Also: You can buy Wiley Plus with online textbook access at www.wileyplus.com

YOU CAN (but don't have to) enroll in Wiley Plus online course here:

<http://edugen.wiley.com/edugen/class/cls42318/>

Any questions, get help here: <http://www.wiley.com/college/studentfdoc>

Class: Monday and Wednesday, 4.40pm-6.30pm in **SB1 #107**

Web: <http://www.physics.pdx.edu/~bseipel/>

The course covers the basic concepts of mechanics. **We will cover most of the first 13 chapters of the textbook**

Lecture Notes

WEEKS 1-3 (6 lectures)

[09/24 Introduction & Vectors \(CH 1 & CH3\)](#)

[09/26 Kinematics in 1D \(CH2\)](#)

[10/01 Kinematics in 2D \(CH2\)](#)

[10/03 Forces](#)

[Kinematics II \(CH2 & CH4\) complementary notes](#)

[DynamicsI, DynamicsII , complementary notes \(CH5 & CH6\)](#)

WEEKS 4-6 (6 lectures, CH 7-9)

[Work and Energy \(CH7\)](#)

[Energy Conservation \(CH8\)](#)

[Momentum & Center of Mass \(CH9\) - complementary notes, compl. notes2](#)

WEEKS 7-9 (6 lectures, CH 6.5,10-13)

[Circular Motion and Rotation , momentum of inertia and rolling \(CH 6.5, 10\)](#)

[Rolling, Torque and Angular Momentum \(CH11\)](#)

[Equilibrium & Gravity \(CH 12,13\)](#)

Homework

The homework is meant to **help the students**

apply the concepts from the lecture and to review the covered theory. Homework problems will be assigned

but will not be graded. The homework should help the students to **prepare for the exams**. Some of the

homework problems might also appear in a slightly changed form in the exams. The solutions will be on hold

in PSU's library.

Ch-1: 1, 3, 5, 7, 10, 12, 16, 19, 23, 29, 40, 52 SP 1-4 (p. 7)

Ch-2: Q1 to Q9; 3, 6, 11, 12, 13, 14, 17, 21, 31, 33, 35, 36, 38, 42, 43, 45 46, 48,54, 58, 60, 61, 62, 65, 69, 78, 82, 88, 99, 115. SP 2-1, 2-2.

Ch-3: Q2 to Q8, Q10; 4, 6, 8,15, 19, 20, 25, 26, 27, 35, 37, 39, 42, 43, 48, 59, 61, 66, 70, 71, 74.

Ch-4: Q1 to Q13; 1, 3, 6, 7, 9, 11, 15, 16, 17, 19, 20, 22, 23, 24, 28, 30, 31, 32, 33, 34, 35, 36, 38, 40, 43, 44, 46, 50, 51, 52, 55, 56, 58, 59, 60, 64, 68, 69, 70, 71, 72, 74, 75, 77, 78, 80, 85, 86, 96, 106, 111, 119, 123, 132.

Ch-5: Q1 to Q12; 1, 3, 4, 5, 8, 9, 11, 12, 13, 15, 16, 24, 26, 30, 37, 39, 40, 41, 42, 43, 44, 45, 47, 49, 50, 51, 52, 54, 55, 56, 60, 63, 66, 67, 70, 74, 75, 76, 77, 88, 99, 100.

Ch-6: Q1 to Q11; 1, 4, 7, 8, 10, 12, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 26, 28, 29, 30, 32, 33, 36, 37, 41, 43, 47, 48, 49, 51, 52, 57, 58, 59, 61, 62, 66, 67, 68, 69, 71, 74, 82, 89, 90, 97, 102, 105.

Ch-7: Q1 to Q10; 1, 3, 4, 9, 10, 12, 13, 14, 18, 20, 21, 27, 28, 31, 32, 37, 39, 40, 41, 44, 47, 47, 50, 54, 55,57, 61, 63, 70, 71, 74, 78.

Ch-8: Q1 to Q9; 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14, 15, 16, 18, 20, 21, 22, 23, 25, 27, 28, 29, 30, 31, 32,33, 34, 36, 37, 40, 41, 44, 45, 49, 50, 51, 51, 57, 59, 60, 61, 62, 63, 64, 66, 67, 71, 82, 89, 95.

Ch-9: Q1 to Q12; , 1, 3, 4, 5, 7, 8, 9, 10, 13, 15, 17, 20, 21, 23, 24, 25, 28, 29, 30, 31, 32, 33, 38, 42, 48, 49, 50, 53, 54, 56, 58, 60, 62, 63, 64, 74, 75, 76, 81, 82, 89, 97, 109, 113, 124, 126, 128, 130, 134.

Ch-10: Q1 to Q10; 1, 2, 7, 8, 13, 14, 18, 19, 22, 27, 28, 29, 34, 36, 38, 39, 40, 41, 47, 48, 51, 52, 53, 55, 56, 58, 59, 60, 62, 65, 67, 69, 71, 72, 76, 77, 78, 81, 83, 84,85, 86, 88, 89, 90, 92, 94, 98, 101, 104, 111, 116, 120.

Ch-11: Q1 to Q10; 1, 3, 4, 6,7, 8, 9, 10, 11, 12, 13, 14, 24, 25, 28, 30, 31, 34, 36, 37, 38, 39, 40, 41, 44, 45, 47, 50, 51, 53, 56, 57, 58, 59, 60, 64, 66, 69, 76, 83, 85, 86, 88, 100.

Ch-12: Q1 to Q10; 1, 2, 5, 7, 10, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 30, 31, 32, 34, 35, 36, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 52, 53, 54, 55, 57, 59, 60, 61, 62, 66, 67, 69, 73, 74, 75, 77, 79, 80, 81, 82.

Ch-13: Q1 to Q10; 1, 2, 4, 6, 7, 8, 9, 10, 11, 12, 14, 15, 17, 20, 23, 28, 29, 31, 36, 48, 52, 58, 63, 72, 75, 79, 89, 94, 96, 97, 98, 102, 103.

Quizzes

Besides the homework additional online quizzes (Wiley Plus) will be given once a week. These quizzes can consist of both conceptual questions and problems and will be graded online. The quizzes count are worth 30% of your final grade.

You have to subscribe in WileyPlus to do the quizzes. Please write an email if you have questions. If you decide not to enroll in WileyPlus your grade will be based on the exams only.

Exams

The course grade is based on the quizzes (30%) three exams (70%). **The best exam of each student is worth 50%, and the two other are worth 30% (2nd best) and 20% of the total grade.** The exams can have both conceptual questions and problems. The exams are **non-comprehensive**, but exam 2 and 3 **may include** general concepts already covered in previous exam.

Exam1	Monday, October 15	4.40pm-6.30pm
Exam2	Wednesday, November 7	4.40pm-6.30pm
Exam3	Monday, December 3	5.30pm-7.20pm

Make-up exams will be only given in case of emergencies or illness (with proof) at the end of the term.

One piece of paper is allowed with anything **YOU** want to write on it. Handwritten on both sides. Format: Letter 8.5" x 11"

Calculator is required!!

Grading Scale

>=90% A, 80%-89% B, 70%-79% C, 60%-69% D, < 59% F

Lowest in the range will be a MINUS, highest will be a PLUS

(E.g. 90% = A- and 89% = B+)

You can calculate your final score

Option 1: with Quizzes

Final Score = $(e1 * 0.5 + e2 * 0.3 + e3 * 0.2) * 0.7 + Q * 0.3$

e1,e2,e3 = your exam scores in %; Q = Quiz Factor

The Q - factor will be calculated as follows:

Total quiz score =

80% --> Q = 100

70% --> Q=90

60% --> Q=80

50% --> Q=70

Option 2: Without quizzes or quiz score < 50%

Final Score = $e1 * 0.5 + e2 * 0.3 + e3 * 0.2$

Tutoring

The Skills Enhancement and Tutoring Center (SETC) provides FREE drop in tutoring in Biology, Chemistry, Chinese, French, German, Spanish, Arabic, Russian, Psychology, Physics, Statistics, and Writing. It is a FREE resource available for PSU students sponsored by Student Services Resource Fees and Student Affairs. The SETC has trained undergraduate and graduate tutors and has flexible drop in tutoring hours. The SETC is located in Smith Memorial Student Union (SMSU) in room 425. More information can be found at www.setc.pdx.edu. (Physics: every day from 11:30 - 12:30)