

Portland State University
 Department of Physics
Physics 201 – General Physics
 Mechanics

SYLLABUS – Fall 2005

Instructor: Bjoern Seipel
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Office hour: Wednesday 10-11am at SB2 Office 314
Text book: James S .Walker, *PHYSICS, Second Edition, ISBN 0-13-101416-1*
Web: <http://www.physics.pdx.edu/~bseipel/>
Class: Tuesday and Thursday, 4.40pm-6.30pm, BA , Room 190

The course covers the basic concepts of mechanics. We will cover most of the first 12 chapters of Physics by J.S. Walker.

Dates	Topic	Reading Assignment	Homework	Solutions	Lecture Notes
09/26/05	Introduction, Vectors	Ch 1,3	Ch 1: CQ 4 P 2,24,38 Ch 3: CQ 2,14 P 2,13,19,21	Solutions	Lecture 1
	Vectors, 1D kinematics	Ch 3,2	Ch 2: CQ 4,14,18 P: 8, 12, 34, 40, 45, 48, 61,66	Solutions	Lecture 2
	2D kinematics	Ch 4	Ch 3: P 31,43,45 Ch 4: CQ 2, 4,12 P: 3,6,10,13, 31,40,53	Solutions	Lecture 3
	2D kinematics & Newton's Laws	Ch 4,5	Ch5: CQ 1, 9, 12, 15 P 1,12,15	Solutions	Lecture 4
	Newton's Laws	Ch 5	CH5: CQ 16,17,26,29 P 23,25,29,31,43 CH6: CQ 2,7,9 P 2,4,7	Solutions	Lecture 5
	Commonly Experienced Forces	Ch 6	CH6: CQ 3,16,22,27, 28 P 17, 21, 23, 28, 37, 43, 49	Solutions	Lecture 6
	Circular Motion	Ch 6			
10/25/05	Exam #1	Ch 1-6	4.40pm-6.30pm		
10/27/05	Work and Energy	Ch 7	CH7: CQ 1,7,11,17,21 P: 2,5,12,15,25, 31, 35,41,43	Solutions	Lecture7
	Conservative Forces and Conservation of Energy	Ch 8	CH8: CQ:1,3,5,13 P: 1,2,7,11,12,13,21	Solutions	Lecture8
	Conservation of Energy & Linear Momentum	Ch 8,9	CH8: CQ: 17,21 P: 13,21,27,29, 68,78	Solutions	Lecture 9
	Collisions	Ch 9	CH9: CQ: 5,7, 11, 15, 17,23,27 P: 4,5,9,17,23,25,28,31,37	Solutions	Lecture 10
	Rotation	Ch 10			Lecture11
11/17/05	Exam #2	Ch 3, 6-10	4.40pm-6.30pm		
	Rotation	Ch 10,11	CH10 CQ: 1,3,9,13,25 P: 5,7,15,21,33,45,51,53,57,59,89	Solutions	Lecture11-2
	Rotation	Ch 11	CH11 CQ 1,3,7,13, 17 P 1,9,11,17, 21	Solutions	Lecture12
	Gravity	Ch 12	CH 11, 21, 39, 41, 49-51, 79 CH 12 CQ: 1, 6, 9, 13 P: 3, 7, 13, 23, 32, 37, 43, 45 Solutions ch11 , Solutions ch12		Lecture 13
	Gravity	Ch 12			
12/07/05	Exam #3	Ch 3,10-12	5.30pm-7.20pm		

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. Homework Problems and solutions will be posted on the homepage <http://www.physics.pdx.edu/~bseipel/Teaching>.

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.

Problems (Quizzes)

Besides the homework quizzes will be given occasionally. These quizzes can consist of both conceptual questions and problems and will be graded. The answers are due to the beginning of next class.

Exams

The course grade is based on quizzes and three exams. The best exam of each student is worth 40%, and the two other are worth 35% (2nd best) and 25% 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.

I pay special emphasis to in the lectures that will be asked off you in the quizzes and exams, but I do not take class attendance.

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

Calculator is required!!

Grade

The quizzes (problems) are worth 30%, the exams are worth 70% of the final grade.

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

Grading Scale

$\geq 90\%$ 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+)