DEPARTMENT OF PHYSICS

Spring 2009 **Physics 2A** **April 2, 2009**

Physics – Mechanics

Web page: http://physics.ucsd.edu/students/courses/spring2009/managed/physics2a/

INSTRUCTOR: Prof. Olga Dudko dudko@physics.ucsd.edu
Office: 7234 Urey Hall
Office Hours: Tue 2:00 p.m. – 3:00 p.m.

COURSE COORDINATOR: Patti Hey, 118 Urey Hall Addition, plhey@physics.ucsd.edu

TEACHING ASSISTANT: Evan Grohs egrohs@physics.ucsd.edu
Office Hours: Wed 5:00 p.m. – 6:00 p.m. in the Physics Tutorial Center, 2702 Mayer Hall Addition, http://tutorialcenter.ucsd.edu/

CLASS SCHEDULE:

Lectures:	Mon Wed	12:00 p.m. – 12:50 p.m.	WLH 2001
	Tue	8:00 p.m. – 8:50 p.m.	PETER 110
Quizzes:	Fri	12:00 p.m. – 12:50 p.m.	WLH 2001
Discussions:	Wed	4:00 p.m. – 4:50 p.m.	YORK 2622
Problem Sessions:	Thu	7:00 p.m. - 8:50 p.m.	WLH 2005
Final Exam:	Wed, June 10	11:30 a.m. – 2:30 p.m.	TBA

Final Examination: The final examination will cover all of the material of the course. **It will not be possible to take the exam at any other time for any reason.**

TEXT: Wolfson and Pasachoff, Physics for Scientists and Engineers, 3rd Edition, Addison/Wesley

PREREQUISITES: Math 20A and concurrent enrollment in Math 20B. Calculus will be used extensively in lectures, problem sets and exams.

Help Is Available: Problem sessions will be held on Thursdays 7:00-8:50 p.m. in WLH 2005. At these sessions, problems will be worked out and the weekly lectures gone over. Attendance is voluntary, but students are encouraged to use these meetings to help master course material and prepare for quizzes. Individual assistance is available during office hours. **The Physics Dept. tutorial center (**Mayer Hall Addition 2702**) is also open Sunday-Thursday from 3-8 p.m.**

COURSE FORMAT: Physics 2 A-B-C-D is a lecture course covering mechanics, electricity and magnetism, waves and modern physics. Physics 2A is a calculus-based science-engineering general physics course covering vectors, motion in one and two dimensions, Newton's laws, work and energy, conservation of energy, linear momentum, collisions, rotational

kinematics, rotational dynamics, equilibrium of rigid bodies, oscillations, and gravitation.

Homework Assignments: Problem sets are assigned as selections from each text chapter. Solutions will be available on the course web site. The problems will be worked in detail during the problem session. The homework will not be graded, but exam problems may resemble homework that is assigned.

Quizzes: A weekly Problem Quiz will be given. Your lowest two quiz scores will be dropped. **There will be no make-up quizzes. You must purchase your own scantron form for quizzes (No. X101864-PAR-L). They are available at the Bookstore and the general store co-op for about $0.15 each. You will need a No. 2 pencil to fill in the scantron.** At the first quiz you will be assigned a quiz code number. This number is yours for the rest of the quarter. You have to put your proper quiz code number on every quiz and the final. When results of exams are posted on-line, they will be listed by quiz code number. You may bring a calculator to the quiz but not a laptop computer.

Clickers: You have the opportunity to earn up to 5% extra credit by utilizing the in-class SRS system (clickers).

Grading Policy:

Quizzes	60%	(Determined by your top seven quiz scores)
Final Exam	40%	
Clickers	5%	(Extra Credit)

Add/Drop: Use WebReg to add/change/drop, drop from waitlists. See Sharmila Poddar (534-3290; spoddar@physics.ucsd.edu) in the Physics Department, Student Affairs Office, Urey Hall Addition, Room 115, if you have any problems with WebReg. If you need advice, see the TA or the instructor, **but they do not sign any cards.**

Add/Drop Deadlines:

Add	Friday, April 10
Drop without 'W' on transcript	Friday, April 24
Drop with 'W' on transcript	Friday, May 29

Academic Dishonesty: Please read "UC Policy on Integrity of Scholarship" in the UCSD General Catalog. The rules on academic dishonesty will be strictly enforced.

PHYSICS 2A TENTATIVE COURSE SCHEDULE

Week	Date		Topics	Chapter
1	March 30	M	Introduction. Units and Dimensions	1
	March 31	T	Estimation. Variables of Motion	1,2
	April 1	W	Kinematics	2
	April 3	F	No quiz	
2	April 6	M	Vectors	3
	April 7	T	Projectile Motion	4
	April 8	W	Circular Motion	4
	April 10	F	**Quiz 1**	
3	April 13	M	Forces	5
	April 14	T	Newton's Laws	5
	April 15	W	Applying Newton's Laws	6
	April 17	F	**Quiz 2**	
4	April 20	M	Forces with Multiple Objects	6
	April 21	T	Friction	6
	April 22	W	Work and Power	7
	April 24	F	**Quiz 3**	
5	April 27	M	Energy	8
	April 28	T	Conservation of Energy	8
	April 29	W	Center of Mass	10
	May 1	F	**Quiz 4**	
6	May 4	M	Momentum	10
	May 5	T	Conservation of Momentum	10
	May 6	W	Collisions	11
	May 8	F	**Quiz 5**	
7	May 11	M	Two Dimensional Collisions	11
	May 12	T	Angular Kinematics	12
	May 13	W	Torque	12
	May 15	F	**Quiz 6**	
8	May 18	M	Rotational Vectors	13
	May 19	T	Conservation of Angular Momentum	14
	May 20	W	Equilibrium	14
	May 23	F	**Quiz 7**	
9	May 25	M	**UNIVERSITY HOLIDAY**	
	May 26	T	Simple Harmonic Motion	15
	May 27	W	Simple Pendulum	15
	May 29	F	**Quiz 8**	
10	June 1	M	Gravitation	9
	June 2	T	Gravitational Potential Energy	9
	June 3	W	Class Review	
	June 5	F	**Quiz 9**	