DEPARTMENT OF PHYSICS
Spring 2019 Physics 2A(B) Physics – Mechanics

Course web page: http://dudko.ucsd.edu/physics_2a_b.html

INSTRUCTOR: Prof. Olga Dudko
Office: Urey Hall 7234, dudko@physics.ucsd.edu
Office Hours: Tue 5:30 – 6:30 pm and Wed 1:00 – 2:00 pm

COURSE COORDINATOR: Dawn Love
Office: Mayer Hall Addition 2551, d1love@physics.ucsd.edu

LEAD TEACHING ASSISTANT: Nick Colmenares, ncolmenares@physics.ucsd.edu
Office Hours: Friday 9:45 am - 10:45 am SERF 464

TEACHING ASSISTANTS: Hunter Nicholson, hnichols@ucsd.edu
Office Hours: Friday 2:00 pm – 3:00 pm, Physics Tutorial Center Mayer Hall 2218

Yiheng Xu, y7xu@ucsd.edu
Office Hours: Thursday 9:30 am – 10:30 am, Physics Tutorial Center Mayer Hall 2218

William Hicks, whicks@ucsd.edu
Office Hours: Monday 2:00 pm – 3:00 pm, Physics Tutorial Center Mayer Hall 2218

CLASS SCHEDULE AT A GLANCE:

MON	TUE	WED	THURS	FRI
Problem session 6:00 - 7:50 pm SOLIS 104	**Lecture** 2:00 pm - 3:20 pm York Hall 2722 **Problem session** 7:00 - 8:50 pm PEPPER CANYON 109	**Discussion** Time&Location: Refer to your individual schedule	**Lecture** 2:00 pm - 3:20 pm York Hall 2722	**Quiz** 5:00 pm - 5:50 pm Galbraith Hall 242

Final Examination: The final exam will be held on **Tuesday, June 11, 3:00 pm – 6:00 pm**. The final 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: Richard Wolfson, Essential University Physics, Volume 1

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 and Discussions: will be held before the quizzes. During these meetings problems will be worked out. Students are encouraged to use these meetings to help master course material and prepare for quizzes.
- Individual assistance of the Professor and TA is available during their office hours.
- The Physics Dept. tutorial center (Mayer Hall 2218). Their website is http://tutorialcenter.ucsd.edu/

COURSE FORMAT: Physics 2A - Mechanics is a calculus-based science-engineering general physics course covering 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. The problems will be worked in detail during the problem sessions and discussions. The homework will not be graded, but the time spent doing homework is the best way to prepare for the weekly quizzes and the final exam.

Quizzes: A weekly Problem Quiz will be given. **There will be no make-up quizzes.** Your lowest two quiz scores will be dropped. **You must purchase your own scantron forms for quizzes, No. F-289-PAR-L (red color), which are available at the Bookstore. You will need a No. 2 pencil to fill in the scantron.** Before the first quiz you will be assigned a 3-digit quiz code number. This number is yours for the rest of the quarter. You have to put your quiz code number on every quiz and the final. Results of exams will be posted online and listed by quiz code number. You may bring a calculator to the quiz but not a laptop, smartphone etc.

Clickers: You are encouraged to participate in the lecture by utilizing the iclicker.

Grading Policy:

Quizzes	60%	(Determined by your top 7 out of 9 quiz scores)
Final Exam	40%	
Clickers	5%	(Extra Credit)

Add/Drop: Use WebReg to add/change/drop. See course coordinator (contact information above) in the Physics Department Student Affairs Office if you have any problems with WebReg.

Academic Dishonesty: Every honest student benefits from maintaining high academic integrity. Please read "UCSD Policy on Integrity of Scholarship" in the UCSD General Catalog, http://www.ucsd.edu/catalog/front/AcadRegu.html.
These rules will be rigorously enforced. Any confirmed case of cheating will result in an "F" grade in this course, and referral to the dean for disciplinary action. Cheating includes submitting another person's work as your own; submitting your work as another person's; submitting an iclicker response for another person; copying from another student on exams; knowingly allowing another student to copy from you; use of unauthorized materials during a quiz or exam; intentionally misusing code numbers; or any attempt to obtain a higher grade by means other than honest effort.

PHYSICS 2A *TENTATIVE* COURSE SCHEDULE

Week	Date		Topics	Chapter
1	Apr 2	Tu	About the course. Units. Dimensions. Estimation	1
	Apr 4	Th	Variables of Motion. Motion in a straight line.	2
	Apr 5	Fr	**No quiz**	
2	April 9	Tu	The vector description of motion. Relative motion	3
	April 11	Th	Motion in more than one dimension. Projectile Motion. Circular Motion	3
	April 12	Fr	**Quiz 1**	1,2
3	April 16	Tu	Force and motion	4
	April 18	Th	Newton's Laws. Using Newton's Laws.	4,5
	April 19	Fr	**Quiz 2**	3
4	April 23	Tu	Forces with Multiple Objects. Circular motion.	5
	April 25	Th	Friction. Work and Power	5,6
	April 26	Fr	**Quiz 3**	4
5	April 30	Tu	Energy. Conservation of Energy.	6,7
	May 2	Th	Center of Mass.	9
	May 3	Fr	**Quiz 4**	5
6	May 7	Tu	Momentum.	9
	May 9	Th	Conservation of Momentum. Collisions.	9
	May 10	Fr	**Quiz 5**	6,7
7	May 14	Tu	Rotational motion.	10
	May 16	Th	Torque. Moment of inertia. Conservation of Angul Momentum	10,11
	May 17	Fr	**Quiz 6**	9
8	May 21	Tu	Static equilibrium.	12
	May 23	Th	Static equilibrium. Simple Harmonic Motion.	12,13
	May 24	Fr	**Quiz 7**	10,11
9	May 28	Tu	Simple Harmonic Motion. Driven oscillations and resonance. Gravitation.	13,8
	May 30	Th	Gravitation. Orbital motion.	8
	May 31	Fr	**Quiz 8**	12
10	June 4	Tu	Class Review. Final exam information.	
	June 6	Th	Problem review session.	
	June 7	Fr	**Quiz 9**	13,8