ESS 9	Solar System and Planets		
Tuesdays and Thursdays	9:30am - 10:45am in Geology room 3656		
Discussion	1B Thursday 2:00 - 2:50pm, 1C Thursday 3:00 - 3:50pm, 1E Friday 10:00 - 10:50am		
Discussion sections:	Geology 4691 and 4653		
Lecturer:	David Jewitt jewitt@ucla.edu		
Teaching Assistant:	Ivy Carpenter icarpenter@ucla.edu		
Book:	Bennett et al. The Solar System (6th edition), Addison-Wesley		

Notes on the Class

The aim of the class is to be broad, informative and fun: you should end up being excited about the solar system and have a decent feeling for what we know, don't know and want to know about it. We will use numbers to describe things but will not rely much on mathematics because this is an introductory class and most of the people who take it do not have mathematical backgrounds.

We will cover the entire solar system in this class, from the rocky planets, to the gas and ice giants, the comets, the asteroids, the satellites and rings, the Centaurs, Kuiper belt objects and Oort cloud, and we will go beyond to consider the planetary systems of other stars and the likelihood and distribution of life.

Book

The Bennett book is there for background. You should read in parallel with the lectures (ideally before the relevant class) and you are encouraged to read ahead as much as you like (in your copious free time). There are many other, similar introductory level books (Chaisson and McMillan Astronomy Today: The Solar System, Freedman et al. Universe: The Solar System). In my mind they're all about the same.

Web

The course www site is

https://ccle.ucla.edu/course/view/11W-ESSCI9-1

Interactions

You have several opportunities for interaction. First, please ask me questions in the lectures. This is the main way I can tell whether or not I am hitting the right notes: I need your feedback and right there in the lecture is the best place and time to start. Second, there are "labs" (UCLA-speak for "discussion/interaction sessions") run by Ivy Carpenter in which you are specifically encouraged to ask lots of questions and interact with Ivy. Third, my office is Geology 3713 and you are welcome to see me at any time to discuss the subjects of this class. Email is another good way to interact with me: phone is not a good way (I rarely answer the phone).

Grades

The various graded aspects of the class are not there to trip you up. They are there to focus your attention on the key points of the class. The final grades will be weighted between homeworks, in-class exams, discussion section guizzes and the final exam as

Homeworks Discussion section quiz In-class exam Final exam 15% (best 5 of 6) 20% (best 7 of 9) 25% (multiple choice) 40% (multiple choice)

The answer to the inevitable question "do you grade on a curve?" is "I think so". You can assume that if you make a reasonable effort you will get a reasonable response in terms of the grades, and you will know from the homeworks and exams how you are doing as the class progresses, so there should be no surprises.

Practical Details

PDFs of the lectures will be posted on-line but, since PDFs cannot show movies or animations and have no sound, these may not be an effective substitute for attending the class.

There are no make-up exams and late homeworks will not be graded because these things place a disproportionate burden on the TA. Instead, you may miss one homework and two discussion section quizzes without penalty.

No electronic devices may be used during the exams.

Date	N	Subject	Chapter	Notes
JANUARY				
Tu Jan 4	1	Intro, science, numbers & units	1, 3.4, 3.5	
Th Jan 6	2	Solar system tour		
Tu Jan 11	3	Basics of gravity & orbits	4	
Th Jan 13	4	Origin of Solar System I	8	
Tu Jan 18	5	Origin of Solar System 2	8	
Th Jan 20	6	Rocky Planets 1: impacts/Moon	9, 12.4	
Tu Jan 25	7	Rocky Planets 2: geology	9	
Th Jan 27	8	Rocky Planets 3: atmospheres	10	
FEBRUARY				
Tu Feb 01	9	Gas Giants 1: nature	11	
Th Feb 03	10	Gas Giants 2: formation	11	
Tu Feb 08	11	Ice Worlds 1: tour	11.2	
Th Feb 10	12	Ice Worlds 2: formation	11.2,	
Tu Feb 15	13	Ivy Carpenter		DJ in Kona
Th Feb 17	14	Asteroids & Meteorites	12.1	
Tu Feb 22	15	Comets	12.2	
Th Feb 24	16	Satellites, regular & irregular	11.2,11.3	
MARCH				
Tu Mar 01	17	Life in the Solar System	24	
Th Mar 03	18	Extrasolar Planets 1	13	
Tu Mar 08	19	Extrasolar Planets 2	13	
Th Mar 10	20	Summary Class		
Mar 16		Final Exam, 8:00am-11am		