

THE SOLAR SYSTEM

ASTRONOMY 21/ GEOLOGY 21 – SPRING 2012

Ticket # 21565A&D

INSTRUCTOR: Jim Repka
OFFICE HOURS: T-Th from 2:00-4:30 in SM133 (or by appointment)
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TEXTBOOKS: THE PLANETARY SYSTEM; Morrison/Owen

INTRODUCTION: This course is a detailed study of the origin and evolution of our solar system, from the beginning to the present, as deduced from sampling, remote sensing, exploration, imagery and theory. We will discuss and compare composition, tectonics, volcanism, surface processes, atmospheric and thermal evolution of Earth, the moon, Terrestrial and Jovian planets and their satellites. Additional topics will include meteorite and comet impacts, extra-solar planetary systems, and the possibility of discovering life elsewhere in the solar system or the universe.

SPECIAL SERVICES: Students with verified disabilities (physical and/or learning) may be entitled to appropriate academic accommodations. If you are such a student please contact me and, if you've not done so already, Special Services in room SSC 113.

TECHNOLOGY: Cell phones are a constant distraction, not just because they ring or buzz at inappropriate times, but because a few among us are able to leave them alone during lectures (FYI it is quite obvious when you are texting or playing games during lectures). If I catch you using your phone during class will be given the option of (1) leaving the phone on the instructor's desk for the duration of the class or (2) leaving the class.

If you prefer to take notes on your laptop or tablet by all means bring it to class. Again, to keep the focus on the class, people with laptops should be sitting in the front row, or as close to the front of the classroom as possible.

ENROLLMENT: It is ultimately the student's responsibility to drop herself or himself from a course. The instructor may drop students for non-attendance, but don't count on it. The last drop day is April 07; after this date I am REQUIRED to assign a grade for the course.

SIGNIFICANT DATES:

- January 16 (Monday): Labor Day Holiday
 - January 22: Last day to drop with a full refund
 - February 14: Last day to drop without a "W" grade, or to apply for CR/NC option
 - February 22 (Monday): President's Day Holiday
 - March 12-16: Spring Break
 - April 5: Last day to drop with a "W" grade
 - May 14 (Monday): Final Exam, 10:15-12:15
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GRADING SCALE:	Percentage score	Grade
	85- 100	= A
	70- 84.9	= B
	55- 69.9	= C
	40- 54.9	= D
	< 40	= F

GRADES: Methods of evaluation include:

1. **LECTURE EXAMS (50-67%)** These exams will consist of some combination of multiple-choice/true-false, completion, and short and long essay questions. The final exam will be comprehensive.
 2. **QUIZZES AND OTHER ASSIGNMENTS (33-50%)** These will be short tests (10-15 minutes) consisting of multiple-choice/true-false questions. There will be about 10-12 of these.
 3. **HOURS YOU WORK OUTSIDE OF SCHOOL/ EXCELLENT GRADES YOU'VE ALWAYS GOTTEN IN OTHER CLASSES (0%)**.
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Quiz/Test Point Recovery: After I return each quiz or test (with the exception of the final exam, obviously), you may get back up to 1/2 of the points you missed by re-submitting corrections for each answer you missed -- your answer must demonstrate to me that you *UNDERSTAND* the question and the answer and should include a reference, either to the page number in your text, a full reference to another book, or a web page.

The Rules: to be eligible to receive recovery points your assignment must

1. Be turned in, *with the quiz attached*, within 7 days after I return the graded assignment.
 2. Be *typed*, with the original question in **boldface**, and your answer in normal typeface.
 3. Have multiple pages *stapled* together, including the original graded assignment.
 4. Show that you *understand why* the correct answer is correct (include references).
 5. *Not* be a copy or near copy of any other student's answer or the textbook.
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HONOR CODE: Anyone taking a class at Saddleback College should be familiar with the [Students' Rights and Responsibilities](#)¹, section of the college catalog, in particular the [Academic Honor Code](#)². In this class, your name on any assignment, test, paper, or quiz, will be taken as your certification that you have neither given nor received unauthorized aid with the project. All assignments, tests, papers, or quizzes are expected to be entirely your own work unless I specifically state otherwise.

1: http://www.saddleback.edu/cc/documents/Genifpages7-40_003.pdf

2: <http://www.saddleback.edu/mse/documents/integrity.pdf>

STUDY SKILLS: This class has no prerequisites, but it is a college-level science class. This means that I can assume that you are literate and that you have a basic grasp of arithmetic skills. This said, even the most intelligent students sometimes have difficulties because they have not developed good study skills.

The counseling department offers a half-term (8 week, 1.5 units) study skills course that many students have found quite helpful. It is called APSY 161A and it meets from 12:00-1:20 PM on T-Th during the first eight week session (January 9 – March 18).

FIELD TRIPS: There will be several off-campus field trips/class meetings during the semester. These are generally scheduled for the weekend, either Friday Saturday or Sunday. I will inform you of dates/locations as these details come into focus.

Within the Earth Science department we are offering two 1-unit Field Studies courses this term (you can find these courses in the Schedule of Classes under “Geology Field Studies”: Geology 172 – Mojave Desert (March 23-25); and Geology 173 – Death Valley National Park (April 13-15). These are weekend camping trips with short day hikes to various points of interest. The trips are not restricted to geology students (though they are restricted to Saddleback students)...

TENTATIVE OUTLINE FOR ASTRONOMY 21 (TOPICS COVERED):

- History of Astronomy [chapter 1]
- Celestial Sphere; Sky Motions [1]
- Our Star the Sun [2]
- Meteorites: Solar System Debris [3-4]
- Asteroids: Building Blocks and Wrecking Balls [5]
- Comets: Ghosts of the Past [6]
- Earth: How to build a habitable planet [9]
- Name That Moon [7]
- Mercury and Messenger [8]
- Venus: Earth’s Evil Twin [10]
- Mars: Earth’s Deformed Twin [11]
- Atmospheres and hydrospheres [12]
- The Jovian Mega-Planets: Jupiter and Saturn [13]
- The Cosmic Icebox: Uranus and Neptune (and why not Pluto?) [14]
- 95 Worlds and Counting: the Big Satellites [15]
- Small Satellites and Ring Systems [16]
- Evolution of Planetary Systems; Extra-Solar Planetary Systems [17-18]
- Life in the Universe (are we alone or do we just live in the sticks)? [18]

FAQ (frequently asked questions):

I (wasn't here last/won't be here next) week. Did/Will I miss anything important? Yes.

I missed X assignments. Is there some extra credit I can do? No.

I'M NO GOOD AT MATH. HOW MUCH DO I NEED TO KNOW FOR THIS CLASS? There are no prerequisites for this course. This course is not intended to provide a mathematical background for more advanced study in astronomy, therefore the solving of mathematical problems is not the primary emphasis. Some mathematical terms and equations are used, however, and a familiarity with high school arithmetic is assumed.

WHAT ARE WE GOING TO BE TESTED ON? Do not end your sentences with prepositions. The material on the tests will be drawn from both the readings and the lectures, therefore regular class attendance is expected. You need not ask me what chapters a test covers; it covers all material discussed in class, whether or not it is in the textbook. NOTE: *THERE WILL BE MATERIAL PRESENTED IN CLASS THAT IS NOT COVERED IN THE TEXTBOOK.*

I WAS SICK/ OVERSLEPT/ HAD PRACTICE/ WAS IN JAIL, CAN I TAKE THE EXAM NEXT WEEK? No makeup tests will be given. If you miss a test, you earn a zero on that test. As I drop the lowest quiz score, any quiz you miss will be your lowest score. Because of point-recovery you have the opportunity to get half-credit for a missed quiz.

BUT I HAVE A NOTE FROM MY DOCTOR/PARENT/COACH/PAROLE OFFICER! Your note makes your absence excused, meaning that I will not use the absence as a reason to drop you from the class. Whether the absence is excused or not however, you are responsible for all of the material you miss. In extreme cases such as sickness (documented), death (yours or an immediate family member, documented), or not-at-fault accidents (documented), arrangements may be made to take an exam (not a quiz) late. Note that the rescheduled test will be different from the exam the rest of the class takes.

BUT MY CAR WOULDN'T START. AND I WAS HAVING MY TEETH CLEANED. AND I'VE GOT A HISTORY PAPER DUE... Dental or counseling appointments, family vacations (this includes "Ski week"), and tests or papers due in other classes are not good enough reasons to reschedule, nor does calling my office the day of the test constitute making prior arrangements. If you need a ride, www.octa.net is the website for the local bus schedule.

HOW MUCH TIME WILL I HAVE TO SPEND ON THIS CLASS? The answer depends on several things. If you are a science major or if you have misspent your youth looking up at the stars and collecting rocks, you may find that you don't need to spend much time at all. If, on the other hand, you have virtually no exposure to science you will need to devote a good deal of time. That's assuming that you want an A. If all you really want to do is just pass (C), your time requirements will be considerably less.

A good rule of thumb is that you should spend at least 2-½ -3-½ hours of study time for each 1 hour of class time. A student taking 12 units should spend around 30-40 hours a week studying (that's why they call it full time).
