

Syllabus

PTYS/ASTR 206 -- Section 2 -- Spring 2007

Golden Age of Planetary Exploration

Lectures: T,Th 11:00AM-12:15PM -- Kuiper Space Sciences Room 308

Instructor: Joe Giacalone (Assistant Professor, Dept. of Planetary Sciences)

Office: Kuiper Space Sciences -- Room 431

Office Hours: T,Th 2:00-3:15PM (for other times, please send me an email to confirm a time, I am generally fairly flexible)

Tel: 626-8365 Fax: 626-8250

Email: giacalon@lpl.arizona.edu

Administrative Assistant: Donita Vanture (Room 413; tel: 621-6939)

Graduate Teaching Assistants:

- Jade Bond (Graduate student, LPL)
Office: Kuiper Space Sciences – Room 320
Office Hours: M,W,F 10:00-11:00AM
Tel: 621-1479 email: jbond@lpl.arizona.edu
- John Weirich (Graduate student, LPL)
Office: Kuiper Space Sciences – Room 324
Office Hours: T,Th 9:30-11:00AM
Tel: 621-1507 email: jweirich@lpl.arizona.edu

Course Description:

This is a Tier 2 NATS general-education course that introduces non-science majors to planetary and solar-system science. In this course, we will explore our solar system in detail. The concept of comparative planetology is introduced to help us better understand why planetary bodies appear the way they do, and how they formed. Because the solar system is reasonably accessible to humans (through spacecraft missions and Earth-based imaging), there are sometimes spectacular new observations made that may effect our current understanding. We will discuss these as they happen. Refer to the course schedule for a more-detailed list of topics. Throughout this course, we will emphasize basic scientific understanding and curiosity. By the end of this semester, you should have an appreciation for the modern scientific method and feel comfortable making quantitative estimates to solve problems based on the laws of physics and nature.

Prerequisites and Background:

The course prerequisite is the successful completion of two Tier 1 NATS courses. You will encounter some basic mathematics in some assignments (homework and in-class activities). A familiarity with basic algebra, fractions, trigonometry, scientific notation, and unit conversion would be useful, but not required. There will very little (if any) mathematics on the exams. During the course, you will encounter topics relating to physics, astronomy, chemistry, geology, and biology. A very basic understanding in one, or more, of these areas would be helpful, but not essential. Please see us if you are having trouble with the math, or any of these subjects.

You may wish to use an inexpensive calculator for this course. The calculator should be able to perform routine scientific functions (trig functions, square roots, exponential notation, etc.).

Required Textbook: *Universe: The Solar System*, 2nd ed., Freedman and Kaufmann.

Lectures, homework, exam questions, and other class assignments, will be related to the material in this book, although we are likely to discuss some topics that are not covered in the textbook.

Website:

The course website can be found at:

http://www.lpl.arizona.edu/undergrad/spring2007/Giacalone_206

The website will post class lectures (PowerPoint and pdf format), solutions to in-class activities, homework, and exams, and details of the term paper. The material on this website is intended to be useful, but it is not a substitute for attending class!

Grading:

The following grading scale will be used for this class.

- A: 89% and higher
- B: 78% - 88%
- C: 67% - 77%
- D: 56% - 66%
- E: 55% and lower

Your final grade will be based on a cumulative performance on exams, in-class activities, and homework. The percentage breakdown of each is listed below:

- 20% Best of two mid-term exams
- 10% Worst of two mid-term exams
- 20% Final exam
- 25% Homework
- 10% Average of in-class activities
- 5% Average of quizzes
- 10% Term Paper

The final grade will be determined on the work that you do for the class. The distribution of grades for the entire class will not necessarily be based on any particular statistical curve. However, if special circumstances warrant it, the instructor may choose to modify the distribution. For those cases in which the final cumulative score is just below one of the borderlines, a higher grade may be given. This will be based on several factors including an exceptionally positive performance gradient during the course, in-class participation, and participation at (optional) out-of-class study sessions. **In order to be considered for a grade higher than that corresponding to your class score, you MUST have handed in all homework assignments!**

General Policies:

Academic integrity

You should read the University of Arizona's Code of Academic Integrity

<http://www.catalog.arizona.edu/policies/984/acacode.htm>

All students are expected to abide by the Code which will be strictly enforced.

You are encouraged to work together on homework assignments and in-class activities. **However, the work that you hand in MUST be your own. It is not acceptable to turn in work that is identical to that of another student.** Work together to understand the basic concepts, and then write it down using your own words – you will learn the material much better this way!

Attendance

Attending class is one of the most important tips to success. Nearly everyone who successfully graduates from college will attest to this. During this course, there will be numerous in-class activities. The purpose of these is to enforce ideas that are discussed in the textbook and lectures. The in-class lectures may not necessarily follow the textbook closely. Exam questions and other assignments will be based, in part, on the lecture material. You are responsible for remaining aware of class activities, assignment deadlines, and knowing when the exams are. Students who are not participating may be dropped from the course using the Administrative Drop procedure.

In the classroom

The enrollment for this class is usually very large. Use common sense and courtesy in the classroom. Please turn cell phones and other communication devices off. No food or drink is permitted in the classroom (except for bottled water). Please, arrive early enough so that we can start on time. Showing up late (and leaving early) leads to a disruption and is not fair to those students who wish to participate in the class. Of course, there are often unavoidable reasons for arriving late. If you arrive late, or must leave early, please do so as quietly as possible and use the door located at the north side of the auditorium. Other forms of class disruption are not acceptable. The instructor may choose to drop a student for persisting in disrupting the class using the Administrative Drop procedure.

Please feel free to ask questions in class; in fact, it is strongly encouraged!

Assignments, In-Class Activities, Quizzes, and Exams:

There will be ~6 homework assignments during the course. The assignments will be announced in class and will be available for download from the course website. The assignment **must be turned in on the due date at the beginning of class**. Solutions will be made available on the website. To ensure fairness to all students, late homework will not be accepted. There will be at least one week to finish each homework assignment. Do not wait until the last minute to complete the homework assignments!

We will have numerous in-class activities that will vary in format. You will work together with a group of a few students to discuss these activities, but will be expected to hand in your own work. The activities will be due at the end of the class in which they are assigned. The purpose of these activities is to go over material related to the lectures and/or material from the textbook. **There will be no makeup activities.** To minimize the impact of a missed activity, the two lowest in-class activity scores will be dropped. In addition to the in-class activities, there will also be three announced in-class quizzes (about a week before each exam).

All three exams in the class will be closed book, closed notes, unless otherwise specified. They will be based on both the lectures and textbook material. The two mid-term exams will be held during regular class hours and will be due by the end of the period. To ensure that you have sufficient time to complete the exam, arrive on time. The dates of the exams will be announced in class. **The final exam will be given 11:00AM-1:00PM, Thursday, May 10, 2007.** This date and time is set by the University and cannot be changed.

Absences:

Makeup mid-term exams will be available for students who are absent either for University-approved activities (Deans approval required), or due to illness (documented with a doctor's note). **There will be no make-up in-class activities or quizzes;** however, if documented by a doctor's note or University-approved excuse, the instructor will make a note in the course grades of a missed activity and/or quiz (in which case, it will not affect your grade).

Errors in Grading:

Occasionally errors in grading may occur. If you spot such an error, you must call it to the attention of the TA or instructor within one week. An effort will be made to hand back material in a timely manner. Make sure to review all of your handed-back material as soon as possible. Note that you can only discover an error in grading if you pick up your graded material and review it!

Extra Credit Assignments:

Occasionally, there may be announcements of opportunity for extra-credit assignments. The format of these will be determined later and will be announced in class.