

Course Syllabus ASTR D004.01 CRN 00190

The Solar System Astronomy (5 units)

De Anza College

Spring 2019

- Instructor:** Dr. Atousa Chaharsough-Shirazi  
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- Office Hours:** Th-F 8:00 am-8:30 am or by appointment  
Location PLT108-knock on the door!
- Start/End Date:** 8/4/19-28/6/19
- Days/Times:** M-F 8:30 am-9:20 am
- Location of class:** Planetarium (PLT)  
(No food or drinks of any kind are permitted in the Planetarium.)
- Final exam:** Wednesday 6/26, 7 am-9 am at PLT
- Materials:** -*The Solar System* 9<sup>th</sup> edition by M. Seeds and D. Backman (new or used, you don't need the access code)  
-Course notes posted on Canvas

**Course description:** Analyze the physical principles, logic, and development of solar system astronomy from ancient times through the present. Examine earth and sky relationships, exploration of the solar system by spacecraft and earth-based methods, similarities and differences between Earth and other planets, theories of the origin of our planetary system, and properties of other stars' planetary systems. Includes multimedia planetarium demonstrations.

**Student Learning Outcomes:**

- Appraise the benefits to society of planetary research and exploration
- Compare and contrast the development of planetary systems and of the major planet types, including those factors that have led to Earth's unique characteristics.
- Evaluate astronomical news items or theories concerning solar system astronomy based upon the scientific method.

**Course Objectives:**

- A. Discuss planetary astronomy as a discipline and delineate its historical and global development.
- B. Describe motions of the sky and identify which of those were useful in establishing the heliocentric nature of the solar system.
- C. Use Newton's law of motion and gravitation in examining methods for determining planets' masses and distinguishing among possible trajectories for bodies in the solar system.
- D. Identify dynamical and structural regularities in the solar system, which are not demanded by physical law and assess which of those can reasonably be expected to exist in other planetary systems.
- E. Describe the history, goals, and methods of modern planetary exploration

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- F. Compare and contrast Earth's characteristics to those of other planets and identify ways in which investigation of other worlds helps us better understand our own.
- G. Assess current models of the origin, development, and commonness of planetary systems in light of characteristics of newly discovered extrasolar systems and evaluate those models' implications concerning the likelihood of extraterrestrial intelligence.

<b>Grade Breakdown:</b>	Midterm Exams	70 %
	Final Exam	30 %

<b>My grading scale:</b>	90-100%	A
	80-89%	B
	70-79%	C
	60-69%	D
	below 60%	F

### Exams:

There will be three in-class midterms and one final exam covering material from the lectures and the assignments. I will drop the lowest midterm. There are no makeups! If something causes you to miss a midterm test (excused absence) that will be the one that you drop. But if you miss two midterms you need to withdraw from the course. You have to take all of your midterms and the final exam with your section of the class. Taking the mid terms and final exam is mandatory. If you miss the final exam and do not have a formal excuse, then a grade of zero will be recorded.

The midterms are *not* cumulative but the final exam is cumulative. The final exam is performed on two days *Thursday June 27 and Friday June 28*. All the exams are closed-book and you don't need a calculator and cell phone usage of any kind is not allowed during tests. If you arrive late for an exam, you won't be given extra time to finish it. On exams, once the first person has turned it in and left the room, no further latecomers will be given tests.

*\*Important:* You need to bring a picture id with you on exam days.

### Exams schedule:

Exam 1	TBA
Exam 2	TBA
Exam 3	TBA
Final exams	Wednesday 6/25, 7am -9 am

### Class attendance:

Note that it is important for you to come to class and participate in discussions to learn the material. Moreover, not everything covered on the exams will be adequately covered in the readings-much of the materials will be available *only* in class like the videos shown in the class.

Regular class attendance is required. Class attendance will be recorded each class period. I will be free to drop you from the course if you miss three classes. If you must miss a class due to illness or personal emergency you need to contact me.

### Communication:

Announcements are made in-class and through email. Please check your emails regularly.

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### **Academic integrity:**

If you are having trouble with any part of an assignment, come to my office hours (or e-mail me, or talk to me before or after class). My office hours are there for **your benefit**. Do not cheat yourself! When you copy or cheat, you are not learning the material. Consequences for cheating can vary from getting a “0” on the assignment to being dropped from the class and reported.

### **Student code of conduct:**

Students are expected to treat others with courtesy and respect. Refer to student Code of Conduct in the 2018-2019 Catalog.

**Student Learning Outcome(s):**

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