Astronomy 4
Solar System Astronomy
Section 51Z, CRN 192

Spring Quarter 2023
Asynchronous
Class Location: Online only

Instructor: Rachel Mastrapa, PhD
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Textbook:
> *Astronomy*, Fraknoi, Morrison, and Wolff Openstax (Free)

Office hours: Friday, 2 PM, or by appointment. Access office hours through Canvas.

Course Description: In this class, students will analyze the physical principles, logic, and development of solar system astronomy from ancient times through the present. This class includes multimedia planetarium demonstrations. Class content is designed for non-science majors. Credit for the 5 quarter units of Astronomy 4 is fully transferable to both the University of California and California State University systems.

Drop without W and with Refund by April 23
Drop with W by June 2

Grade Breakdown

Discussions	15%
Homework	40%
Exams	30%
Final Exam	15%
Total	100%

Exam Schedule

Exam 1 Due April 23
Exam 2 Due May 28

Final Exam Due Tuesday, June 27

Course Grade Ranges

A	90–100%
B	80–89%
C	70–79%
D	60–69%
F	<60%

I will inform you of any changes to the policies or procedures listed below.

Behavior
All students and instructors are expected to treat each other with respect. Everyone will be held to the expectations listed in the Student Code of Conduct and the Academic Integrity Policy.

Class Format
This class is divided into **22** modules in Canvas for each "day" of class. Each module contains reading assignments, videos, and homework. The due date for all assignments is listed in the title of each module. You are responsible for completing all of your assignments on time. Late assignments will lose 2% of their grade per day late. Exams and the final are separate work and discussed below. You will need to use Canvas and Zoom to complete the class. Please visit the remote learning page for any technical support or advice.

Discussions: 15% of grade
In each module there will be at least one discussion topic that will be graded. You will be asked a question regarding what you have learned. These questions are designed to make you think about the big picture, and do not necessarily have a single correct answer. You will be graded on how well you argue your point by supporting it with examples from the lecture or textbook. This assignment should only be a few sentences long and not take you longer than 15 minutes to complete. The rubric for discussions is shown below:

Discussions Rubric			✎ Q 🗑
Criteria	**Ratings**		**Pts**
No response	0.0 pts Full Marks	0.0 pts No Marks	0.0 pts
Medium Effort Two to three sentences, loosely related to the question.	5.0 pts Full Marks	0.0 pts No Marks	5.0 pts
Full Effort Three to five sentences containing a reasonable response to the question with a useful example.	5.0 pts Full Marks	0.0 pts No Marks	5.0 pts
		Total Points: 10.0	

Homework: 40% of grade

All homework assignments are in the format of Canvas multiple choice quizzes. Although they are called quizzes, they are open notes/textbook and you have 2 chances to complete them, retaining your highest score. There is at least one quiz on the reading assignment and one quiz for each video lecture.

Exams: 30% of grade
There will be two open notes exams due at 5 pm on **April 23 and May 28**. The exam in **April** will cover all material covered before that date. The exam in **May** will focus on material covered since the previous exam. Exams will consist of multiple-choice questions in Canvas. You will have only <u>ONE</u> attempt to take the exam. Late exams will have a deduction of 10% per day. The exam will close 5 days after the due date and answers will be posted. <u>There are no make-ups or extensions for any reason.</u>

Final Exam: 15% of grade
The final will be due on Tuesday, **June 27** at 5pm. The final will include all material covered over the entire course. The format is the same as the exams. Late finals will be deducted 20% per day. The final will close on **June 30** at 5pm. <u>There are no make-ups or extensions of the final for any reason.</u>

Attendance
For an asynchronous class, I count attendance by completion of assignments. Any students that do not complete any of the assignments in the first two weeks of class may be dropped. I will contact students before dropping them.

Tutoring

Need help with this course? Want to more personal connections this quarter? Student Success Center tutors and workshops are ready for you! Watch the <u>SSC Welcome Video</u> to learn more.

Tutoring: Go to <u>http://deanza.edu/studentsuccess</u> and click to join a Zoom tutoring room during open hours.

Workshops: Attend a <u>Skills Workshop</u>, a <u>content-specific math/science workshop</u>, an <u>Accounting chapter review workshop</u>, or a <u>Listening and Speaking workshop</u>.

Resources: Join the <u>SSC Resources Canvas site</u> to see content and learning skills links.

After-hours or weekend tutoring: See the <u>Online Tutoring</u> page for information about NetTutor (via Canvas) or Smarthinking (via MyPortal).

Objectives

- To provide the student with as comprehensive an account of the modern field of planetary astronomy as possible.
- To create an increased sense of place and scale in the universe and a sense of how our species reached its current understanding of our world's place in the larger scheme of things.
- To acquaint the student with the appearances and other physical characteristics of the major planets, especially as they have been revealed by space probes over the last generation.
- To generate a familiarity with the various modes of research, which astronomers use to investigate other planets, including (but not limited to) various types of automated spacecraft.

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.