

ASTRONOMY 4

Solar System Astronomy

De Anza College Fall 2021

Course Information Summary

Term: 2022 Fall De Anza | **CRN:** 00209 | **Title:** SOLAR SYSTEM ASTRONOMY | **Course:** ASTR D004.02Z |

Room: Asynchronous online + Synchronous Zoom TTh 2:30-3:20 pm

Canvas course name: F21 ASTR D004 02Z Solar System Astronomy

Instructor: Srikar Srinath

Email: srinathsrikar@fhda.edu

Textbook:

Your textbook for this class, *Astronomy* by FHDA's own Prof. Fraknoi is available for **free** online courtesy the amazing folks at OpenStax, in a variety of formats (web view, PDF, ePUB)!

You have several options to obtain this book:

- - [View online](https://openstax.org/details/astronomy) at <https://openstax.org/details/astronomy>
 - [Download a PDF](#) [**recommended** - you can annotate in a PDF reader]
 - [Order a print copy](#) (may be out of date, ISBN 1938168283)
 - [Download on iBooks](#)
 - [Download on Kindle](#)

You can use whichever format(s) you want. PDF on your device is recommended, followed by Web View

Lectures: Online on Zoom, archived on Zoom & YouTube, and linked within Canvas

Office Hours and questions:

- On Canvas Class [Question & Answer discussion board](#)
- In Zoom/Canvas class TTh 3:20-3:45 pm Pacific Time
- Via Zoom by appointment (please send me 3 available or preferred times when asking for an appointment)
- Canvas [Inbox](#)

For the inbox and discussion board options, if you send in a question on Friday evening I may not get to it until 48 hours later, otherwise expect a response within 12-24 hours.

Introduction to Astronomy 4

Astronomy 4 is an introductory-level course about the contents of our Solar System and what we have learned about them in the past 400+ years of telescopic observation and 60 years of space exploration.

The course has no prerequisites. However, De Anza College does advise the following: English as a Second Language 5. The class is taught with the non-Science major in mind, but we will be doing Science because anybody and everybody can (and does)!

Class Format

This class is mostly a *synchronous* online class which means lectures are held live with recordings and supplementary material made available shortly afterwards. There will be 2-3 hours of lecture every week, live on Zoom, recorded and archived on Zoom, past lectures on YouTube and linked on the Canvas website. You can expect to be tested on all of the material presented in lecture as well as in the textbook reading assignments.

Synchronous Zoom sessions will be held on Tuesdays and Thursdays from 2:30 pm to 3:20 pm Pacific Time. There will be **no synchronous session** on Th Nov 11 (Veterans' Day) and Th Nov 25 (Thanksgiving).

Registration

If you wish to add the class, you must obtain an add code from me. It is your responsibility to use the add code before the deadline. The preferred method is to add yourself to the class waitlist so I can send you an add code from Active Roster. If you are not allowed to add yourself to the waitlist, please email me directly at the address above. Pretty much anyone who asks for an add code will get one (unless you tell me you want to join my Astrology class - actually, you'll get an add code even then).

Attendance

Regular engagement with online content is required: participation in online discussions and in synchronous Zoom sessions can boost your grade by as much as 5% (half a grade level). Not participating will not hurt your grade.

Exams and Grades

Your class grade will be based on your performance on lecture assignments, homework assignments, a midterm and a final report.

1. Every lecture will have a reading assignment (usually a recent news article about the subject matter for that week) and some associated short answer questions. Answering these questions will make up a total of 25% of your grade. Your three lowest scores will be dropped. These assignments have generous due dates (typically 7-10 days) and no late penalties, but please try not to fall behind on them because work will pile up towards the end of the quarter.
2. Every other week (i.e. skipping a week), except during midterm and finals week, a homework assignment on Canvas will be posted. This will make up 25% of your grade. Two homework assignments will actually be preparation for your final report so I can give you feedback on its format and on your understanding of concepts. You are *strongly encouraged* to turn those in because it will make your final assignment much easier. Homework deadlines are not extended except for proven medical reasons.
3. A midterm will be made available Fri, Oct 28. It will be multiple choice, timed and open book/notes/Internet. This will **not** be dropped and will be 25% of your grade.

- The week of Finals, a report (single-spaced, minimum 2000 words) will be due. This will **not** be dropped and will be 25% of your grade. The report topic will be revealed in Week 2 of the quarter.

Cheating

JUST DON'T DO IT!

Cheating on any assignment is grounds for a failing grade in the class and a permanent note in the student's file with additional punishment at the discretion of the administration. Some assignments use Turnitin, a plagiarism checking tool. The output of that tool can be, and has been, used to determine whether cheating has occurred and penalized accordingly.

That said, you are encouraged to consult external sources (I link to a number of them every week) and use them in your writing provided you mostly use your own words in describing that work and supply either a web link or a pointer to a specific page in a book etc. Please use reputed sources with solid science reporting.

Course Outline & Reading

Lecture material is tentative based on progress made in class. Tests will only feature topics covered in class or in the book until the testing date.

Date	Textbook chapter	Topic
Week 1		
Sep 26	Ch 1	Cosmic Context
	Ch 2	Diurnal, Annual, Planetary apparent motions
Week 2		
Oct 3	Ch 3	Orbits - Kepler & Newton, The Seasons
	Ch 4	Moon phases, Tides, Eclipses
Week 3		
Oct 10	Ch 5	Time & Light
	Ch 5	Spectra
Week 4		
Oct 17	Ch 6	Telescopes on Earth and in Space. How they work.
	Ch 7	Overview of the Solar System
Week 5		
Oct 24	Midterm week 1	Practice midterm available
Oct 26		Midterm available

Oct 30		Midterm Due
Week 6		
Oct 31	Ch 8	Earth as a planet
		Earth-shaping processes and Climate Change
Week 7		
Nov 7	Ch 9	Cratered Worlds: The Moon and Mercury
	Ch 10.-10.3	Venus
Week 8		
Nov 14	Ch 10.4-10.6	Mars
	Ch 11	The Giant Planets
Week 9		Thanksgiving Break
Nov 21	Ch 12	Moons of the Giant Planets
Week 10		
Nov 28	Ch 13, 14	Dwarf planets, asteroids, comets
	Ch 15	The Sun
Week 11		
Dec 5	Ch 16	The Sun, Star & Solar System formation
	Ch 21, 30	Planets around other stars, Life in the Galaxy
Week 12		
Dec 16	Finals	Final assignment due by 11:59 pm

Student Learning Outcome(s):

*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.

Office Hours:

Zoom

T,TH

03:20 PM

03:50 PM