ASTRONOMY 4 Section 04

Solar System Astronomy

De Anza College Fall 2019

Course Information Summary

Term: 2019 Fall De Anza | **CRN:** 00209 |
Title: SOLAR SYSTEM ASTRONOMY | **Course:** ASTR D004.04 |
Days: MW | **Time:** 04:00 PM - 06:15 PM | **Room:** PLT

Instructor: Srikar Srinath

Email: SrinathSrikar@fhda.edu

Free Online Textbook

Our textbook can be found at:

https://openstax.org/details/books/astronomy

Best way to use it: Download the PDF!

Lectures: Mondays & Wednesdays 4:00 – 6:15 pm in the De Anza Planetarium

Office Hours: After class in the Planetarium MW 6:15 - 6:45 pm

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 59 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.

Class Format

Our in-class time will typically be broken up into 3 x 40-minute sessions with a 5-minute break between sessions. It will feature both lectures and audio/visual programs, including videos and demonstrations with the Fujitsu star projector and the Digital Sky system. You can expect to be tested on all of the material presented in class as well as in the textbook reading assignments below.

Registration

If you wish to add the class, you must attend the first day, and you must obtain an add code from me. It is your responsibility to use the add code before the deadline.

Attendance

Regular attendance is required. Attendance will be taken at every class meeting. Students with four or more unexcused absences from the class will be dropped. However, official withdrawal from the class is still the **student's responsibility.**

Exams and Grades

Your class grade will be based on your performance on midterm exams and the final exam. There will be **no extra credit**. **There will be no makeup exams**.

There are three midterm exams. They represent 50% of your grade. Your

lowest midterm grade will be dropped. If you miss an exam, that will count as your low score.

The final exam is **comprehensive** and will account for 50% of your grade.

The exams will be held **in class** on the following dates at 4:00 PM:

First Midterm:	**Monday, Oct 7 2019**
Second Midterm:	**Monday, Oct 28 2019**
Third Midterm:	**Wednesday, Nov 20 2019**
Final	**Wednesday, Dec 11 2019**

The exams will be multiple choice and graded on a curve. A ParSCORE Scantron sheet will be provided. You will need to bring a #2 pencil for each exam.

During tests:

1. After you start working on a test, you must hand it in before leaving the room.
2. If you arrive late for a test, you will not be given extra time to finish it.
3. Once the first person has turned in a test and left the room, no further latecomers will be given tests.

Cheating

Cheating on any exam 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. **JUST DON'T DO IT!**

Course Outline & Reading

Test dates are fixed, but 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.

Week 1		
Sep 23	Ch 1	Cosmic Context
Sep 25	Ch 2.1	Diurnal, Annual, Planetary apparent motions
Week 2		
Sep 30	Ch 2.2-3.1	The origins of modern astronomy: From the ancients to Kepler
Oct 02	Ch 3.2-3.6	Newton's discoveries: How do motion, gravity, and orbits REALLY work?
Week 3		
Oct 07	**Midterm 1**	
Oct 09	Ch 4.1-4.6	Review Test 1, What REALLY causes the seasons, and Moon Phases
Week 4		

Oct 14	Ch 4.7	Eclipses
Oct 16	Ch 5	Light, the electromagnetic spectrum, and spectroscopy
Week 5		
Oct 21	Ch 6.1	How telescopes work; Observatories on Earth and in space
Oct 23	Ch 7 & 8	Overview of our solar system; Dating planetary samples and surfaces, and Earth: Our planet
Week 6		
Oct 28	**Midterm 2**	
Oct 30	Ch 9.1-9.4	Review Test 2; Earth's Moon
Week 7		
Nov 04	Ch 10.1-10.3	Mercury and Venus
Nov 06	Ch 10.4-10.6	Mars
Week 8		
Nov 11	**Holiday - Veterans' Day, No class**	

Nov 13	Ch 11-12.2	The Giant Planets and Jupiter's Galilean Moons

Week 9

Nov 18	Ch 12.3-12.5	Titan, Triton, Pluto, and planetary rings
Nov 20	**Midterm 3**	

Week 10

Nov 25	Ch 13.1-13.2	Review Test 3; Asteroids
Nov 27	Ch 13.3-14.2	Comets, Meteors, and Meteorites

Week 11

Dec 02	Ch 14.3, 15, 16	Origin of the solar system; The Sun
Dec 04	Ch 21.3-21.6	Planets around other stars

Finals week

Dec 09	**No class**
Dec 11	**Final 4-6 pm**

Planetarium rules

We are guests in this planetarium and it is one of the most visited public spaces on De Anza campus. In order to maintain the Planetarium's

valuable services to the community, these rules will be strictly enforced:

* **Absolutely no food, drink, or chewing gum is allowed**.
* Do not litter.
* Do not leave bicycles or skateboards inside the building.
* Please keep your feet off the seats.

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 panet 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.