

ASTR 4 Section 02Y

Astronomy 4

Solar System Astronomy

On-Campus Meetings: Tuesdays 1:30 – 3:45pm in the De Anza Planetarium

Instructor:

Marek Cichanski

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Office Hours: Tue 4:00-5:00pm on campus and Thu 2:00–5:00pm on campus. During my office hours, you can send me an email message or a Canvas Inbox message and we can do Zoom, if you can't make it to campus.

Everything you need to know about the class – i.e. the same information as in this syllabus – can be found on the class's Canvas website. Canvas is the online "learning management system" used by De Anza College, and can be accessed through your MyPortal login.

Make sure to check the class's Canvas site whenever you have questions!

Textbook:

The textbook for this class is available for free online at:

<https://openstax.org/details/books/astronomy-2e>

Student Learning Outcomes

- Apply fundamental theoretical principles and evidence-based reasoning to explain how observations and data inform our current understanding of the universe and everyday phenomena.
- Distinguish and compare the size, scale, and structure of astronomical objects in the solar system.
- Describe the diverse perspectives and contributions that have shaped humanity's understanding of the universe through the field of astronomy.

Notes for the grading scheme listed below:

1. A percentage like 89.7% rounds to 90, so it's an A.
2. If something causes you to miss a test or quiz, that will be the one you drop.
3. I'm afraid my schedule won't allow me to give you a final at a different time in order to fit your vacation. You'll need to plan around the final – you may want to tell family members about this before they buy non-refundable plane tickets.

GRADING

Step 1:

You take three (3) midterm exams and the final exam.

Test 1 200pts

Test 2 200 pts

Test 3 200 pts

FINAL EXAM 300 pts

Step 2:

I drop the lowest midterm exam.

-200 pts = **400 pts of midterms**

There's no way I'm going to drop **this** one...

Step 3:

I calculate the final grade.

Your final percentage =

The points you earned, after dropping lowest scores as described at left

DIVIDED BY...

700 possible points

I then round your final percentage to the nearest whole percent, and use the following grading scale:

90-100 A

80-89 B

70-89 C

60-69 D

<60

Astronomy 4 Class Rules and Guidelines

During the first few weeks of class, I will collect state-mandated class attendance data using a sign-in sheet and/or seating chart.

ADDING THE CLASS:

If you add the class, make sure that your add code has worked, and that you have been properly added to the class. If not, it is your responsibility to check with the Admissions/Records office to find out how this can be corrected. After the end of Week 2, the College CAN NOT process a late add, and you could find yourself not enrolled and not receiving a grade for the course, if you're not registered

DROPPING THE CLASS:

I would like to see everyone complete the course, earn a good grade, and become excited about science. However, the realities of life sometimes get in the way.

You should assess your situation realistically throughout the quarter.

If you decide to drop the class, you must do so by the final date to drop with a "w", or you risk receiving an "F" if you haven't earned enough points to pass the class.

Also – and this is very important – ASKING FOR AN INCOMPLETE GRADE WILL NOT WORK AS A WAY AROUND THE FINAL DROP DATE! I can only assign an Incomplete in a few, very specific situations. If it's after Week 8, and you realize you should have dropped, and someone in Counseling or Admissions and Records tells you to ask me for an Incomplete, it is VERY UNLIKELY that the situation will actually warrant one! "I" grades cannot be given for missing a large fraction of the work in the course.

CLASS ENVIRONMENT:

Remember that we have all chosen to be in this class. We should thus have an environment that fits this choice.

Talking to your neighbor(s) while I'm lecturing, reading non-course material in class, doing outside homework, and using wireless devices of any kind* are not allowed in class, and may result in dismissal for the remainder of the class period.

*this means you won't be able to use the calculator on your cell phone during tests and quizzes. You'll need to get a separate calculator if you want to use one on tests and quizzes.

TESTS:

- After you start working on a test, you must hand it in before leaving the room.
- If you arrive late for a test or quiz, you won't be given extra time to finish it.
- On tests and quizzes, once the first person has turned it in and left the room, no further latecomers will be given tests.

ACADEMIC INTEGRITY AND CHEATING: Cheating on any exam or project is grounds for a failing grade in the class and a permanent note to a student's file. "Cheating" is defined (in this course) to be an effort by a student to obtain a grade by any means other than demonstration of that student's individual achievement in mastering the class material and/or fulfilling terms of a project.

Further grounds for expulsion from the class include any activity which interferes with others' ability to benefit from the class (such as chronic distracting behavior) of which degrades the classroom's function or environment.

NOTICE: No exceptions will be made to policies stated on this course syllabus and/or on the class website, unless made by the instructor in consultation with the Dean of the Division of Physical Sciences, Mathematics, and Engineering, and/or in consultation with the College's Disability Support Programs and Services counselors. If the schedule(s) of the relevant person or persons listed above does not permit such consultation during the quarter that this class takes place, then the stated policy (or policies) will stand.

ASTRONOMY 4 Schedule, Fall 2026 Tue 1:30pm Hybrid Class (= Section 02Y)

		TUESDAY Planetarium Session	Online Lectures for This Week	Online Lectures and Reading for This Week
Wk 1	Sep	22 Class Enrollment, website, and procedures Our Cosmic Context	Measuring Distances Light Travel Time A Tour of the Universe The Cosmic Calendar	Openstax Astronomy 2e Chapter 1
Wk 2	Sep/ Oct	29 Apparent Motions in the Sky	Apparent Sky Motions: Implications Apparent Annual Motion: The Reality The Spherical Earth The Geocentric Model Heliocentrism and Parallax Galileo's Discoveries Constellations and Magnitudes	Openstax Astronomy 2e Chapter 2
Wk 3	Oct	6 Orbits TEST 1	Tycho's Observations Simple Motion and Newton's 1 st Law Newton's 2 nd and 3 rd Laws Universal Gravitation and "Weightlessness" How Orbits Work	Openstax Astronomy 2e Chapter 3
Wk 4	Oct	13 Moon Phases Eclipses Seasons	Coordinate Systems on Earth and in the Sky Seasons Moon Phases Part 1 and 2 Tides	Openstax Astronomy 2e Chapter 4
Wk 5	Oct	20 The Multi-Wavelength Universe	Spectroscopy The Formation of Spectral Lines	Openstax Astronomy 2e Chapter 5
Wk 6	Oct	27 Telescope Show-and-Tell TEST 2	Telescopes and the Earth's Atmosphere Detectors, Multi-Wavelength Astronomy, and Space Telescopes Parts 1 and 2	Openstax Astronomy 2e Chapter 6
Wk 7	Nov	3 Intro to our Solar System Earth	Origin of the Solar System How Old are Planetary Surfaces and Rocks? The Earth: Atmosphere, Life, and Impact Events	Openstax Astronomy 2e Sections 7.1 thru 7.4 Sections 8.1 thru 8.5
Wk 8	Nov	10 Earth's Moon	Origin of the Earth's Moon Mercury	Openstax Astronomy 2e Chapter 9
Wk 9	Nov	17 Venus Mars TEST 3	Venus: Its Atmosphere and the Greenhouse Effect The Exploration of Mars Following the Water on Mars	Openstax Astronomy 2e Chapter 10
Wk 10	Nov	24 Giant Planets and their Moons	Atmospheres of the Giant Planets Titan and Triton Pluto	Openstax Astronomy 2e Chapter 11 Chapter 12
Wk 11	Dec	1 Asteroids Comets Meteors, Meteor Showers, Meteorites	The Dawn Mission to the Asteroid Belt Origin of the Solar System Revisited	Openstax Astronomy 2e Chapter 13 Chapter 14
Wk 12	Dec FINALS	8 FINAL EXAM 1:45 – 3:45 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:

4:00 PM - 5:00 PM

S-15a T

2:00 PM - 5:00 PM

S-15a TH