

# Astronomy 4

Section 1 (M through F, 8:30-9:20 am)

Image: NASA / JPL / SSI

## Welcome to Astronomy 4!

### Do you need to fulfill a General-Ed Science requirement?

De Anza's Astronomy 4 class fulfills the **physical science** requirement from the [CSUGE](#) and [IGETC](#) lists.

Most students who take Astronomy 4 are non-science majors working through their science requirements before transferring or getting a De Anza Associate degree. I'm excited about sharing the adventure of astronomy with you!

### For Current Students:

Make sure to familiarize yourself with the links in the navigation bar (at the top of the page). There you'll find all the information you'll need to `navigate' your way through the quarter. It's a good idea to check the [Calendar](#) every day, and don't forget to use the Calendar's `week' and `month' buttons to see what's coming up. You'll also want to look at the [What2Know](#) page frequently, to guide your studying for the tests and the final exam.

**Textbook:** [The Solar System, 8th edition](#), by Seeds and Backman. The bookstore probably has used copies, and it may be available as part of their [textbook rental program](#). The publisher also has it available as an [ebook rental](#) and as a [physical rental](#).

### Class Schedule:

Mon through Fri, 8:30-9:20 am, [De Anza Planetarium](#)

### Instructor:

Dr. Marek Cichanski

Office: S15a

Office Hours: M through F 9:30 - 10:20 am, plus other times by appointment.

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Dr. C's other internet content: [Twitter](#), [YouTube](#), [Vimeo](#), [Flickr](#), [Blogspot](#), [Delicious](#)

### 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.



# Astronomy 4 Lecture schedule, Spring 2015 8:30am Class

**Important:** Dates of TESTS are fixed, but the *lecture topics* (shown in *italics*) are tentative. For example, we may or may not cover “*Origin of the Solar System*” on May 4th, depending on how quickly we cover the preceding material.

*Each test covers the material since the last test.*

*Final Exam is comprehensive - it covers the whole quarter.*

		MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Wk. 1	Apr	6 <i>Class Enrollment</i>	7 <i>How the class works, looking at the sky</i>	8 <i>Diurnal and annual motions in the sky</i>	9 <i>Apparent magnitudes, the Ancient Two-Sphere Universe</i>	10 <i>Moon phases: What we see in the sky</i>	11
Wk. 2	Apr	13 <i>Moon phases: What's really going on</i>	14 <i>Eclipses</i>	15 <i>Seasons</i>	16 <i>Pre-Copernican models of the universe</i>	17 <i>The Copernican model</i>	18 Last day to add
Wk. 3	Apr	20 <i>Galileo's Battle For the Heavens</i>	21 <i>Galileo: Jupiter's moons and seeing a 'gibbous Venus'</i>	22 <i>Tycho's data and Kepler's laws</i>	23 <i>Newton's Laws: What causes a change in motion?</i>	24 <i>How orbits work</i>	25
Wk. 4	Apr/ May	27 <b>TEST 1</b>	28 <i>How telescopes work</i>	29 <i>Review Test 1</i>	30 <i>Observatories on Earth and in space</i>	1 <i>Light and spectra</i> <small>Last day to apply for Pass/No Pass grading</small>	2
Wk. 5	May	4 <i>Origin of the Solar System</i>	5 <i>Birth of the Earth</i>	6 <i>The Sun</i>	7 <i>Earth: How it works</i>	8 <i>Earth's Moon: What formed all those craters?</i>	9
Wk. 6	May	11 <i>Earth's Moon: Its origin, geology, and exploration</i>	12 <i>Mercury: The (slightly) shrinking planet</i>	13 <i>Venus: Twin sibling or not?</i>	14 <i>Comparative planetology: Tectonics of Venus and Earth</i>	15 <i>Mars: Early observations and discoveries</i>	16
Wk. 7	May	18 <b>TEST 2</b>	19 <i>Mars: Evidence for water and the search for life</i>	20 <i>Review Test 2</i>	21 <i>Five Years on Mars</i>	22 <i>Jupiter: The giant planet</i>	23
Wk. 8	May	25 <b>HOLIDAY</b>	26 <i>Jupiter's Moons</i>	27 <i>Saturn and its rings</i>	28 <i>Saturn's moons</i>	29 <i>Titan: A strangely Earth-like world</i> <small>Last day to drop with "W" grade</small>	30
Wk. 9	Jun	1 <i>Uranus</i>	2 <i>Neptune</i>	3 <i>Meteors and meteorites</i>	4 <i>Asteroids: A failed planet</i>	5 <i>The Dawn mission: Asteroids Vesta and Ceres</i>	6
Wk. 10	Jun	8 <b>TEST 3</b>	9 <i>Comets: Visitors from the outer solar system</i>	10 <i>Review Test 3</i>	11 <i>Rosetta: Mission to Comet 67P</i>	12 <i>Impact hazards and planetary defense</i>	13
Wk. 11	Jun	15 <i>Discovery of Pluto</i>	16 <i>The Kuiper belt and the Pluto controversy</i>	17 <i>Beyond our solar system: The realm of the stars</i>	18 <i>How to find planets around other stars</i>	19 <i>Extrasolar planets: What we know so far</i>	20
Wk. 12	Jun	22 <i>Review Session + any leftover lecture material</i>	23 <b>FINAL EXAM</b> 7:00 - 9:00	24	25	26	27

FOR READING ASSIGNMENTS, SEE THE ONLINE VERSION OF THIS SCHEDULE AT:

<http://nebula2.deanza.edu:16080/~marek/astro4day/calendar.html>

# GRADES

## step 1:

You take various tests and the final

Test 1

Test 2

**200 points each**

Test 3

FINAL EXAM

**300 points**

## step 2:

I drop the lowest midterm score

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

*There's no way I'm gonna 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**

**700 possible points**

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

Notes:

1) A %-age like 88.7 rounds to an 89, so it's an A.

89-100	A
79-88	B
68-78	C
57-67	D
<57	F

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If something causes you to miss a test, that will be the one that you drop. This means that there are **NO MAKEUPS**.

You have to take all of your midterms and your final exam with **YOUR SECTION** of the class.

I'm afraid that 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.

# Astronomy 4 Rules and Procedures

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

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## 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 6, the College cannot 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 will receive an "F".

Let me re-emphasize that: If you decide to drop the course, it is *your* responsibility to go to the registrar and drop yourself. The deadline is the end of the eighth week.

## VERY IMPORTANT INFORMATION ABOUT DROPPING AND THE END OF THE QUARTER:

For many years, De Anza students have been given the impression that "your instructor can drop you" after the end of the 8th week. THIS IS CHANGING! We are no longer allowed to give a "W" on the final grade form. Additionally, I will NOT be able to drop you using a blue 'Addendum to Class List' form after the end of the 8th week. If you have a personal hardship after the end of the 8th week, you will have to request a "Late Drop" using a white form called "Petition for Exception to Registration Policies", which will be evaluated by the Registrar and/or the Academic Council.

## 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. Such dismissal will count as an absence.

## TESTS:

After you start working on a test or quiz, 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.

If you find yourself wanting to use a calculator on a test (such as to solve an extra-credit question that involves a numerical calculation), you'll need to use a regular calculator; you can't use a cell-phone calculator.

## NOTICE:

Cheating on any exam or project is grounds for a failing grade in the class and a permanent note in 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) or which degrades the Planetarium's function or environment.