

ASTRONOMY 10

De Anza College

Section 1

M - F, 7:30 - 8:20 am

De Anza Planetarium (PLT)

Marek Cichanski

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Office hours: M thru th 11:30am-12:20pm, Fri 9:30am-10:20pm, other times by appt.

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IMPORTANT: This syllabus document is only a `condensed' version of the class website! For all of the information you need about this course, see the class website at: <http://mrcgeoastro.com/astro10/index.html>

TEXTBOOK

We will be using the free online textbook "Astronomy" by Fraknoi, Morrison, and Wolff:

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

STUDENT LEARNING OUTCOMES

Appraise the benefits to society of astronomical research concerning stars and stellar systems.

Evaluate the impact on Earth's characteristics of the evolution of stars and stellar systems.

Evaluate astronomical news items or theories about stellar astronomy based upon the scientific method.

Astronomy 10 lecture schedule, Fall 2017 Morning Class

Important: Dates of TESTS are fixed, but the *lecture topics* (shown in *italics*) are tentative. For example, we may or may not cover “Observatories...” on Oct. 17th, depending on how quickly we cover the preceding material.

Each test covers the material since the last test. See the What2Know list for details.

Final Exam is comprehensive - it covers the whole quarter.

		MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Wk. 1	Sep	25 <i>Class Enrollment</i> <i>Our cosmic context</i>	26 <i>Diurnal apparent motions in the sky</i>	27 <i>Annual apparent motions in the sky</i>	28 <i>Ancient Astronomy</i>	29 <i>Copernicus and Galileo: A Sun-centered model</i>	30
Wk. 2	Oct	2 <i>Tycho and Kepler: Laws of planetary motion</i>	3 <i>Newton's Laws: How does motion REALLY work?</i>	4 <i>Gravity: A Universal Force</i>	5 <i>How do orbits work?</i>	6 <i>Orbits of multiple bodies</i>	7 Last day to add
Wk. 3	Oct	9 <i>Moon Phases</i>	10 <i>Eclipses</i>	11 <i>Light and the Electromagnetic Spectrum</i>	12 <i>Spectroscopy: How atoms give away info about themselves</i>	13 <i>How telescopes work</i>	14
Wk. 4	Oct	16 TEST 1	17 <i>Observatories on Earth and in space</i>	18 Review Test 1	19 <i>The Sun: Its structure and magnetic field</i>	20 <i>The Sun: How does it generate energy?</i>	21
Wk. 5	Oct	23 <i>Star Brightness and Color</i>	24 <i>Stellar Spectra</i>	25 <i>The motions of the stars</i>	26 <i>The masses of the stars</i>	27 <i>The diameters of the stars</i>	28
Wk. 6	Oct/Nov	30 <i>Stars: Classification and the H-R diagram</i>	31 <i>Ways of measuring distances</i>	1 <i>Variable stars and stellar distances</i>	2 <i>The Interstellar Medium</i>	3 <i>How do stars form?</i>	4
Wk. 7	Nov	6 TEST 2	7 <i>Stellar Evolution</i>	8 Review Test 2	9 <i>Star clusters</i>	10 HOLIDAY	11
Wk. 8	Nov	13 <i>“Planetary” nebulae</i>	14 <i>White Dwarfs</i>	15 <i>Supernovae</i>	16 <i>Neutron Stars</i>	17 <i>Binary-star evolution and gamma-ray bursts</i> Last day to drop with “W” grade	18
Wk. 9	Nov	20 <i>Einstein's General Relativity</i>	21 <i>Black Holes</i>	22 <i>Structure of the Milky Way galaxy</i>	23 HOLIDAY	24 HOLIDAY	25 HOLIDAY
Wk. 10	Nov/Dec	27 TEST 3	28 <i>Spiral arms and dark matter</i>	29 Review Test 3	30 <i>Stellar populations and galactic evolution</i>	1 <i>Galaxies outside the Milky Way</i>	2
Wk. 11	Dec	4 <i>The Expanding Universe</i>	5 <i>Galaxies and cosmic evolution</i>	6 <i>Age of the universe and the Big Bang</i>	7 <i>The Cosmic Microwave Background</i>	8 <i>Composition and fate of the universe</i>	9
Wk. 12	Dec	11 FINAL EXAM 7:00 - 9:00 am	12	13	14	15	16

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

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 10 Rules and Procedures

During the first few weeks of class, I will collect state-mandated 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 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 risk receiving an "F" if you haven't earned enough points to pass the class.

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.