

ASTRONOMY 10

De Anza College

Section 1

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

De Anza Planetarium (PLT)

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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>

Astronomy 10 lecture schedule, Winter 2018 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 Jan. 31st, 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 covers the whole quarter.

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

GRADES

step 1:

You take various tests and the final

step 2:

I drop the lowest midterm score

step 3:

I calculate the final grade.

Test 1

Test 2

200 points each

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

Test 3

Your final percentage =

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

700 possible points

FINAL EXAM

300 points

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

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.

Student Learning Outcome(s):

*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.