

Astronomy 15

Astronomy Laboratory

INSTRUCTOR:

Marek Cichanski  
cichanskimarek@fhda.edu

Winter 2022 Online Office Hours: Mon and Wed 3:30-5:30pm.

You can send me a message through the Canvas "Inbox" system anytime, or email me anytime, but if you want to email me or call me when I plan to be at my computer, that's when I'll be there, barring any unusual circumstance.

General Course Information:

Course	Astronomy 15L – Astronomy Laboratory
Section	30Z (CRN 32656)
Quarter	Winter 2022
Instructor	Marek Cichanski
Class Location	<a href="http://canvas.deanza.edu">http://canvas.deanza.edu</a>
Office Hours	Mon and Wed, 3:30-5:30pm
Office Location	Online via email or Canvas "Inbox"
Instructor's Email	cichanskimarek@fhda.edu

Course Description:

Introductory astronomy lab in which students use astronomical techniques, data, and software to evaluate hypotheses about the physical universe. Areas of investigation include our solar system and the extrasolar planets, as well as stars, galaxies, and the evolution of the universe.

Weekly Zoom Sessions:

This course will have two 50-minute live sessions on Zoom each week. My goal is to show you what you need to do in each week's lab, and how to do it. Most labs will involve using computer simulations of various parts of the universe. I'll demonstrate how to use those simulations to figure out the answers to your lab questions. If you have trouble running the simulations on your own computer, these sessions should provide you with a chance to see the simulations in action, so that you can still answer the questions.

Labs:

Each week you will have a lab to complete, and each Lab will generally consist of multiple Parts. You will answer the questions and submit the Parts through Canvas. Answering the questions will generally require using online simulations of astronomical phenomena. Your instructor will attempt to provide links and advice for making the simulations work on your computer. They will also attempt to make videos that you can watch if the technology available to you won't run the simulations.

**IMPORTANT:** It is always your responsibility to make sure all Parts of a lab have submitted properly. If for some reason an activity does not submit properly and you do not notice this until after the late period deadline has passed, you will not have another opportunity to submit this activity for a grade.

### Important Notes about Technology and Internet Access:

Online courses are generally designed with the expectation that the student will have an up-to-date laptop or desktop computer, and reliable access to the internet. Your instructor will try to provide videos or other alternatives to the astronomical simulations, but there are limits as to what they can do.

Also please note that all dates and times in this course are in the Pacific time zone of the USA unless otherwise noted.

If local circumstances affect your access to the Internet, such as if you are in a region where a local or national government blocks (or partially blocks) access to the global Internet, I cannot change that situation.

### Policy on Academic Integrity and Our Online Course Environment:

Any student who displays inappropriate conduct, including cheating, plagiarism, or harassment of any other student(s) will be subject to disciplinary action. For more information on the College's policies on subjects such as academic integrity, mutual respect, student due process, and disciplinary action, see the De Anza College Catalog. As with any other course at De Anza College, whether on-campus or online, all College and District policies and guidelines apply to this course.

### Policy for Dropping Students:

Students who have not accessed the course content during the first two weeks may be dropped by the instructor. For students who feel that they will not be able to complete the coursework and wish to drop the class, the final deadline to drop with a "W" is the end of Week 8. It is the **student's responsibility** to drop by that deadline if they feel they need to drop the course. I cannot drop them after that date.

### Note on accommodations for students with disabilities:

In coordination with the DSS (Disability Support Services) office, reasonable accommodations will be provided for eligible students with disabilities. If you do not yet have an accommodation letter, please contact the DSS office at (408) 864-8753 (voice) or (408) 864-8758 (TTY). If you are a DSS student, please scan and email me your accommodation letter within the first two weeks of the quarter, even if think you might not need to use the accommodations, so we can be prepared if the need arises. DSS's email address is [dss@deanza.edu](mailto:dss@deanza.edu).

### 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 staff. If the schedule(s) of the relevant person or persons above does not permit such consultation during the quarter that this class takes place, then the stated policy (or policies) will stand.

## **Schedule of Lab Topics for Winter 2021:**

Lab 1	Maps of the Earth and Sky	DUE Sunday 1/9, 10pm
Lab 2	Internet Image Hunt and Observation Planning	DUE Sunday 1/16, 10pm
Lab 3	Models of the Solar System	DUE Sunday 1/23, 10pm
Lab 4	Seasons	DUE Sunday 1/30, 10pm
Lab 5	Moon Phases	DUE Sunday 2/6, 10pm
Lab 6	Kepler's Laws	DUE Sunday 2/13, 10pm
Lab 7	Extrasolar Planets	DUE Sunday 2/20, 10pm
Lab 8	Colors of the Stars	DUE Sunday 2/27, 10pm
Lab 9	The Hertzsprung-Russell Diagram	DUE Sunday 3/6, 10pm
Lab 10	Habitable Zones Around Other Stars	DUE Sunday 3/13, 10pm
Lab 11	The Cosmic Distance Ladder	DUE Sunday 3/20, 10pm
Opt. E.C. Lab	Astronomical Image Processing	DUE <b>Friday</b> 3/25, 10pm

# GRADING

You'll do a lab each week. There are 11 weeks in the quarter, so there are 11 labs.

Each lab is made of multiple Parts. Most labs have about 4 Parts each.

The Parts of each lab will add up to 40 points total for each lab.

Canvas will auto-drop 4 Parts. This is roughly the equivalent of dropping the lowest lab.

However, Canvas won't just pick one specific lab. It will pick and choose from among all the labs, to drop the 4 Parts that help your grade the most by dropping them.

There is an Optional Extra-Credit lab, which is worth 40 points, the same as the other labs.

I can't show you your grade for the optional Extra Credit lab until after all the other work in the quarter has been graded and "unmuted". This is because doing so would make the Canvas gradebook show you an inaccurate total course percentage. Canvas doesn't handle extra-credit very well. But the optional Extra Credit lab can **only help** your grade, it can't hurt it.

Once Canvas has calculated your final percentage and the percentage has been rounded to the nearest percent (e.g. 89.4=89, 89.5=90), I will apply this grading scale:

90% - 100+% = A

80% - 89% = B

70% - 79% = C

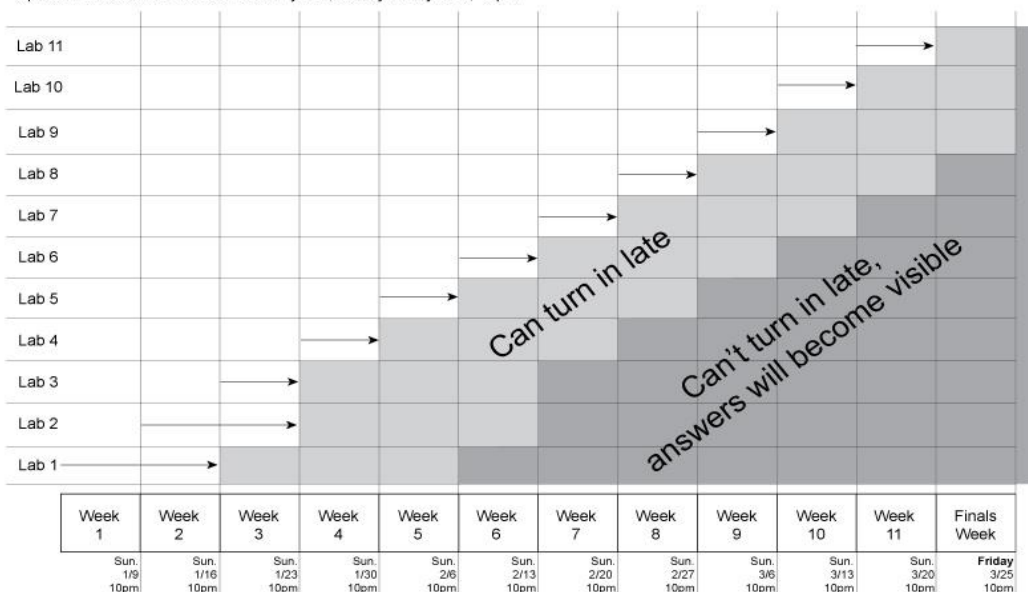
60% - 69% = D

less than 60% = F

## Astronomy 15 Online Lab Due Dates

Late Labs:  
-2% per day  
for 3 weeks

Optional Extra-Credit Lab: Can start anytime, due by Friday 3/25, 10pm





**Student Learning Outcome(s):**

\*Evaluate claims about the nature of the physical universe using the scientific method of hypothesis testing.

\*Compare and contrast the histories of solar-system bodies (e.g. moons, planets, asteroids, comets, meteorites) by integrating data from spacecraft and Earth-based observatories.