

ASTR 1 Cosmic Evolution

Course Syllabus

Dr. Melinda L. Weil

CRN: All Sections

Hello and Welcome Online Students! Our online ASTR 1 class is asynchronous. You complete each weekly module on your own time. We focus on unraveling the mysteries of space, from the planets and stars to galaxies and the whole Universe! Is there anywhere we can move if we mess up our planet Earth? What is a Black Hole really? Why do Dark Matter and exploding stars mean you exist? How big and how old is our Universe, and are we safe in it? This syllabus is really long and contains a lot of sometimes dull info. But it is important because most of the information about how our class runs is in here. To read each section, click the heading for that section. This syllabus is also available as a Word document, which is printable and accessible by a screen reader:

Course Description

Introductory astronomy course with an emphasis on the development of the cosmos and its components. The origin, evolution, and final state of our physical universe. Properties, formation, and evolution of our galaxy and other galaxies, the sun and other stars, and our solar system. Extrasolar planets and the possibility of life elsewhere in the universe. (3 units) UC/CSU*

* ASTR 1 credit transfers to all universities in both the University of California and California State University systems. It transfers to most other universities as an introductory physical science course too. Fulfills Physical/Natural Science requirement.

[Link to Course Outline of Record](#)

Student Learning Outcomes

After successful completion of this course, students will be able to:

- Analyze theories about and evidence for the structure, origin, evolution, and possible final states of the universe.
- Differentiate the universe and its major components.
- Interpret and assess models of the properties, formation, evolution, and interactions of large-scale structure, galaxies, stars, and planetary systems.
- Distinguish the roles of fundamental particles, forces, and astrophysical processes in the universe.
- Explain the relationship of human beings to astronomical objects and history in terms of cosmic evolution size and time scales.

Suggested Textbooks

A textbook is not required but recommended. You know yourself better than I do, as to whether you are able to pass our class without a textbook to assist you. If you are not sure, try the first few weeks without one, then decide.

The suggested book is "Universe: Stars and Galaxies" by Freedman, Geller, & Kaufmann, 5th or 6th edition, published by Macmillan. (The 4th edition has the chapters set up differently but is still pretty good if you can't find the later editions.) The textbook may be bought used or rented; the 6th edition is available at <https://store.macmillanlearning.com/us/product/Universe-Stars-and-Galaxies/p/1319115098>

"Universe: Stars and Galaxies" is the text I used to develop the class so the order of the chapters and topics, and the figures are based on it. But most relatively recent, cheap used textbooks on introductory astronomy could help you in the class. You may also opt for the [Open Stax free astronomy textbook](#). The chapters, order of topics, and figures in a different book will be different than "Universe: Stars and Galaxies" so it will be harder to use. I personally would choose an older, used edition of "Universe: Stars and Galaxies" if I wanted to make learning in the class easy and save a little money. Also, the full text called "Universe" by the same authors may be available - the 9th, 10th, and 11th editions of that one work.

CCSF offers the [Associated Students Book Loan program](#) if you need help paying for textbooks. Depending on need and the number of units you are taking, they will give you Book Vouchers (coupons) to be used at the CCSF Bookstore.

Is this a hard class?

I don't think so. Whether this is your first online class or you have passed online classes before, remember that one important action you take for success is budgeting enough time! You will want to study the lessons and complete assignments each week. Online classes require the same amount of time as face-to-face classes. You will find a Time Management Suggestions document on our class Canvas website to assist you. I will clearly indicate deadlines for completing assignments, including taking quizzes and participating in online discussions, when each weekly module opens. Due dates are always on Thursdays and Sundays at 10pm. I drop your lowest two quizzes and your lowest discussion of the semester.

Course Communication

Instructor Contact

Address



Dr. Melinda L. Weil, Ph.D.
Astronomy Department
City College of San Francisco
50 Frida Kahlo Way, S29
San Francisco, CA 94112



Email: Sending me an Inbox message within Canvas is best. I will respond to all course email within 48 hours Monday-Friday, exclusive of school holidays. If you don't hear from me during that time, assume your email did not make it to me and try again, please. If there are problems with Canvas, you can email me at mweil@ccsf.edu

Instructor Website (if you want to know a bit more about me):

[Dr. Weil's Website](#)

Tel: 415-239-3242 (this is the least useful option as I may not be notified I have a message)

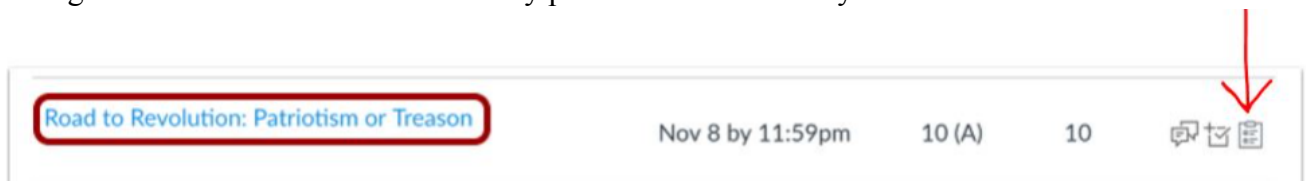
Communication Plan

- I will often contact you through the Canvas Learning Management System email. The Inbox is in the far left-hand Canvas menu. Again, this is also the best way to reach me, as I check my email all the time when I am working.
- I will also post announcements on the Instructor Announcements page in Canvas throughout the semester. Canvas notifies students according to their preferred [Notification Preferences](#), as soon as the instructor creates an Announcement.
- In the left-hand Canvas menu on most pages is Pronto. (It has the call-out symbol with 3 horizontal dots in it. Can you see it?) Pronto can be used as a group or individual chat in our class. It instantly connects each user with the students and instructors in their current courses by automatically creating a group chat for each section the user is in. You are welcome to use Pronto to reach me or to send a message about astronomy that may be of interest to other students.
- Office Hours: You may view the video conferencing office hours in the Calendar on the left-hand Canvas menu. There are thirty-minute appointment slots every Tuesday and Thursday between 11:30am and 12:30pm. (But if the weekly office hours don't fit your schedule, no problem! Just email me for an appointment time that works for you.)

Reserve your appointment slot at least 24 hours in advance, please, so I can prepare for you.

1. Click on the Course Calendar.
2. Click on Find Appointments. Look for our class.
3. Locate available appointments on the Calendar.
4. Click Reserve and remember to use the Zoom link in the Appointment details to join office hours when the time comes.

- Office: Science Hall 405. For in-person classes only. Astronomy Department offices are located at the top of the central staircase. They are not accessible; please ask if you need to meet in an accessible room.
- Important! After I have graded a Discussion, visit your Grades page and click on the Rubric icon at the right side for that Discussion to see my personal comments to you.



- Your weekly quizzes also contain feedback for your own self-assessment.

Building Community

Most Discussions will ask that you interact with one another through Peer Review. Instructions will be in each Discussion and will allow students to support one another while also earning credit for those communications. Canvas only allows Peer Review to be completed on a computer, not a phone or tablet. In addition to my individual comments on your Discussion posts, you'll receive insight from other students, and I hope we will learn from each other.



Also, I encourage you to use Pronto to discuss topics of interest or ask questions of other students. Access to Pronto is through the call-out symbol with three dots on the left-hand Canvas menu. You can talk with one another about setting up study groups or share interesting astronomy information

you have found - music, images, news reports. Please use "Netiquette" with only respectful and supportive language.

Help, I have Internet problems!

There are a couple of places you can look for help.

[Low Cost and Free Internet Resources](#)

[San Francisco Free Wifi](#)



Students who are in need of food and other items to live comfortably have options available through the college and city. In addition, there is the Facebook group called Buy Nothing (San Francisco) where many free items are posted every day.

Course Structure

Canvas

We use the **Canvas Learning Management System**. Students will use the Canvas Learning Management System for reading content material, assignment instructions, submitting assignments, viewing classmates' work, sharing resources, and viewing grades. Access Canvas by going to the CCSF Website at <http://www.ccsf.edu> ([Links to an external site.](#)) and click on "CANVAS" at the top of the page. Enter our ASTR 1 class and click on "Home" in the left-hand course menu. "Home" is the place to go every time you enter our class!

If you have problems with Canvas, there is 24/7 assistance available on the left-hand Canvas menu under "?"

Where to go and What to do!

Our class uses a weekly module structure. Modules are found on the Home link in the left-hand course menu. As long as you follow each Module in the Home page, the only other menu links you need often are this Syllabus, Grades, Announcements and maybe Zoom.

In online courses, your regular participation is the equivalent of coming to a class held on campus. Participation involves logging in to our course, navigating through the sections in a module, studying the Content Slides that contain the main lesson, then completing assignments -- mainly discussions and quizzes, and your two exams. Your participation is not only an important part of your learning and the way to earn points towards the grade you want, you will also be able to contribute to the learning of your peers. (Again, check out the Time Management Suggestions in the Week 1 resources... that could help you achieve your goal!)

Module Structure

There is a new module each week of the semester, mostly with an Overview, Content Slides, Videos, Review, Assignments, and a short Summary, the same every week. Each week's module opens on Saturday mornings by 3am so people can get started early. The Content Slides are the main lesson for each week. This knowledge is what the discussions, quizzes, and exams will usually assess.

Required Software

Canvas runs on many platforms, but it is known to work best with the Chrome, Firefox, and Microsoft Edge browsers. JPEG files in Canvas quizzes and test are not always visible on Safari browsers. Canvas also has a few known problems on phones and tablets, including Peer Review and a few other aspects.

- [Update your browser \(Links to an external site.\)](#) [Links to an external site.](#)
- [Adobe Reader \(Links to an external site.\)](#) [Links to an external site.](#)

Grading

Quizzes and Discussions

Most weeks have a quiz due. You have two tries for each quiz; I keep your highest grade.

Most weeks will also have a discussion. You can view the discussion rubrics before you begin each discussion to see how they are graded. View the rubric in Grades again after you complete each discussion for a personal message from me.

Each assignment is worth 100 points. For assignments that have files to upload, I can take docx and pdf. Google documents and Apple pages files cannot be used, thanks!

Your lowest two quizzes will be dropped and the rest are worth 20% of your total grade. Your lowest discussion will be dropped and the rest are worth 40% of your total grade. The Canvas software at “Grade” in the left-hand course menu keeps track of these grades every week. The grade you see has the lowest two quizzes and lowest one discussion so far dropped. That way you always know where you stand in our class. (What if one of your assignments later on is lower than one already dropped? The already dropped one comes back and the new lower one is dropped instead. I used to have to do this by hand; no more, whew!)

Exams

There is one midterm exam in Week 8 or 9, and one final exam during finals week. The dates/times are those determined by the College and shown in their modules. I will offer an alternative exam time for people who have work or other issues that prevent them from attending the normal time.

The exams are each worth 20% of your grade for a total of 40%. The material comes mainly from the Content Slides lectures. Both exams are similar to quizzes with true/false and multiple choice questions (no essays!), but longer.

There are study guides for your midterm and final in the Study Guides section at the end of the Syllabus. Use them and the Key Ideas Reviews to help focus your attention on important topics. It should help to use them to take notes throughout the class, not just when we get near exam time!

IMPORTANT: For exams, you may use paper notes or a paper textbook to help you. But you cannot leave the test page otherwise the exam is invalidated and earns zero points! You cannot go to another tab or window or jump to another application on your computer.

Unless you have a documented excuse as described below, if any exam is missed then a zero will be recorded as the score.

Grading Policy

Visit “Grades” in Canvas to keep track of your grades. I post grades and individual comments to you which you can view on the online Canvas gradebook.

Grading

Letter Grade	Percent
A	90% to 100%
B	80% to 89%
C	69% to 79%
D	58% to 68%
F or FW	<58%



An “FW” grade indicates the student stopped attending a course after the “last day to withdraw” deadline and subsequently did not submit any work or participate in any exams. Please check with your counselor and financial aid advisor for possible implications of the FW grade on residency and financial aid status. An “F” grade indicates that a student attended, participated and completed the course but failed to master the course curriculum.

[How do I view my grades, teacher comments, and an assignment rubric as a student?](#)

Missing and Late Policy: Documented Excuses

All assignments are due at 10pm PST on the due date unless otherwise indicated.

Without a documented excuse, an assignment that is late or missing will receive zero points. That is a large penalty, ugh! But you may receive full credit for completing an assignment late or be given a makeup if you have a documented excuse. Acceptable documented excuses include a dated, signed form from a professional or institution (e.g., health center, doctor, court, cops) or some other written or pictorial indication that events conspired to prevent you from completing your assignment on time. If you are not sure if you have a documented excuse, ask me! Maybe we can find one. Make-ups normally must be completed within a week of missing them, unless the documented excuse shows why that is a hardship.

If you ever have technical trouble uploading something to Canvas for an assignment, there are two things to do:

- 1) Email me before the deadline for the assignment and attach a copy of what you are trying to upload.
- 2) Contact the Canvas help staff through their 24-hour chat option using the ? button on the left-hand Canvas menu. They have a record of every keystroke you make and can find out what went wrong with your upload. Retain proof of the discussion and outcome. If the problem is on the Canvas side, I can give you an extension.

Course Logistics and Important Dates

Important Dates

Here's the link to the [CCSF Semester Calendar](#)

Dropping the Class

The college policy is this: If you decide to discontinue this course, it is your responsibility to officially drop it to avoid getting no refund (after 10% of course length), a W symbol (after 20%), or a grade (after 60%). Also, if a student has not participated in their online class for three weeks or more, the instructor may drop or withdraw the student.

Attendance

It may difficult to catch up in ASTR 1 if you begin the class more than two weeks late. (Week 3 is the hardest of all; the content becomes easier after that.) Because of this, and because I often have a very long list of additional students waiting to get in if space is available, I may drop you from the course if you do not access the class within the three days.



Academic Accommodations for Students with Disabilities

Students with disabilities who need academic accommodations should request them from the Disabled Students Programs and Services (DSPS) located in the Rosenberg Library, Room 323 on the Ocean Campus. Telephone: 415-452-5481 (V) 415-452-5451 (TDD). More information can be found on the [DSPS website](#).

Standards of Conduct and Diversity, Equity, & Inclusion

Students who register in CCSF classes are required to abide by the [CCSF Student Code of Conduct](#). Violation of the code is basis for referral to the Student Conduct Coordinator or dismissal from class or from the College. See the [Office of Student Affairs](#).

Copying on tests in whole or in part is considered an act of academic dishonesty and results in a grade of 0 for that test.

Please avoid any indication of cheating by writing your answers in your own words and submitting your own work. PLAGIARISM = copying other people's or artificial intelligence's words or drawings without giving them credit. Plagiarism will result in zero points for the submitted work. See these links on Plagiarism:

- [Encourage Academic Integrity and Prevent Plagiarism](#)
- [Citing Information Sources](#)

City College of San Francisco is committed to inclusivity, equity and diversity. Students, of varying backgrounds, races, abilities, nationalities, genders, sexual orientations, beliefs, religions, and socio-economic status, have the right to access a higher education and receive the resources and support they need to achieve their educational and professional goals. We welcome, encourage, and engage in diverse perspectives in respectful dialogue. Education is for all who enter the doors of this college.

The San Francisco Community College District is committed to creating and maintaining a community free of all forms of unlawful discrimination, including sex-based discrimination (which includes sexual harassment and sexual violence.) The [District has adopted detailed Title IX policies and regulations](#) addressing unlawful discrimination.

Hints for Success

- Go to the HOME page each time you enter our class so you can see each week's material.
- Study the Content Slides carefully, taking notes or whatever method you use to best understand and remember them. Use the textbook, videos and other astronomy educational materials to assist you if you need them.
- Complete the assignments on time each week.
- Study for exams, using the study guides I've given you.
- Come ask questions during online office hours or request a special meeting.
- Please let me know as soon as you can concerning difficulties that you may have so I can make suggestions.
- This course is about topics that you probably don't think about every day, or even at all. We'll view the night sky and learn about gravity and light. We will visit the planets of the solar system and figure out how it formed. We consider the birth, life, and death of our Sun and other stars. We learn about the formation, evolution, and properties of our galaxy and other galaxies, then explore the origin and fate of the Universe. We will discuss the possibilities of life and intelligence in our solar system and the Universe. If you feel kinda small, remember that you are the part of the universe that is smart enough to figure it all out!

Study Guides

Go to Syllabus in the left-hand course menu on Canvas to access the midterm and final study guides.