



Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: <https://catalog.uvu.edu/>

Semester: Spring

Year: 2025

Course Prefix: Astro

Course and Section #: 1040 X05

Course Title: Elementary Astronomy

Credits: 3

Course Description

Astronomy 1040 is an introduction to modern astronomy. We will cover topics such as the solar system, the nature of stars, cosmology, and the methods that astronomers use to make new discoveries. This class is not math intensive and will mostly cover conceptual material.

Course Attributes

This course has the following attributes:

- General Education Requirements
- Global/Intercultural Graduation Requirements
- Writing Enriched Graduation Requirements
- Discipline Core Requirements in Program
- Elective Core Requirements in Program
- Open Elective

Other: *Click here to enter text.*

Instructor Information

Instructor Name: Miriam West

Student Learning Outcomes

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

1. Describe the process of science and tools by which astronomers gain knowledge about the universe, including how our understanding of the universe, its scale and our place in it has changed over time.
2. Make connections between the earth's daily and yearly motions and their experience of the sky, including positions and motions of celestial bodies, seasons, phases of the moon, and eclipses.
3. Recognize how underlying physical laws govern the formation and evolution of stars, planetary systems, galaxies, and the universe as a whole.
4. Apply basic principles of physics and light to the interpretation of astronomical observations and phenomena.
5. Identify scientific information conveyed in various forms, including simple equations, numbers, diagrams, charts, and graphs.
6. Answer conceptual questions with correct terminology in the fields of stellar astronomy, cosmology, and solar system science.

7. Apply concepts learned in the course to observations of the real night sky, current news and events, and representations of astronomy in the media and popular culture.

Course Materials and Texts

The Essential Cosmic Perspective 8th Edition; Bennett, Donahue, Schneider, Voit

Course Requirements

Course Assignments, Assessments, and Grading Policy

Homework (33.3% of grade)

Homework assignments are posted on Canvas on the home page, and you will **submit them electronically through Canvas**. Homework assignments are due at 11:59pm on the date indicated in the Class Schedule. The homework assignments correspond to the chapters in the textbook. Some chapters will have more than one homework assignment.

There will be 33 homework assignments based on the lectures but only your 30 highest homework scores will be included in your final grade. Homework assignments are open notes and book and you may take several attempts to complete them. **Homework is not accepted after the deadline listed on the class schedule.** If you want to use the homework assignments to help you study for the exams (which I highly recommend) you need to submit each homework assignment at least once. Otherwise, the homework will be locked. Homework assignments correspond to the lectures and chapters in the textbook. The lecture PowerPoint presentations can be found on Canvas on the home page. The homework assignment titled "Homework: Syllabus Review" is a mandatory homework assignment. You may attempt this homework assignment as many times as you need to, but you must score 100% in order to have any other assignments graded for the rest of the semester. This assignment cannot be dropped from your final grade.

Lecture Quizzes (19% of grade)

Each week, you will be assigned to watch one or two lecture videos. After each video or set of videos, you will be assigned a questionnaire about the lecture videos. To get full points, you have to watch the entire video. I will also ask you which topics were confusing and ask you to write down questions that you have about the lecture. I will make a discussion board on Canvas for each chapter where I will answer the questions that you have. You may also post more questions on the board and you are more than welcome to try to answer questions that other students have. There will be 14 lecture quizzes and your top 12 scores will count toward your final grade.

Observing Projects (9.5% of grade)

You will have two observing projects this term. The projects are posted on Canvas on the home page. Please print the projects out on paper and write your responses directly on the printed page. If you don't have access to a printer, please email me. The constellation observing project is due April 12th but can be completed and turned in before the due date. The moon phase observing project asks you to keep track of moon phases. It must be started on January 31st and is due on February 21st.

Exams (38.1% of grade)

You will have three exams in this class. Each will be worth 80 points. They will be posted on Canvas on the Home Page at the end of each unit. For the exams, you may use your textbook, homework, and the lecture PowerPoint slides and recordings. You may not use any other websites. If you use the internet on an exam, you will receive a score of zero. Exams will consist of multiple choice, matching, and essay questions.

	Chapters Covered	Due Date
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Exam 1	1-5	Friday, February 14 th at 11:59 pm
Exam 2	11-18	Friday, March 28 th at 11:59 pm
Final Exam	6-10, 19	Wednesday, April 30 th at 6 pm

Grading Scale

	Percentage of Total Grade	Points per assignment (630 total points in class)
Homework	33.3%	7 (30 HW Assignments, 210 points total)
Observing Projects	9.5%	40 and 20 (60 points total)
Lecture Quizzes	19%	10 (12 quizzes, 120 points total)
Exams	38.1%	80 (3 exams, 240 points total)

A	94-100%	C	73-76.99%
A-	90-93.99%	C-	70-72.99%
B+	87-89.99%	D+	67-69.99%
B	83-86.99%	D	63-66.99%
B-	80-82.99%	D-	60-62.99%
C+	77-79.99%	E	Below 60%

Disclaimer: Because your 3 lowest homework scores and lowest lecture quiz scores will be dropped from your final grade, the “total” grade that Canvas calculates for you may not reflect your actual grade in the class. Do not rely on Canvas to calculate your final grade for you. Your final grade will be calculated according to the table above. If you have questions, please ask your instructor.

Recommended Reading Assignments and General Subject for Each Week

Date	Week	Topics	Reading
Jan 11	1	Introduction	Chapter 1
Jan 18	2	Celestial Sphere	Chapter 2 Part 1
Jan 25	3	Science of Astronomy	Chapter 2 Part 2, Chapter 3
Feb 1	4	Motion, Energy, Gravity, Light	Chapter 4, Chapter 5 Part 1
Feb 8	5	Telescopes	Chapter 5 Part 2
Feb 15	6	The Sun, Surveying the Stars	Chapter 11, Chapter 12
Feb 22	7	Stellar Evolution	Chapter 13
Mar 1	8	Stellar Remnants and Relativity	Chapter 14
Mar 8	9	Our Galaxy, A universe of Galaxies	Chapter 15, Chapter 16
Mar 22	10	Big Bang, Fate of the Universe	Chapter 17, Chapter 18
Mar 29	11	Solar System Formation, Earth	Chapter 6, Chapter 7 Part 1
Apr 5	12	Terrestrial Planets	Chapter 7 Part 2
Apr 12	13	Jovian Planets, Other Solar System Objects	Chapter 8, Chapter 9
Apr 19	14	Extrasolar Planets, Life in the Universe	Chapter 10, Chapter 19

Required Course Syllabus Statements

Generative AI

I take academic honesty very seriously. If you are caught cheating on an exam, you will receive a score of zero on that exam. If you display a persistent habit of cheating or plagiarism, you will receive a failing grade in this class and you will be reported to the student conduct office. Plagiarism of any kind or copying another student's work will not be tolerated and will result in an automatic zero on assignments. Use of artificial intelligence including programs such as ChatGPT are not permitted in this class.

Using Remote Testing Software

This course does not use remote testing software.

This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities

Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU [Accessibility Services](#) at accessibilityservices@uvu.edu or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at DHHservices@uvu.edu

DHH is located on the Orem Campus in BA 112.

Academic Integrity

At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their [rights and responsibilities](#). In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in [UVU Policy 541: Student Code of Conduct](#).

Equity and Title IX

Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation

UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.

To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a [specially dedicated space](#) for meditation, prayer, reflection, or other forms of religious expression.