



## Syllabus for Astronomy 10

### Course Information

Semester & Year: Fall 2021

Course ID & Section #: Astro 10 (D2353)

Instructor's name: Dr. Jon Pedicino

Day/Time/Location: Correspondence (Pelican Bay)

Course units: 3.0

### Instructor Contact Information

Correspondence (Via Mail)

### Catalog Description

An overview of historical approaches to understanding the science of astronomy and our place in the universe. We will explore light and its role in the transmission of information, telescopes, the formation of the solar system, the planets and moons and their potential for life, the sun, the evolutionary life cycle and death of stars, black holes, and the formation of the universe.

### Course Student Learning Outcomes *(from course outline of record)*

1. Demonstrate how the scientific method is used to understand natural phenomena
2. Define and identify the different types of electromagnetic radiation.
3. Analyze the evolution of the solar system and the development of the Earth's atmosphere and landforms.
4. Define the nuclear processes that take place in the sun and relate those to the birth, evolution, and eventual death of the range of stars present in the cosmos.

### Grading

80%- Unit Summaries (12), 3 sides, Due Fri, 100 pts each, 20%-Current Events (6), 1 side, Due F, 50 pts  
A (>93.3%), A- (90-93.3%), B+ (86.7-89.9%), B (83.3-86.6%), B- (80-83.2%), C+ (76.7-79.9%), C (70-76.6%), D (55-69.9%), F (<55%)

### Accessibility

Students will have access to course materials that comply with the Americans with Disabilities Act of 1990 (ADA), Section 508 of the Rehabilitation Act of 1973, and College of the Redwoods policies. Students who discover access issues with this class should contact the instructor.

College of the Redwoods is also committed to making reasonable accommodations for qualified students with disabilities. If you have a disability or believe you might benefit from disability-related services and accommodations, please contact your instructor or Disability Services and Programs for Students (DSPS).

## **Astronomy 10 Class Schedule**

Friday, August 27- Book, Current Event Articles, Assignment Delivered

Friday, September 10- First summary due

Friday, December 10-Last summary, Last current event due.

## **Astronomy 10 Topics/Outline**

Textbook: Openstax Astronomy Book by Franknoi

\*\*Current event due along with summary (you choose from Current Event Article Pack)

<u>Due Date (Fri)</u>	<u>Unit#</u>	<u>Topic</u>	<u>Openstax Chapter</u>
	1	Search for Life	
Sept 10	1	Requirements for Life	30.1-30.4
	2	Scientific Method	
	2	Mass, Distance, Temp	1.4, Appendix C&D
Sept 17**	2	Light-year, Calendar	4.4, 1.4, 1.6, 1.5
	3	Night Sky, RA/Dec	2.1, 4.1
	3	Seasons	4.2
Sept 24	3	Moon Phases, Eclipses	4.5, 4.7
	4	Geocentrism vs. Heliocentrism	2.2, 2.4
	4	Galileo	2.4
Oct 1**	4	Kepler and Newton	3.1, 3.3, 3.4
	5	Nature of Light, EM Spectrum	5.1, 5.2
	5	Telescopes	6.1, 6.2
	5	Temp/Color, Spectroscopy	5.2, 5.3
Oct 8	5	Doppler Effect	5.6
	6	Big Bang, Galaxies	29.6, 29.3, 29.1-2
	6	Solar System Formation	7.4, 21.1, 21.3, 14.3
Oct 22**	6	Asteroids and Density	8.5, 7.1
	7	Earth,	8.1-8.4
Oct 29	7	Moon	9.1-9.4
Nov 5**	8	Terrestrial Planets	9.5, 10.1-10.6
Nov 12	9	Jovian Planets	11.1-3, 12.1-3, 12.5

Nov 19**	10	The Sun and Thermonuclear Fusion	15.1-15.4, 16.2-16.4
	11	Distance and Luminosity of Stars	19.2, 17.1
Dec 3	11	H-R Diagram, Mass, Spectral Class.	18.2, 18.3, 17.3, 18.4
	12	Stars, the Beginning of the End	21.2, 22.1, 22.4
	12	White Dwarfs and Planetary Nebulae	22.4, 23.1
Dec 10**	12	Supernovae and Black Holes	23.2-4, 24.5, 24.6