



DAVIS UNIVERSITY

COURSE SYLLABUS
PHS120: INTRODUCTION TO ASTRONOMY
SUMMER QUARTER 2025

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COURSE SYLLABUS FOR: PHS120 INTRODUCTION TO ASTRONOMY

CREDIT HOURS: 5 CREDITS

INSTRUCTOR:

INSTRUCTOR EMAIL:

INSTRUCTOR OFFICE HOURS:

COURSE DESCRIPTION: Introduction to the elementary aspects of the astronomical universe. Topics include the history and growth of astronomy, instrumentation, solar system, stars, galaxies, and cosmology. Star-gazing sessions and planetarium trips are included to identify the prominent constellations and stars.

TEXT: *Pathways to Astronomy*, 5th Edition; By Steven Schneider, ISBN13: 9781260012682.

LATE WORK POLICY: All students are expected to submit homework assignments electronically on the date specified on the syllabus. No late homework will be accepted and the student will receive a "0" (zero) for the homework assignment. Should the student refuse to complete the assigned work for the class, it could result in the student failing the class. All work assigned is expected to be completed on the date assigned. The instructor reserves the right to alter the schedule as necessary. Please be sure to check your email/Moodle for any changes to the schedule.

PLAGIARISM AND COPYRIGHT INFRINGEMENT POLICY: Work that is found to be plagiarized receives a grade of zero and often causes a student to fail a class. Documentation of plagiarism is added to the student's academic file as a violation of accepted student conduct and is subject to disciplinary action. Plagiarism is the use of another person's exact words, or their ideas written in the student's words without giving the original author credit.

Plagiarism can result from any of the following:

- Quote material directly without using quotation marks.
- Paraphrase the original so that many of the phrases are the same as the original. A good rule is no more than 3 or 4 words in a row should be the same as the original.
- Copy the original sentence pattern, substitution synonyms for key words.
- Neglect to indicate the source of the original material.

ASSESSMENTS:

Content

examinations	50%
final exam	15%
discussions and Activities	35%

Total

COURSE GRADE: A = 93%-100%

B = 85%-92%

C = 77%-84%

D = 70%-76%

F = below 70%

TENTATIVE CLASS SCHEDULE:

(Subject to change)

Week	Content Covered	Assignments & Assessment Due
Week 1:	<p><u>Topic: The Cosmic Landscape (Part 1 in textbook); includes the following subtopics:</u></p> <ul style="list-style-type: none"> • Our planetary neighborhood- Unit 1 • Astronomical Numbers- Unit 3 • Scientific Foundations of Astronomy- Unit 4 • The Night Sky- Unit 5 • The time of Day- Unit 7 • The Year- Unit 6 • Lunar Cycles- Unit 8 • Calendars- Unit 9 • Planets: The Wandering Stars- Unit 11 • Birth of Astronomy- Unit 12 	Exam 1- Friday
Week 2:	<p><u>Topic: Probing Matter, Light, and Their Interactions (Part 2 in textbook); includes the following subtopics:</u></p> <ul style="list-style-type: none"> • Astronomical Motion: Inertia, Mass, and Force- Unit 14 • Force, Acceleration, and Interaction- Unit 15 • Universal Law of Gravity- Unit 16 • Orbital and Escape Velocities- Unit 18 • Tides- Unit 19 • General Relativity- Unit 27 • The Dual Nature of Light and Matter- Unit 21 • The Electromagnetic Spectrum- Unit 22 • Identifying Atoms by Their Spectra- Unit 24 • Thermal Radiation- Unit 23 • The Doppler Shift – Unit 25 	Exam 2- Friday
Week 3:	<p><u>Topic: Stars and Stellar Evolution (Part 4 in textbook); includes the following subtopics:</u></p> <ul style="list-style-type: none"> • The Sun, Our Star- Unit 51 • The Sun's Source of Power- Unit 52 • Solar Activity - Unit 53 • Surveying the Stars (Luminosity, Temperature)- Units 54, 55, 56 • The H-R Diagram- Unit 59 • Star Formation- Unit 61 • Overview of Stellar Evolution- Unit 60 	Exam 3- Friday

	<ul style="list-style-type: none"> • Main-Sequence Stars- Unit 62 • Giant Stars- Unit 63 • Old Age and Death of Stars- Units 65, 66, 67 	
Week 4:	<p><u>Topic: The Solar System (Part 3 in textbook); includes the following subtopics:</u></p> <ul style="list-style-type: none"> • Mercury- Unit 40 • Venus- Unit 41 • Mars- Unit 42 • Jupiter and Saturn: Gas Giants- Unit 45 • Satellite Systems and Rings- Unit 47 • Uranus and Neptune: Ice Giants- Unit 46 • Asteroids- Unit 43 • Comets- Unit 49 • Ice Worlds, Pluto and Beyond- Unit 48 • Impacts on Earth- Unit 50 • The Origins of the Solar System- Unit 35 • Other Planetary Systems- Unit 36 • Earth's Atmosphere and Hydrosphere- Unit 38 • Our Moon- Unit 39 	Exam 4- Friday
Week 5:	<p><u>Topic: Galaxies and The Universe (Part 5 in textbook); includes the following subtopics:</u></p> <ul style="list-style-type: none"> • Discovering the Milky Way- Unit 71 • Stars of the Milky Way- Unit 72 • Gas and Dust in the Milky Way- Unit 73 • A Universe of Galaxies- Unit 75 • Types of Galaxies- Unit 76 • Dark Matter- Unit 79 • Cosmology- Unit 80 • The Curvature and Expansion of Universes- Unit 82 • The Beginnings of the Universe- Units 83, 84 • The Search for Life Elsewhere- Unit 86 	Exam 5- Friday