

Astronomy 001 - Elementary Astronomy - Section 3370 (Sp 2015)

Instructor: Elizabeth Bell

Email (best way to contact me): bellea@wlac.edu

Classroom: MSA 005 (Thursdays 6:45 pm - 10:00 pm)

Office: MSB 224 **Phone:** 310-287-4585

Hours: M/W- 10:30am-11am, 1:30pm-2pm, 6:15pm-6:45pm, T- 2:30pm-3:30pm,
Th- 5:45pm-6:45pm (and by appointment)

Prerequisite: None

Advisories: English 021 (English Fundamentals), and Math 105(A,B,C) Arithmetic

REQUIRED: 1. EXPLORATIONS: An Introduction to Astronomy, 7th edition, by Thomas Arny; (4) Mini Essay Book Scantrons (form NO. 886-E); pencils, blue or black or green pen, four function calculator (+, -, ×, ÷); 2. Planet Wheel (in the book store) ISBN: 978-0-9613207-5-1

ASTRON 001 THE STELLAR SYSTEM

Units: 3.00 - UC:CSU, May Be Taken Once for Credit

A conceptual survey of the basic principles and science of astronomy. Topics include the history of astronomy, the solar system, the Sun, galaxies, cosmology, and life in the universe. This introductory course is designed for the non-technical student.

Student Learning Outcomes

INSTITUTIONAL OUTCOMES (SLOs):

- A. **CRITICAL THINKING:** Analyze problems by differentiating fact from opinions, using evidence, and using sound reasoning to specify multiple solutions and their consequences.
- G. **CULTURAL DIVERSITY:** Respectfully engage with other cultures in an effort to understand them.
- F. **TECHNICAL COMPETENCE:** Utilize the appropriate technology effectively for informational, academic, personal, and professional needs.

ASTRONOMY DIVISION PROGRAM OUTCOMES (SLOs):

1. Develop an understanding of how science works and specifically how it is used to discover knowledge of the physical universe. (meets institutional outcome A)
2. Recognize and explain basic concepts and principles of physics which underlie and are used to conduct astronomy. (meets institutional outcomes A and F)
3. Differentiate between the scientific method and pseudo-science as a means to explain the way the universe works. (meets institutional outcomes A and F)
4. Appreciate the historical and philosophical foundations of astronomy. (meets institutional outcome G)
5. Investigate and absorb information available outside the textbook to appreciate how our knowledge of astronomy changes. (meets institutional outcomes A and F)
6. Differentiate among possible models of the universe. (meets institutional outcomes A and F)
7. Write brief, focused, logically coherent responses to conceptual (and quantitative - honors) questions covering the major topics of astronomy. (meets institutional outcomes A and F)
8. Come away with a broader perspective of our place in the universe. (meets institutional outcomes A and G)

Topics and Dates are Tentative

SCHEDULE

2/12	Introduction / The Cosmic Landscape	
2/19	The Cycles of the Sky / Phases of Moon and Eclipses	
2/26	The Rise of Astronomy / Time in Astronomy	*REVIEW FOR TEST #1*
3/5	Gravity and Motion	TEST #1 (no gravity and motion)
3/12	Light and Atoms	
3/19	Telescopes	
3/26	Survey of the Solar System	*REVIEW FOR TEST #2*
4/2	Inner and Outer Planets	TEST #2 (no Inner /outer planets/ meteors, comets, asteroids.)
4/9	No class - Spring Break	
4/16	Meteors, Comets, Asteroids	
4/23	The Earth and The Moon	
4/30	The Sun	*REVIEW FOR TEST #3*
5/7	Stellar Properties / H-R Diagram	TEST #3 (no stellar properties/HR Diagram)
5/14	Stellar Evolution/ Milky Way Galaxy	
5/21	Cosmology / Hubble Expansion	
5/28	Einstein's Theories of Relativity	

****Final Exam (not cumulative) Thursday June 4 - Same room, 7:15 pm - 9:15 pm****

Grades will be based on the following:	Attendance	up to 3% extra credit*
	Assignments	10 points each
	Tests (3)	50 points each
	Final (1)	60 points
Grading Scale: A (90 - 100)%, B (80-89)%, C (70-79)%, D (60-69)%, F(0-59)%		

No make-up tests! One of the three in-class tests (lowest score) will be dropped. No credit for the class if more than one exam missed. **Final must be taken to receive credit for the course.**

***Extra Credit** (you may earn up to 5% (of total points possible) extra credit for the course).

- Attendance: 3% (perfect attendance), 2% (1 absence), 1%(2 absences)
Tardy counts as an absence in extra credit calculation.
- Other opportunities (TBA) - I can use some help with telescope viewing nights and star parties.
- Extra credit due 2 weeks before final

TO SUCCEED AND OBTAIN A GOOD GRADE IN THIS CLASS - YOU MUST:

1. Attend class regularly, attending all class sessions. Get to class on time, every time, and stay the whole time. **You are responsible for information, test announcements, date changes, etc. - whether or not you are present.**

2. Take at least 2 of the 3 in-class tests and the Final Exam (I highly recommend planning to take all tests in case of unforeseen emergencies, or just to try to pull your grade up) on the days listed above -- **No make ups! DON'T SHOW UP SICK.**

4. You are responsible for credit and enrollment status. You are responsible to drop the class - if you choose not to continue. (Note: you may be excluded if you are consistently absent or tardy). Students failing to follow the correct procedure for withdrawal will receive a grade "F" for the course which will affect your GPA.

Note: New rules that a student may not take any class more than three times.

Drop a Class w/o a Fee	Feb 20
Drop a Class w/o a W	Feb 20
Drop w/ a W	May 8

5. Each student is expected to do his/her own work on all tests. **Academic dishonesty, or cheating, will result in a zero grade on that test (which will not be dropped),** plus (in cases of continued academic dishonesty) a filing of a report with the Science Chairperson or Dean of Students giving your name and describing the incident.

6. Expect to work hard. Plan to read and study 2-4 hours per week and attend all classes. Do not wait until the last minute to start assignments or study. This will result in incomplete assignments and you will not have sufficient time to absorb the material.

7. Please turn off your cell phone before entering the class.

8. In taking this class, you are agreeing to abide by all the rules and regulations stated above - including dates of tests and final. **This means that you do not schedule anything else on test days or ask for an extension if you plan an extended weekend vacation.**

9. Welcome to Astronomy 100!

**** If you are a DSPS student requiring special accommodation for this class, please contact me after class during the first week.***

