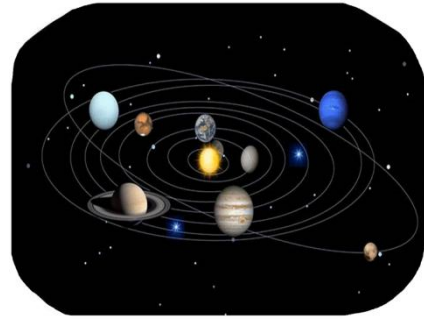




Astronomy 10 Syllabus

Reedley College – Fall 2023



Course Description:

An introduction to the astrophysics of the solar system, stars, the interstellar medium, the galaxy, and the universe, as determined from a variety of astronomical observations and models. This will include a look at the history of our understanding of the cosmos, and a description of the relevant physics laws involved. The focus will be conceptual, but occasionally some quantitative aspects will be covered.

Lectures:

This is a “hybrid” course, so lectures are online. I learned of this only on the first day of the semester. Students are NOT required to attend real-time on-line lectures at any specific time. Students can instead review recordings of lectures at any time they choose. My first attempts to use ZOOM encountered problems with limited time, etc. Until Reedley officials can help resolve this, I will be posting asynchronous lectures

- meaning that there will be no real-time component, and then discuss issues of interest with students during office hours or lab meetings.

Lab Time: Tuesday Thursday 5:00 PM – 6:50 PM ... in PHY 70 at Reedley College

Some lab days will be used for midterm exams or in-person lectures.

Contact Information:

Instructor Name: Mike Bisset

Email: mike.bisset@reedleycollege.edu

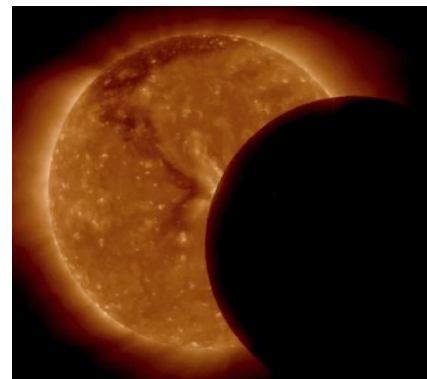
Office Hours:

Fridays 1:30am - 3:30pm in PHY 70 or 75, either in person or via ZOOM

Other times can also be set for meeting via Zoom.

I am also available to meet with you, either in person or on-line by appointment.

You need to reach out to me, and then we will definitely schedule time.



Required Course Materials:

- TEXTBOOK: Open Stax – Astronomy,
ISBN-10: 1-938168-28-3, ISBN-13: 978-1-938168-28-4
 - **THIS TEXTBOOK IS AVAILABLE FREE ONLINE:**
<https://openstax.org/details/books/astronomy>

Prerequisites: none

Advisories: English 1A or 1AH

Student Learning Outcomes:

In this course, students will become familiar with the following phenomena:

- Solar system
- Stars
- Galaxies
- Cosmology (maybe)
- Telescopes
- Radiation & optics

Calendar:

- November 23rd – Thanksgiving, no classes held
- August 18th – Last day to drop a Fall 2023 full-term class for full refund
- August 25th – Last day to drop a Fall 2023 full-term class in person to avoid a "W"
- October 6th – Last day to drop a full-term class
- Dec. 4th - 8th – Finals week

Exams:

There will be two midterm exams (each worth **25%** of the overall grade) and one final exam (worth **30%** of the overall grade).

The exams will be held during lab hours.

The exams contribute **80%** of your semester grade, so they are very important to prepare for.

Makeup exams will be given **with pre-approval only**.

Further details will be given during the semester.



Laboratory & Homework:

This class has a lab exercises that are **mandatory**. The lab scores make up **20%** of your grade. There will be one online make-up lab available at the end of the semester.

I will drop your lowest lab score.

There will be quizzes given at the start of **some** labs related to topics covered in the previous lab experiment. Scores of these quizzes are included in your lab score.

There will not be too much homework assigned. Occasionally, laboratory material will have to be completed outside of classtime. Homework score will be incorporated into the lab score.

Grading Policy:

I do curve-grade, so the scores on the exams may not tell you exactly what your final score will be.

After each test, I will display a score distribution for that exam, and tell you what it means.

Basically, things only go up, not down. Near the end of the semester, I will offer some means of making up some points if a student has done poorly on some item (exams, homework, labs).

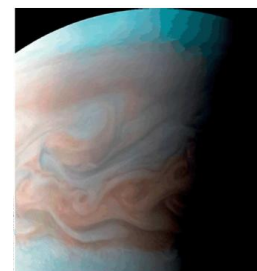
Category	% of Class Grade
Midterm Exams	50% (25% each)
Labs, incl. quizzes & homework	20%
Final Exam	30%

STUDENT SUCCESS:

- Technology Support:
<https://www.reedleycollege.edu/campus-life/technology-help.html>
- Tutoring Services:
<https://www.reedleycollege.edu/academics/tutoring-services/index.html>
- COVID-19 information is uploaded to the Reedley College site:
<https://www.reedleycollege.edu/covid-19/index.html>
- DSPS contact information:

Hours: Monday – Friday 8:00 am – 5:00 pm Phone: 559-638-0332

See more DSPS information here: <https://www.reedleycollege.edu/student-services/disabled-student-programs-and-services/index.html>



Very special thanks to Kurt Shults

who provided me with the template upon which this syllabus is based!

Tentative Schedule for ASTRO 10 FALL 2023

This schedule *may* be too ambitious! We may go slower.

Week		Lecture #	Date	Chapter	Subject	LAB
1		1&2		1	Survey of the cosmos	
1	Th		Aug. 10		In-person introduction	
2		3&4		2,3	Celestial sphere, constellations Ptolemy, Copernicus, Kepler	
2	Th		Aug. 17			Measurement & Uncertainty
3		5&6		3,4	Newton, Tides, Earth, Moon, and Sky	
3	Th		Aug. 24			Observations
4		7&8		5	Radiation & Spectra	
4	Th		Aug. 31		REVIEW Chs. 1-5	
5		9&10		5,6,7	Astronomical Instruments; Solar System Overview	
5	Th		Sept. 7		Midterm EXAM #1	
6		11&12		7,8	Earth as a planet	
6	Th		Sept. 14			Mystery Constellations
7		13&14		9	Moon & Mercury	
7	Th		Sept. 21			Motion & Phases of the Moon
8		15&16		10	Venus & Mars	
8	Th		Sept. 28			Solar System Scale
9		17&18		11	Jovian Planets	
9	Th		Oct. 5			Solar system – online
10		19&20		12	Rings, Moons & Pluto	
10	Th		Oct. 12		REVIEW Chs. 6-12	
11		21&22		15	Sun's structure	
11	Th		Oct. 19		Midterm EXAM #2	
12		22&23		16	How the Sun works	
12	Th		Oct. 26			Kepler's Laws
13		23&24		17,18	Flux, classification of stars	
13	Th		Nov. 2			Chemical Fingerprints
14		25&26		18,21	H-R Diagram	
14	Th		Nov. 9			H-R Diagram & blackbody
15		27&28		22,23	Stellar End States	
15	Th		Nov. 16			ID Galaxies & salt equivalent
16		29		24	Black Holes	
16	Th		Nov. 23		THANKSGIVING	
17		30		25,26	Milky Way, Galaxies	
17	Th		Nov. 30		REVIEW	
18		FINALS WEEK	Dec. 4-8	--	Exam covers Chs. 15-18,21-26	

Academic Dishonesty

Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. Academic dishonesty in any form is a very serious offense and will incur serious consequences.

CHEATING

Warning: I am strongly disturbed by cheating. It is simply NOT worth it!!!!

Cheating is the act or attempted act of taking an examination or performing an assigned, evaluated task in a fraudulent or deceptive manner, such as having improper access to answers, in an attempt to gain an unearned academic advantage. Cheating may include, but is not limited to, copying from another's work, supplying one's work to another, giving or receiving copies of examinations without an instructor's permission, using or displaying notes or devices inappropriate to the conditions of the examination, allowing someone other than the officially enrolled student to represent the student, or failing to disclose research results completely. 48 Administrative Policies 2022-2023 Reedley College Catalog

PLAGIARISM

Plagiarism is a specific form of cheating: the use of another's words or ideas without identifying them as such or giving credit to the source. Plagiarism may include, but is not limited to, failing to provide complete citations and references for all work that draws on the ideas, words, or work of others, failing to identify the contributors to work done in collaboration, submitting duplicate work to be evaluated in different courses without the knowledge and consent of the instructors involved, or failing to observe computer security systems and software copyrights. Incidents of cheating and plagiarism may result in any of a variety of sanctions and penalties, which may range from a failing grade on the particular examination, paper, project, or assignment in question to a failing grade in the course, at the discretion of the instructor and depending on the severity and frequency of the incidents

Important Notes:

- Any student needing accommodations should inform the instructor. Students with disabilities who may need accommodations for this class are encouraged to notify the instructor and contact DSPS early in the semester so that reasonable accommodations may be implemented as soon as possible. All information will remain confidential.