

Syllabus

Astronomy 170B, Section 001, 002H

The Physical Universe

Spring 2020

Lectures: M/W/F: 9:00-9:50 AM
Steward N210

Instructor: Dr. Erika Hamden
Office: Steward Observatory 222
(520) 621-9524
hamden@email.arizona.edu – Include “170B” in the e-mail title. Please e-mail Jessica Li (TA, info below) with questions before contacting Professor Hamden.
Office Hours: Weekly Wednesday 10:00-11:00 AM or by appointment
ATTEND OFFICE HOURS!

Teaching Assistant: Jessica Li
jessicali@email.arizona.edu – Include “170B” in the e-mail title
Office Hours: Weekly Monday 11:00 AM- noon, or by appointment. Location TBA
ATTEND OFFICE HOURS!

Exams: Monday, February 17th
Monday, March 23rd
Friday, April 10th
Monday, May 4th

Final Exam: Thursday, May 14th 10:30 AM -12:30 PM

Required Textbook: *The Cosmic Perspective, 8th ed.* By Bennett, et al (Pearson)
With *Mastering Astronomy* website

Course materials are being delivered digitally via D2L through the Inclusive Access program. Please access the material through D2L on the first day of class to make sure that there are no issues with delivery so any problems can be addressed quickly. You automatically have access to the course materials FREE through **January 28, 2020**. You must take action (even if you have not accessed the materials) to opt-out if you do not wish to pay for the materials, and choose to source the content independently. **The deadline to opt-out is 9PM MST January 28, 2020**. If you do not opt-out and choose to retain your access, the cost of the digital course materials will appear on your Bursars account. Please refer to the Inclusive Access FAQs at <https://shop.arizona.edu/textbooks/Inclusive.asp> for additional information.

Required Equipment: TurningPoint® ResponseCard NXT, QT or QT2 (a.k.a. “clicker”)

Website: <http://D2L.arizona.edu>

Course Learning Objectives:

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

- understand the nature and application of physical science
- apply ideas and processes beyond the classroom
- recognize the complexity of many scientific issues
- speak and write about scientific knowledge
- appreciate the relative scale of objects, rates of change, linear and nonlinear growth
- critically analyze and interpret data and results presented in tables, graphs and charts

as well as perform appropriate mathematical calculations

- read and understand scientific literature from popular sources such as magazines and newspapers

Course Overview:

Astro 170B is a three-credit GenEd class intended to offer breadth of knowledge and methods of inquiry. By exposing students to the study and understanding of the universe around them, this course is designed to foster independent, creative, and interactive learning, prompting students to think about themselves, others, and social organizations in new and insightful ways. The objective is not necessarily to memorize facts or formulae about the universe, but rather to understand the importance of scientific inquiry, critical thinking, and experiment in your life.

Grades:

Your final grade for this course will depend on the in-class exams, the final, and all other assignments, with the following weighting:

	Number	Points Value for each	Total
Exams	4	50	150
Final	1	150	150
Observing Night	1	50	50
Public Lecture	1	50	50
Homework	5	40	200
Writing Assignments	4	40	160
Labs	4	40	160
Participation	1	80	80
Total:			1000

Grades will be posted as soon as possible after the assignment is collected on D2L. Any questions, disputes, or mistakes must be identified and brought to Jessica Li's or Prof. Hamden's attention within 3 business days of the grade being posted. After that, all grades are finalized, although questions are still answered.

At the end of the semester, I will determine if a curve from the standard grading scale is necessary.

Deadlines:

No late assignments will be accepted.

You have one free no question's asked 3-day-late (72 hours after the due date/time) turn in for one non-exam assignment that can be used by you in case of dire need. Please inform either the professor or the TA on the day the assignment is due to use this late turn in. Sometimes everyone has a difficult day. No other excuses will be accepted, so use it wisely. Assignments can be turned in early if desired.

Exam Make Up Policy:

There are 4 hour long exams throughout the semester. No exam make ups will be given. The lowest exam score of the 4 will be dropped. If you miss an exam, that is the score that will be dropped.

All exams are closed book. Nothing may be on your desk aside from the exam. Any phones or other devices used during exams will result in an immediate failure.

Observing Night:

During the semester you are required to attend one evening of observing at the Steward Observatory public telescope (<https://www.as.arizona.edu/raymond-e-white-jr-21-telescope-campus>). Observing times are Monday-Thursday starting January 27th until May 6th from 7-10 PM, with the exception of Spring Break. You need to sign up for your observing time in the main lobby of Steward. You must keep an observing log and have it stamped by the Telescope Operator on the night you observe. Be aware that bad weather will mean the telescope doesn't operate, so give yourself plenty of time to conduct your observation. All logs must be received by Friday, May 1st in class at the latest, although you can turn your log in earlier if desired. No late logs will be accepted.

Public Lecture:

During the semester, there are public lectures at Steward Observatory on Monday Evenings. Lectures are every two weeks at 7:30 PM in the N210 (the same room as the class). You are required to attend at least one of these lectures, on the day and topic of your choice. As part of this assignment, write down one question that you had during the lecture and attempt to answer it using your own research. Questions should be thoughtful and answers should be at least two paragraphs. Please have Dr. Tom Fleming stamp your question prior to leaving the lecture to prove your attendance. Turn in your stamped question and accompanying answer by Friday, May 1st in class at the latest, although you can turn this in earlier if desired. No late assignments will be accepted. The last lecture is scheduled for April 13th. See the schedule here: <https://www.as.arizona.edu/public-evening-lecture-series>

Homework:

Homework is assigned on D2L and must be completed by the due date. Four (4) Writing assignments will all be assigned throughout the course and should be submitted electronically via turnitin.com. You will have the opportunity to get feedback on one writing assignment and submit a revised draft at the end of the semester. There will be four (4) in class labs during the semester. A paper sheet must be submitted in writing after in-class lab activities; each lab will have a due date indicated. If you miss the lab class, there are no makeup opportunities.

A variety of other policies:

NO smoking, eating, drinking (except water), or pets are allowed in class. Please **turn off** your cell phones and avoid disrupting the students around you, even if not explicitly described in this section! Be respectful of the other students who want to learn.

Absence and Class Participation Policy

The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: <http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop>

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, <http://policy.arizona.edu/human-resources/religious-accommodation-policy>.

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: <https://deanofstudents.arizona.edu/absences>

Classroom Behavior Policy:

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

Threatening Behavior Policy

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See <http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students>.

Accessibility and Accommodations

Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit <http://drc.arizona.edu>.

If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Code of Academic Integrity

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See:

<http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity>.

The University Libraries have some excellent tips for avoiding plagiarism, available at <http://www.library.arizona.edu/help/tutorials/plagiarism/index.html>.

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor's express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

UA Nondiscrimination and Anti-harassment Policy

The University is committed to creating and maintaining an environment free of discrimination; see <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

Additional Resources for Students

UA Academic policies and procedures are available at <http://catalog.arizona.edu/policies>

Student Assistance and Advocacy information is available at

<http://deanofstudents.arizona.edu/student-assistance/students/student-assistance>

Confidentiality of Student Records

<http://www.registrar.arizona.edu/personal-information/family-educational-rights-and-privacy-act-1974-ferpa?topic=ferpa>

Subject to Change Statement

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.