

ASTR 250 Fundamentals of Astronomy
Fall 2022

Lecture Meeting Time & Place: MWF 10:00-10:50 AM. Steward Rm 204

Professor Kaitlin Kratter

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Office Hours TBD

Class Meetings: MWF 10-10:50, Steward Rm 204, in person

Final Exam: The final exam will be held on Dec. 9th, 2022 at 10:30AM – 12:30PM in the normal classroom.

Required Textbook: For this course we will use “Foundations of Astrophysics” by Barbara Ryden & Bradley Peterson. You may also find You will be assigned regular readings and assignments from the textbook which you are expected to do prior to coming to lectures. I also recommend looking at the free online book available here: <https://openstax.org/details/astronomy>.

Website: We will make regular use of D2L. It is your responsibility to check D2L regularly for course notifications, updates and assignments.

Course Description and Topics Covered: We will study objects and phenomena relating to the solar system, extrasolar planets, stars, galaxies and cosmology. We will introduce basic concepts used in physics, chemistry, geology and biology needed to better study these objects, and related astrophysics concepts. We will make use of calculus and calculus-based physics relevant to astrophysics. If you would like a larger list of topics to be covered in this course, consult the chapter headings of the “Foundations of Astrophysics” textbook and course schedule.

Course Learning Outcomes

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

- Demonstrate the ability to meaningfully analyze, apply and integrate the principal findings, common applications, current problems, fundamental techniques, and underlying theory of the astronomy discipline.
- Develop proficiency with communicating, translating and interpreting fundamental astronomical concepts and research results in oral and/or written formats.
- Understand basic physics concepts and apply them to astronomy problems.
- Understand some concepts related to observational astronomy and its history.
- To gain knowledge of the physical scales, masses, sizes, lifetimes and other properties associated with a wide variety of astronomical objects and phenomena
- Take higher level astronomy courses.

These learning outcomes will be met through attendance of lectures, homework and writing assignments, in-class activities and in-class exams.

Grading: Your course grade will be based on –

1. Homework / In class activities; (lowest two dropped): 50%

2. Midterms: 30% (Tentatively scheduled for Sept. 30th, Oct 28th)
3. Final exam: 20%

The class will not be curved. The correspondence between final percentages and letter grades will be: **A: 85-100%; B: 70-85%; C: 50-70%; D: 30-50%; E: 0-30%.**

Homework: There will be regular homework assignments (approximately 15 in total). Please feel free to collaborate and use resources outside of the textbook. You **must** show your work to receive full credit. Assignments must be turned at the start of class on the due date, Late assignments will not be accepted without a Dean's Excuse. Recall that the two lowest scores are dropped, so don't worry about missing one assignment.

Exams: There will be two in-class midterms, and one final exam. Exams will be closed book, but you will be allowed to bring in one double-sided page of notes. An unexcused absence from the final will result in an E for the entire course.

Course Schedule & Reading: A semi-definitive course schedule is now posted on the D2L web site. Note that the midterm dates are September 30th and October 28th. This schedule will be updated as the term goes by. I will try not to change the midterm dates. **The relevant chapters and sections that will be lectured on should be read before class.** Our ability to focus on problem solving in class relies on this.

Deadlines and Exam Policy: We will accept no late assignments. The grading in this class allows you to drop your lowest grade for this reason (and others), so that illness, religious holidays, computer malfunctions, family emergencies, zombie attacks, etc are not a good reason to submit late work. Do not request that a deadline be adjusted unless your issue is serious enough that you have a valid Dean's excuse. Exceptions to this policy are serious illness, including COVID-19.

- **Classroom attendance:**

- If you feel sick, or if you need to isolate or quarantine based on [University protocols](#), stay home. Except for seeking medical care, avoid contact with others and do not travel.
- Notify your instructor(s) if you will be missing a course meeting or an assignment deadline.
- Non-attendance for any reason does **not** guarantee an automatic extension of due date or rescheduling of examinations/assessments.
 - Please communicate and coordinate any request directly with your instructor.
- If you must miss the equivalent of more than one week of class, please contact the Dean of Students Office DOS-deanofstudents@email.arizona.edu to share documentation about the challenges you are facing.
- Voluntary, free, and convenient [COVID-19 testing](#) is available for students on Main Campus.
- If you test positive for COVID-19 and you are participating in on-campus activities, you must report your results to Campus Health. To learn more about the process for reporting a positive test, visit the [Case Notification Protocol](#).
- The COVID-19 vaccine and boosters are available for all students at [Campus Health](#).
- Visit the [UArizona COVID-19](#) page for the most up-to-date information.

- **Academic advising:** If you have questions about your academic progress this semester, please reach out to your academic advisor (<https://advising.arizona.edu/advisors/major>). Contact the Advising Resource Center (<https://advising.arizona.edu/>) for all general advising questions and referral assistance. Call 520-626-8667 or email to advising@arizona.edu.

- **Life challenges:** If you are experiencing unexpected barriers to your success in your courses, please note the Dean of Students Office is a central support resource for all students and may be helpful. The [Dean of Students Office](#) can be reached at (520) 621-2057 or DOS-deanofstudents@email.arizona.edu.

- **Physical and mental-health challenges:** If you are facing physical or mental health challenges this semester, please note that Campus Health provides quality medical and mental health care. For medical appointments, call (520) 621-9202. For After Hours care, call (520) 570-7898. For the Counseling & Psych Services (CAPS) 24/7 hotline, call (520) 621-3334.
- **Equipment and software requirements:** access to D2L is required.
- **Statement on compliance with COVID-19 mitigation guidelines:** As we enter the Fall semester, the health and wellbeing of everyone in this class is the highest priority. Accordingly, we are all required to follow the university guidelines on COVID-19 mitigation. Please visit www.covid19.arizona.edu for the latest guidance. At this time, **masks are recommended in classrooms.**

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 or online. 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.

Some learning styles are best served by using personal electronics, such as laptops and iPads. It is acceptable to use these devices for note taking only in this classroom. Students using electronic devices for purposes other than note taking will be asked to leave the lecture.

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>.

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>

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.