

Astronomy 201: *Astronomy for Science Majors*

Instructor: Dr. Allen Shafter

Office: Physics 243

Office Hours: Tu, Th 10:30 – 11:30, or by appointment

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Lecture: Tu, Th 12:30 – 13:45, PA 215

Text: *Foundations of Astronomy 14th Ed.* by Seeds and Backman

Brief Course Description:

This course will provide a broad overview of Astronomy. The course will provide an overview of the night sky, including an introduction to the solar system and to planets around other stars, the formation and evolution of stars, the nature of the Milky Way and other galaxies, and the origin and fate of the Universe.

We will cover material from many of the chapters in the textbook, but not all! For example, we will spend less time on the planets and the solar system than the book does. The only material that you will be responsible for on exams will be covered in my lectures.

This course is directed toward students with a strong interest in science and mathematics, and serves as part of the preparation for the Astronomy major. As such, it is designed to be a more mathematical version of the survey course, Astronomy 101. Students with credit in Astronomy 101 and 201 will only receive a total of three units of credit toward graduation.

Student Responsibilities:

Students will be ultimately responsible for how they perform in this course. I will not force you to attend class, nor will I take roll. However, I can virtually assure you that you will not do well unless you come to class regularly and study the homework problems. When you do come to class, I expect that you will conduct yourself in a matter that is respectful to your fellow classmates and the instructor. That means no talking when I'm lecturing, and no fiddling with cell phones, newspapers, etc. Eating during class is discouraged, but discreet snacking will be allowed as long as it doesn't distract others. In short, I assume that students who choose to take Astronomy 201 over Astronomy 101 are mature enough to take responsibility for learning the material through attending lectures, asking questions, doing homework problems, and studying, without the need for me to browbeat you.

Key Student Learning Outcomes:

By the end of the semester students should be able to:

- Describe the phases of the moon and understand the seasons
- Describe what the analysis of light tells us about celestial sources
- Describe the 4 forces of Nature, and how they are relevant to Astronomy
- Describe the formation, evolution, and fates of stars
- Describe the how we measure distances to other galaxies
- Describe what we know about the formation and evolution of the Universe

Grading:

Grading will be based on three midterm exams (20% each), and a comprehensive final exam (40%).

- **Midterm 1:** Thurs, Feb 20, during regular class time
- **Midterm 2:** Thurs, Mar 19, during regular class time
- **Midterm 3:** Thurs, Apr 16, during regular class time
- **Final Exam:** Thurs, May 14, *from 10:30AM to 12:30PM in PA215*

Make-up exams will consist of essay questions only. I will assign homework, but the homework will not be turned in or graded. However, doing the problems will be extremely valuable in helping you focus on the important concepts and in studying for exams! I will be happy to discuss homework problems during my office hours.

Statement on Student Disability and Privacy:

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Student Disability Services at (619) 594-6473. To avoid any delay in the receipt of your accommodations, you should contact Student Disability Services as soon as possible. Please note that accommodations are not retroactive, and that accommodations based upon disability cannot be provided until you have presented your instructor with an accommodation letter from Student Disability Services. Your cooperation is appreciated.

The Family Educational Rights and Privacy Act (FERPA) mandates the protection of student information, including contact information, grades, and graded assignments. I will use Blackboard to communicate with you, and I will not post grades or leave graded assignments in public places. Students will be notified at the time of an assignment if copies of student work will be retained beyond the end of the semester or used as examples for future students or the wider public. Students maintain intellectual property rights to work products they create as part of this course unless they are formally notified otherwise.