

**GRADES:** Your grade constantly builds up from clicker questions in class, homework (often “Mastering Astronomy,” online), and contributing in recitations. This should lead to less worry at exam time but it means that you must be conscientious throughout the term! **You can’t just put in effort at exam time and pass this class.**

I try and ask thought-provoking questions that challenge your thinking. For that reason

**My grading scale is NOT 90%=A, 80%=B, etc. It is CLOSE TO A > 90, A- 88-90, B+ 84-87, B 78-83, B- 74-77, C+ 71-73, C 66-70, C- 62-65, D+ 59-61, D 54-58, D- 51-53, F 50 or below.** (I adjust it slightly depending on exam difficulty).

**Your final grade will be based:**

20% on homework: *Mastering Astronomy* on-line tutorials and written work handed in on paper.

10% on "clicker questions" asked in class. Clicker questions will be graded **2 pts. for any answer, and 3 pts. for the correct answer.** Often you will be encouraged to discuss the answer with your neighbors in class, before you give it. The main purpose of these questions is to help you understand what you know and don't know, and learn more. And to have fun! As I will discuss in class, use of clickers raises grades but only IF YOU DISCUSS (not just listen).

5% on recitation activities including your participation in recitation. Do you complete the activities and interact with your group? Ask questions? That's how to earn the 5%. **I will drop one recitation absence.**

20% on *each* of *two* midterm exams.

25% on the final exam. When you take the final 75% of your grade will already be done. You should not be nervous. And you cannot "pull this course out" just by a good final.

**“CLICKER QUESTIONS”** Each of you will have a wireless student response system ("clicker"). Many times each class I will ask questions designed to get you to think carefully about some of the concepts I'm trying to teach. Often I will have you talk to your neighbors before answering, so you can help each other figure out the correct answer. Use of clickers:

- Improves your grade (everyone's grades; I DON'T grade on a class average). **When you discuss and debate** with others your knowledge improves. If you just listen it doesn't improve as much.
- Gives YOU immediate feedback what you do and don't understand.
- Tells ME what the class doesn't understand.
- Greatly improves class participation

I will usually start class with a straightforward clicker question or two based on the assigned reading. So do your reading before class!

**YOUR 12 LOWEST CLICKER SCORES WILL BE DROPPED.** If you are sick for a day, have a family emergency, or your clicker stops working, this should cover you. You can miss up to 12 questions without it hurting.

**MIDTERM EXAMS:** The two midterms will be each be worth 15% of your grade.

**FINAL EXAM:** The final exam will be worth 25% of your grade. It will cover the main topics of the entire class and be similar in format to the Midterms. It will include some questions that are identical or very similar to homework and discussion questions.

**EXTRA CREDIT and CLASS PARTICIPATION POINTS:** You can earn **up to 2%** grade boost from extra credit. If you go on the field trip to the Mountain Research Station it is worth 1%. If you attend a public astronomy lecture such as the ones at Fiske Planetarium and send me a short description of what you thought, that is also worth 1% extra credit.

I encourage asking and answering questions in class. If you give a good answer or ask a good question I hand you a little post-it note. Write your name on it and give it to me at the end of class. **Each participation point is worth approximately 1 correct clicker question.**

**NIGHT OBSERVING and FIELD TRIP** You are expected to go to two observing nights during the term at the Sommers Bausch Observatory. The dates will be listed on the class Desire2Learn website.

#### **FOUR SIMPLE RULES TO ENSURE A GOOD GRADE:**

1. **Don't skip class or discussion section.** If you enroll in this course, plan on attending every meeting of the class. If you miss a class you will lose points.
2. Read the assigned text chapters or web pages **before** class.
3. Take the homework questions and class discussions seriously- they represent a big part of your grade. Also, exam questions will be closely related to the homework and discussion questions and to the class discussion.
4. Discuss the class and homework with other students, then turn in **your own** work. Testing your ideas against others is an important way to learn.
5. **TAKE ADVANTAGE** of our Learning Assistants. Those who ask them a lot of questions almost always raise their grade. They are here to help you and easy to talk to.