

COLLEGE OF CHARLESTON

ASTR 130-INTRO ASTRONOMY II

Instructor: T. R. Richardson

Sections 005 and 006 Spring 2017
Harbor Walk West, Room 112
Tuesday and Thursday
8:30-9:45 AM

Lecture Syllabus

Astronomy 130 INTRODUCTORY ASTRONOMY II

Contact Information:

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My Lab: Lightsey Center room 351

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Office Hours:

The latest listing of my office hours can be found on my faculty web page. See the URL later in this document.

Contacting me:

Contacting me is easy. Email if it is not complicated or time sensitive (i. e. something in the next 36 to 48 hours. Otherwise use the phone. You can try my office but it much is better to call my cell phone. Because of classes and meetings it may be turned off. If I don't answer, text me with your phone number or message. My cell phone for school will not take voice messages, even if it seems to, so please don't try. I will do my best to call you back but I am never "it" when it comes to phone tag. Also don't text me without trying to call first unless you are unable to talk at that time. I choose not to text back and forth when a simple call will settle the matter.

General Education Objectives and Learning Outcomes:

At the end of the syllabus are the departmental general education objectives and learning outcomes for this course. Expect me to direct your attention to specific ones as the course progresses through its topics.

Course Learning Outcomes:

The learning outcomes for this course are listed by chapter on the test topics web page. A link to this document in the course links on the right hand side of every course web page. Any additions are made weekly. The assessment of these learning outcomes will occur on the hour exams and the final exam.

Course Objectives:

This course is the second in a two-semester survey of contemporary astronomy. As this instructor views the course, it has a number of objectives. Those objectives are to provide the student with:

1. A broad understanding of the nature, scope, and evolution of the Universe, and where the Earth and Solar System fit in.
2. An understanding of a few crucial astronomical quantities, together with some knowledge of appropriate physical laws.
3. An understanding that physical laws and processes are universal.
4. An understanding that the world is knowable, and that we are coming to know it better each year through observations, experiments, and theory.
5. An understanding of the types, roles, and degrees of uncertainty in science.
6. An understanding of the evolution of physical systems.
7. Some knowledge of related subjects such as mathematics and some useful "tools" from those related subjects.
8. An acquaintance with the history of astronomy and the evolution of scientific ideas.
9. A familiarity with the night sky and how its appearance changes with time and position on Earth.
10. One last objective is to have a reasonably good time accomplishing the previous ones.

Textbooks:

Our textbook, *The Cosmic Perspective*, by Bennett, Donahue, Schneider and Voit, 7th edition is a good one. I know the lead author personally and he has come to the College to talk with our students.

Attendance:

Roll will be taken. The wise student will attend all classes since lecture is intended to supplement rather than duplicate the reading of the textbook or homework movies watched outside of class. We will have several demonstration experiments each week in class and they are an essential part of the course. In addition during class there are a number of individual and group activities on which credit is earned. Without attending class a student loses that credit. Finally part of almost every class will take time to practice the kind of thinking to be assessed on tests. Be there or be left out.

Major Grades:

There will be three or more major tests and a writing assignment. The lowest test grade will be dropped in the computation of the final grade. If a student is absent from a test, that absence is normally treated as that student's dropped grade depending on the circumstances. See the paragraph later on the course make-up policy.

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Little Grades:

There will be more than a dozen little grades taken from homework, in-class activities and reading quizzes. The reading quizzes will allow the use of your written notes both from lecture and from your reading at home. Class participation is also credited in the little grade average. That process will be explained in class. All of these activities are averaged together and constitute a student's Little Grade average. One and usually more (at the instructor's discretion) Little Grades will be dropped in the computation of the Little Grade average. Make-ups are not available for the in-class activities since they involve group work and instructor interaction that cannot be duplicated outside of class. The instructor also expects a student to attend all classes so the student should be there for all of them except in the case of illness. The dropped grades are intended to correct for illness and unplanned absences. There may be optional outside class activities including lectures, relevant movies and other events. A student earns Little Grade credit by attending these activities.

Makeup Policy:

It is the policy of this class to allow makeup work when the request for makeup is accompanied a signed and notarized endorsement by the sitting president of the Republic of Palau. Otherwise such requests are considered on a case-by-case basis.

Grading:

There will be a final exam. It will be comprehensive. The final grade in this course has the following components:

- Major test average 40 %
- Writing assignment 6 %
- Little grade average 36 %
- Final exam 18 %

Grading Scale:

A	92.5 – 100	B	82.5 – 87.4	C	72.5 – 77.4	D	62.5 – 67.4
A-	89.5 – 92.4	B-	79.5 – 82.4	C-	69.5 – 72.4	D-	59.5 – 62.4
B+	87.5 – 89.4	C+	77.5 – 79.4	D+	67.5 – 69.4	F	0.0 – 59.4

Course Schedule and Important Dates:

If you keep a calendar, then you will want to put important dates on it now. If you don't keep a calendar, consider getting one and using it to stay organized. The course schedule is online and can be accessed through my faculty web page or OAKS.

- Test #1 Tue, Jan. 31
- Test #2 Tue, Feb. 21
- Test #3 Thu, March 23
- Test #4 Thu, April 13
- Writing Assignment Sun, Feb. 19
- Final Exam Sat. Apr. 29 8–11 AM in our regular classroom

Disabilities and SNAP:

This class is SNAP friendly. If your situation comes under the guidelines of the programs in the SNAP office, please come to my office so we can talk about how to handle your particular situation. Sooner is better than later if we have to arrange accommodations.

The College Honor Code:

Every society has its rules that help that society to function. The College Honor Code contains some of the rules all of us are expected to follow for the years we are together here. Every individual has rules of their own to guide their life. Make your rules consistent with the College Honor Code and trust that I have done the same. Please visit the College Student Handbook online at <http://www.cofc.edu/generaldocuments/handbook.pdf> for details about the Honor Code and see my summary of the Honor Code as it applies in our classroom at http://richardsont.people.cofc.edu/shared_folder/honor_code.pdf.

Online Resources:

My webpage: <http://richardsont.people.cofc.edu/>

Course webpage: http://richardsont.people.cofc.edu/06_a130_s17.html

Some Study Tips:

1. Have a special place to study.
2. Take breaks for 5–10 minutes each hour.
3. Switch subjects every hour or at some interval that works for you.
4. Review your class notes right after lecture, before the next lecture and every day until the next test.

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5. After a test is returned, analyze how you might have prepared better and make study notes for the final exam.
6. Get some vigorous exercise every day.
7. Eat your vegetables and stop eating junk.

General Education Objectives:

To successfully complete this course the student is expected to demonstrate competence (through quizzes and tests) by being able to:

1. Apply physical/natural principles to analyze and solve problems.
2. Explain how science impacts society.
3. Distinguish the nature and significance of the following: instruments used in astronomy, stars (binary, variable), star clusters, interstellar matter, galaxies and cosmology.
4. Demonstrate how the measurement of light is used to interpret physical characteristics of the universe.
5. Recognize the origins of astronomical objects.
6. Apply physical laws to reveal the nature of astrophysical phenomena.

General Education Learning Outcomes:

The general education learning outcomes will be assessed in your laboratory section this semester. See your lab instructor and lab syllabus for information on that topic.