

NSCI 111 INTRODUCTION TO ASTRONOMY

Summer 2019

CATALOG DESCRIPTION: NSCI 111 INTRODUCTION TO ASTRONOMY

The course introduces non-science students to astronomy. It includes naked-eye astronomy and a brief history of astronomy; the present-day tools of the astronomer; the solar system; the sun and stars; and finally the galaxy, the universe, and extraterrestrial life. Prerequisite or Corequisite: [MATH 105](#) or higher. Corequisite: [NSCI 111-L](#). One semester; three credits.

TEXT: None required – there are ppt slides on the [course web page](#) that can serve as the text; recommended: [free on-line text](#) from OpenStax (Rice University)

INSTRUCTOR: Dr. Johnny B. Holmes, Professor of Physics

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PREREQUISITES BY TOPIC:

1. Basic algebra
2. Ability to read and make graphs of data

GOALS:

1. To teach the student the basic concepts of astronomy and show where mankind and the earth fit in the overall physical (as contrasted with the spiritual, emotional and social) picture.
2. To acquaint the student with the scientific method of thinking by demonstrating it as it applies to the study of astronomy.
3. To show how science is a human endeavor and how it affects society as a whole.
4. To provide a fund of concepts, images, and metaphors that can be utilized to imagine how other things in the world might work.

OUTLINE:

Part I: Introduction and Early Development

Part II: Light and Tools

Part III: The Solar System

Part IV: The Sun and Stars

Part V: The Galaxy and the Universe

Note on class behavior: Laptops and other devices may be used during regular class time (but not during tests) with the understanding that they will not interfere with other students' opportunities to pay attention to the class – in other words, any screens, displays, and/or audios should be visible and/or audible only to you and not to any other student in the class.

GRADING:

There will be a test over each of the five parts listed above. Each test will count as one grade. There will be a final exam that will count as three grades. (Since there are several written reports required in the lab, there will be no reports required in the lecture.) If you have three or fewer absences then I will drop the lowest of the five tests or reduce the weight of the final exam from three to two grades. The final letter grade will be determined from the average of the eight (or seven) grades using the following scale:

A: 93-100; B: 82-93; C: 70-82; D: 65-70; F: 0-65.

Questions will come mainly from the questions on the study guides.

The questions marked with ** will be on the test for that section.

The questions marked with * will probably be on the test.

The unmarked questions may be on the test.

Opportunities (not a requirement) for an in-class presentation on an ancient civilization's use of astronomy (Part 1) or on one of the planets (Part 3) will be available for up to 10 bonus points – one per student on a first come first served basis with requests made via e-mail to me.

ABSENCES:

I expect you to attend class. If you miss three or fewer classes then I will drop your lowest test grade (or reduce the worth of your final by one grade) and average the remaining seven grades. The material you are responsible for is mostly in the powerpoint presentations. You are responsible for all material covered in class and for any test schedule changes announced in class.

If you miss a test, then I will give you a make-up test if you wish but there will be a 10 point penalty (out of 100 points) since it is hard for me to make up another test. *NOTE: If you know beforehand that you are going to miss a test, you may request BEFORE the test date that I give you a make-up test BEFORE the regular test date. In this case there will be no penalty.*

DISABILITY SERVICES: If you have a disability that affects your ability to perform in class or lab, please see the CBU Student Disabilities Services [web page](#).

TENTATIVE SCHEDULE FOR TESTS:

Day	Date	Test
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Mon	June 3	#1 over Part I
Mon	June 10	#2 over Part II
Mon	June 17	#3 over Part III
Mon	June 24	#4 over Part IV
Thur	June 27	#5 over Part V
Fri	June 28	FINAL EXAM over the whole course

For the tests you may bring in a calculator, but it should not be internet-connectable. Cell phones and other internet-connectable devices are not allowed during a test. Hands, eyes, and calculator should be on the desk and not in your lap during tests.