

Course Syllabus
PHYS 3397.01 + PHYS 3197.01
Astronomy + LAB
4 Credit Hours
Fall 2016

Class Time: TTh 11:00 a.m. – 12:15 p.m.
Class Location: Farrington 209
Instructor: Dr. C. Renee James
Contact Info: Farrington 306 294-4888 phy_crj@shsu.edu
Physical Office Hours: By appointment – just let me know when you want to meet, and we can arrange something
Electronic Office Hours: Pretty much perpetual (meaning I check my e-mail often throughout each day, and will try to respond to questions quickly)
Required Materials: *An Astronaut's Guide to Life on Earth*, by Chris Hadfield (provided)
Basics of Radio Astronomy – can be downloaded from here:
http://www2.jpl.nasa.gov/radioastronomy/radioastronomy_all.pdf
A variety of articles (provided)

Important Dates:

8/24 – 1st day of classes
9/5 – Labor Day holiday
9/9 - Last day to drop for full refund
11/4 through 11/22 – Dr. James out of the country
11/11 – Drop deadline
11/23 through 11/27 – Thanksgiving break.
12/2 – Last day of classes
12/8 – Last day of final exams

You must check for HW sets, handouts, and miscellaneous information on BlackBoard.

I have created a FACEBOOK group here for this class:
<https://www.facebook.com/groups/1745179872435999/>

Please ask to join it, and you can often receive real-time help with homework, find out new stuff going on in the sky, see a bunch of nerdy jokes...

YOU NEED TO MAKE CERTAIN THAT YOUR SHSU E-MAIL ACCOUNT IS ACTIVE AT ALL TIMES AND THAT YOU CHECK IT OFTEN (at least once daily). I communicate heavily via mass e-mail and BlackBoard announcements. You have the option of having your SHSU email forwarded to the device you most commonly check. Please take advantage of this option.

Course Description: A study is made of the solar system, sun, stars, and stellar systems, their motions, structure, energy sources and evolution, star clusters, interstellar matter, galaxies, and cosmology. This course will focus on how we have come to understand the universe through observations. Students will become familiar with tools and techniques involved in both optical astronomy and radio astronomy.

The overarching goals for this class are ...

1. Learning the methods by which astronomers obtain information from the cosmos.
2. Learning the methods by which astronomers analyze and interpret data.
3. Understanding the nature of science and how astronomers hypothesize, test, and validate astronomical concepts.
4. Developing your ability to synthesize a group of facts into a conceptual model that demonstrates a comprehension of basic astrophysical phenomena.

5. Learning to work cooperatively with others in a group setting in order to communicate ideas and knowledge while working towards both group and individual goals.
6. Comprehending the relative scales of our Universe and the vastness of space.

Course Objectives: Upon completion of this course, you should have a firm grasp of the following items...

- > The development of the scientific method
- > Decoding light to determine physical properties of objects
- > Determining cosmic distances
- > Historical development of the laws governing the universe
- > Formation and evolution of stars
- > Evolution of stellar systems
- > Galaxies
- > The expansion of the universe
- > The origin and fate of everything

Grade Breakdown: This is what you're REALLY interested in. How much work will you have to do, and what will you get for it? Your grade in this course will be based on the following

LAB (see separate syllabus for lab requirements)	25%
In-class assignments	10%
Visible Light Astronomy Project	10%
Radio Astronomy Project	10%
Modern Astronomy Project	10%
Common Reader Project	10%
One minute papers	5%
Midterm (on or around 10/13)	10%
Final Exam	10%

THE FINAL EXAM WILL BE HELD THURSDAY DECEMBER 8 12 – 2 p.m

THERE WILL BE NO EXCEPTIONS TO THIS FINAL EXAM TIME/DATE. Be certain that you do not make any travel plans that will interfere with your taking the final exam.

Labs: The lab portion of this class will be “asynchronous,” meaning that your lab group will agree to meet weekly at a mutually-determined time to complete the exercises. Lab groups will be formed on the first class day. The full lab schedule is provided in a separate document.

One-minute papers: At the end of each class, I will ask everyone to write a one-minute paper. You will create these electronically by going to this website:

<http://www.surveygizmo.com/s3/2987855/Fall-2016-PHYS-3397-One-Minute-Paper>

I will read the 1-minute papers before preparing the material for the next class, and if there is an overwhelming vote to go back over some point or to move on to new information, I can gear the next class to better accommodate you. While this is a darned good way to assure quasi-regular class attendance, it is really an attempt to get a handle on your current thoughts about class. It really doesn't make sense to pretend everyone is understanding everything I say, and most people choose not to ask many questions for fear that they will look stupid. Sadly, in most cases, most of the class usually wants to ask *the exact same question*, but are afraid of looking stupid. And so the cycle goes.

NOTE: YOU CAN MISS UP TO FOUR (4) 1-MINUTE PAPERS WITHOUT PENALTY. After that, you will lose 1 point off your average for each one-minute-paper missed, with a maximum deduction of 10 points.

STUDENTS WITH DISABILITIES POLICY:

It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (telephone 936-294-3512, TDD 936-294-3786, and e-mail disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see:

<http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf>

MY POLICY ON ACADEMIC DISHONESTY: Work you turn in is expected to be original. Do not turn in work that is copied directly from any other source. I encourage you work in your groups, but the final product should be in your own words. If you are caught cheating or plagiarizing in any fashion, you will receive an automatic F for the class, and then you'll have to do a horrendous runaround with the department head and the Dean of our college that involves lots of time-consuming paperwork. So don't go there.

Definitions of various forms of cheating are listed below.

CHEATING

Cheating is the unauthorized use of information and study guides in any academic exercise. The methods of cheating are varied and well-known. Cheating includes:

1. Copying from others during an examination.
2. Sharing answers for a take-home examination.
3. Using illegal notes during an examination.
4. Taking an examination for another student.
5. Asking or allowing another student to take an examination for you.
6. Tampering with an examination after it has been corrected, then returning it for more credit than deserved.
7. Submitting substantial portions of the same academic work for credit in more than one course, without consulting with the second instructor.
8. Preparing answers or writing notes on a scantron or test paper before an examination.
9. Allowing others to do the research and writing of an assigned paper (for example, using the services of a commercial term paper company).

PLAGIARISM

Plagiarism is academic theft. It refers to the use of another's ideas or words without proper attribution or credit. An author's work is his/her property and should be respected by documentation. Credit must be given:

1. For every direct quotation.
2. When a work is paraphrased or summarized in whole or in part in your own words.
3. For information which is not common knowledge. (It appears in several sources about the subject).

COLLUSION

Any student who knowingly or intentionally helps another student to perform any of the above acts of cheating or plagiarism is subject to discipline for academic dishonesty. There is no distinction between those who cheat and plagiarize and those who willingly allow it to occur.

CLASSROOM RULES OF CONDUCT: Simply put, respect your fellow students. But here are some specifics:

Electronic Devices - Please turn off all cell phones, Blackberries, and other electronic devices during class unless otherwise instructed. In the event that you are honestly expecting some sort of incredibly important call (i.e. your wife is 9 months pregnant and might go into labor any second), you may keep your phone on vibrate mode. Anyone using a phone or other device during class (yes, iPhones, ipods, iPads, and any other wireless distraction) will be subject to evil eyes, embarrassing comments, and ultimately a graded pop quiz on everything from the day's class. Occasionally I toss small objects across the class, but most of these miss the intended target.

Talking – There are usually plenty of chances to get with the people around you to discuss questions or problems as loudly as you like. For other times, please respect your fellow students and remain quiet. Chronic talkers will be subjected to evil eyes, embarrassing comments, pop quizzes, and ultimately requests to leave the classroom.

VISITORS: Visitors are welcome at all times, provided they do not interfere with student learning in any way.