

Astronomy 115 Fall 2016 Course Syllabus

Instructor: Dr. Jeanne Digel

Office: TH 328

ASTR011501-F16R

e-mail: digel@sfsu.edu

Office hours TBA

Required Texts: Discovering the Universe, from Stars to Planets by Comins
ISBN-13: 978-1-4292-30421 and Lecture-Tutorials for Introductory Astronomy by
Adams, Prather, and Slater ISBN-13: **978-0321820464**.

On-line Resources

This course has an iLearn site. Navigate to <http://ilearn.sfsu.edu> and click on the **Click to log in** button. You will be directed to the SF State Global Login page where you enter your **SF State ID** or official **SF State email address** and **SF State Password**. Click on the **Login** button to be redirected back to iLearn. The course website contains this syllabus and all course materials.

Important Dates

Sep 5: Labor Day, no class

Sep 14: Last day to drop without a W

Sep 16: FIRST MIDTERM

Sep 21: Last day to add by exception

Oct 17: SECOND MIDTERM

Oct 19: Last day to select CR/NC grading option

Nov 11 Veteran's Day, no class

Nov 18: THIRD MIDTERM

Nov 21-25: Fall Recess, no class

Nov 22: Last day to withdraw* with a W

Dec 14: Last class meeting

Dec 19: FINAL EXAM 10:45-1:15.

*Physics & Astronomy Dept. Withdrawal policy:

<http://www.physics.sfsu.edu/policy/withdrawal.pdf>

How this course will work:

Each class will consist of short lecture segments followed by students working in groups to complete the activities in the Lecture Tutorials book related to the topic of the lecture. At the end of the class there will be a short group test on the material just covered. The group test is intended to test your understanding of the materials in that class's lecture and exercises.

The iLearn site contains recorded versions of the lecture material which may be more in depth than what is presented in class, as well as weekly on-line exercises based on the material. Each week there will be on-line lessons and review questions related the topics covered in lecture. Completion of these on-

line exercises, along with the readings from Discovering the Universe, counts as the homework for this course.

There will be three mid-terms and a cumulative final exam taken in class. The mid-terms will be closed book and done individually rather than as a group test.

Grading

Grades will be determined as follows:

Group Tests	15%
On-line Homework	15%
Best two of three mid-term exams	20% each
Final exam	30%

More about Lecture-Tutorials: Lecture-Tutorial exercises are found in the required text by Prather et al. Students will be broken into groups of about 4 to write answers to the Lecture-Tutorial. The goal of your group is to write a set of answers where the logic is clear and complete. When you are reading your group answers ask yourself “Can I figure out how to solve this problem based on what is written?” A well written answer, can be understood by someone who didn’t know the answer ahead of time. A good understanding of the Lecture-Tutorial answers should lead directly to a good understanding of how to answer the exam questions.

More about On-line Lessons: At a rate of roughly one a week there will be lessons open on-line covering the various course concepts. The lessons consist of a series of conceptual exercises, each with a short essay portion where students are asked to describe how they solved the exercise. When you’ve completed the exercise it should show a final grade of about 50%. Multiple choice questions are graded automatically but I have to read and grade the essays myself. The exercises can be done more than once, in whole or in part, up until the lesson closes. Your final score will be based on the combined highest scores for each question.

Extra Credit: Visit NASA’s Astronomy Picture of the Day, on-line at <http://apod.gsfc.nasa.gov/apod/>. Write a paragraph or two describing the image and what it is about. Turn in up to 15 of these (one per week) for up to 5% extra credit. This activity is submitted on-line using the APOD links found near the bottom of the iLearn page.

Exam Make-ups: I am typically very reluctant to permit students to make up missed exams. Make sure you have a documented emergency if you are asking for a make-up.

Accessibility: Students with disabilities who need reasonable accommodations are encouraged to contact the instructor. The Disability Programs and Resource Center (DPRC) is available to facilitate the reasonable accommodations process. The DPRC is located in the Student Service Building and can be reached by telephone (voice/TTY 415-338-2472) or by email (dprc@sfsu.edu).

Student Learning Objectives:

Student Learning Outcomes

After successfully completing this course, students will be able to:

1. Explain the steps in the scientific method of inquiry, which involves gathering observable, empirical and measurable evidence subject to specific principles of reasoning, and recognizing that reproducible observation of a result is necessary for a theory to be accepted as valid by the scientific community
2. Analyze specific examples of how the scientific method has been used in the past to collect data through observation and experimentation, and to formulate, test and reformulate hypotheses about the physical universe; evaluate scientific information from a variety of sources and use that information to articulate well-reasoned responses to scientific concerns
3. Evaluate scientific information from a variety of sources and use that information to articulate well-reasoned responses to scientific concerns
4. Recognize the utility of alternative scientific hypotheses in the development of scientific theories, research and applications and understand how scientific evidence is used to develop hypotheses and theories
5. Describe ethical dilemmas arising out of contemporary scientific research and applications, which may include those related to social justice, and may have implications for local and/or global communities
6. Use scientific theories to explain phenomena observed in laboratory or field settings, and
7. Discuss the relevance of major scientific theories and research to their lives.

Academic Integrity:

SFSU maintains a firm policy on plagiarism and cheating, which can be found in the SFSU Bulletin. The Physics and Astronomy department also maintains a set of guidelines stating specific practices that are prohibited and the procedures for handling cases of academic cheating or plagiarism. This policy can be viewed online at:

<http://www.physics.sfsu.edu/policy/plagiarism.pdf>

Campus Safety and Sexual Violence

SF State fosters a campus free of sexual violence including sexual harassment, domestic violence, dating violence, stalking, and/or any form of sex or gender

discrimination. If you disclose a personal experience as an SF State student, the course instructor is required to notify the [Dean of Students]. To disclose any such violence confidentially, contact:

The SAFE Place - (415) 338-2208; http://www.sfsu.edu/~safe_plc/

Counseling and Psychological Services Center - (415) 338-2208; <http://psyservs.sfsu.edu/>

For more information on your rights and available resources: <http://titleix.sfsu.edu>