

Syllabus

Astronomy 48: Weather in Interplanetary Space

Berkeley City College
Course number #V0806
Fall Semester, 2007

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Meeting Times: Tuesdays, 6-8 PM

Class Location: Room 115 Kroeber Hall, UC Berkeley campus

Web Page: <http://cse.ssl.berkeley.edu/astro48bcc>

Course Description:

This course provides an introduction to background information and new discoveries in space science and astronomy, from Earth's magnetic field to galactic dust. Space scientists and astronomers from UC Berkeley will give guest presentations throughout most of the semester.

Course Goals:

This course is designed to:

1. Provide an opportunity to have fun learning about space science and astronomy.
2. Show the different paths people take to become research space scientists.
3. Share the excitement about space felt by space scientists and astronomers from the Space Sciences Laboratory (SSL) at the University of California, Berkeley (UCB).
4. Teach some of the fundamental science concepts which underlie much of the research topics.
5. Demonstrate how scientists share discoveries and information at scientific conferences.

Course Methodology and Student Objectives:

In class, we will make use of movies, lab activities, and presentations given by space scientists and astronomers. Each activity will be accompanied by class discussions. Out of class, students will read suggested articles on the web, as well as printed articles. Students will fill out a vocabulary sheet prior to each lecture to prepare for the lecture. Prior to each scientist's lecture, one student will introduce the scientists and brainstorm one question for the lecturer about that day's science topic.

Grading Policy – Pass/No Pass Criteria:

This is a pass/no pass course. To pass the course you must:

1. Attend 14 of 16 classes.
2. Turn in 11 of 13 vocabulary sheets (or other written assignments) at the beginning of each class when they are due.
3. With at least one other classmate, create and present a poster on a space science or astronomy topic covered in class.

Note on plagiarism: We expect all students to ensure that they have not copied word-for-word any text without reference. Please try to use your own words in defining the vocabulary words and when creating your poster. When that is not possible, reference your source.

Course Outline:

week	date	guest scientist	subject(s)	GS? LP?
1	Aug. 28		Introduction; Magnetism	GS, LP
	Sep. 4		CLASS CANCELED	-
2	Sep. 11	Bryan Mendez	The Sun-Earth Connection	GS, LP
3	Sep. 18		Solar Blast PBS Film and discussion Poster examples and discussion	GS, LP
4	Sep. 25	David Brain	Mars' Lumpy Magnetosphere	GS, LP
5	Oct. 2			GS, LP
6	Oct. 9	Marit Oieroset	Earth's Magnetotail	GS, LP
7	Oct. 16	Randolf Klein	The Formation of the Sun and the Planets	GS, LP
8	Oct. 23			GS, LP
9	Oct. 30	Jonathan Eastwood	Space Weather from the Sun to Earth's Magnetosphere	GS
10	Nov. 6	Thomas Immel	Earth's Upper Atmosphere	GS, LP
11	Nov. 13	Harald Frey	The Mysterious Aurora	GS
12	Nov. 20	Manfred Bester	Experimenting in Space	GS
13	Nov. 27	Anna Butterworth	Gathering Dust: the NASA Stardust Mission	LP
14	Dec. 4	Mark Moldwin	Space Weather and Climate Impacts on Life	GS
15	Dec. 11		Poster Preparations	GS
16	Dec. 18		Poster Session	GS, LP

Reading List:

The **required book** for the course is **The Sun** by **Steele Hill and Michael Carlowicz**. Before each class, please read through assigned sections from this book, along with your choice of readings suggested on the course website under "Syllabus". Occasionally hand-outs will be given in class for you to read before the next class period. Additional books

you may find interesting and useful are: The 23rd Cycle by Sten Odenwald, Cartoon Guide to Physics by Larry Gonick, and The Aurora Watchers Handbook by Neil Davis.

Steps to Successfully Enjoying This Class:

This course is designed to interest and inspire you. If you have any suggestions on how we can make the class better, please let one of the instructors know. We are open to feedback and hope to help you learn more about space science while you gain confidence in your ability to understand science in general.

If you keep up with the vocabulary sheets, do some reading before class on the topic being discussed, take part in the discussion by sharing questions you have, and start working on your poster early enough, you should succeed in enjoying this class.

Acknowledgements:

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