

ASTRONOMY 2 - OVERVIEW OF THE UNIVERSE

Spring 2010

Web-CT pages: http://ic.ucsc.edu/services/learning_management_system/student_info.php
<http://ic.ucsc.edu/webct>

Time and Location:

TTh 4:00-5:45pm; Thimann Lecture Hall #3

Textbook: Explorations: An Introduction to Astronomy by Thomas T. Arny and Stephen E. Schneider (6th ed. or any earlier)

Instructor: Professor Steven S. Vogt

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Teaching Assistants:

Rosalie McGurk

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Angie Wolfgang

Office: ISB 355; Ofc Hrs: M 4:30-5:30pm

Tu 10:30-11:30am

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Description:

Astronomy 2 is a one-quarter introductory course designed for non-science majors, and offers a broad overview of modern astronomy. The course will review many of the fundamental concepts of the astronomical universe, with an emphasis on how we came to know them. Since the universe is big, and the quarter is short, we can't cover everything. We will start with an overview of important historical developments, building up an understanding of basic physical principles (gravity, light, atoms), then moving outward to stars, extragalactic astronomy and cosmology (origin and evolution of the universe). There will be no coverage of our own solar system, though we will review the hunt for and discovery of other solar systems. As AY2 satisfies the Q-code requirement, math will be used in the homework problems and on tests. In addition to the formal course lectures, a number of stargazing sessions will be offered (as weather permits) to learn the constellations, the motions of the moon, planets, and stars through the heavens, and to observe with binoculars and small telescopes. A field trip to Lick observatory is also being arranged for TBD.

Discussion Sections:

These will be held once a week and are a very important part of the course as they allow further discussion and explanation of concepts presented in the lectures, in a smaller and more informal setting. Homework problem solutions will also be discussed in these sections. You will be expected to attach yourself to one of the sections and attend regularly.

Section	Day	Time	Room	Teaching Assistant
A	Monday	12:30-1:40PM	PSB 114	RM
B	Tuesday	6:00-7:10PM	PSB 110	AW
C	Wednesday	11-12:10PM	PSB 114	AW

D	Thursday	8:30-9:40AM	PSB 110	JJ
E	Wednesday	9:30-10:40AM	Nat Sci Anx 101	RM
F	Friday	12:30-1:40PM	PSB 114	JJ

GRADES:

Final grades will consist of 30% homework, 30% midterm exam, and 40% final exam, out of a possible 100%. Section attendance and handing in Chapter Review problems will be worth extra-credit of 5%.

HOMEWORK:

Homework will be assigned regularly in the lectures. A problem set will be distributed in class each Tuesday, and due in class the following Tuesday. The weekly assignments will consist of 5 problems/week at 10 points/problem and will count in total for 30% of the course grade.

EXAMS:

There will be a midterm and a final exam. I am more interested that you learn concepts rather than memorizing numbers, formulae, and taxonomy. Therefore, both exams will be open book/open notes. The MT will count 30% and the final will count 40% toward the course grade.

ASTRONOMY 2 - Spring 2010 - TENTATIVE LECTURE SCHEDULE

DATE	Lecture Topic	<u>Explorations Reading</u> (6th ed)
Mar. 30	Course Introduction	The Cosmic Landscape
Apr. 1	History of Astronomy	Chapter 1,2
Apr. 6	Gravity and Motion	Chapter 3
Apr. 8	Gravity and Motion	Chapter 3
Apr. 13	Gravity and Motion	Chapter 3
Apr. 15	Relativity	Essay 2
Apr. 20	What is Light?	Chapter 4
Apr. 22	Telescopes and Instrumentation	Chapter 5
Apr. 27	Atoms and Spectroscopy	Chapter 4
Apr. 29	Measuring and Properties of Stars	Chapter 13
May 4	Properties of Stars	Chapters 12 and 13
May 6	MIDTERM	Open notes and open book
May 11	The Nearest Star – Our Sun	Chapter 12
May 13	Stellar Structure	Chapters 12 and 13
May 18	The Secret Lives of Stars – Evolution	Chapters 14 and 15
May 20	Our Home Galaxy – the Milky Way	Chapter 16
May 25	Off into the Abyss - Extragalactic	Chapter 17
May 27	The Edge of Forever – Cosmology	Chapter 18
June 1	Cosmology	Chapter 18
June 3	Are we alone? The hunt for other worlds	Essay 4
June 10	Final Exam: 12:00pm-3:00pm	Open book and open notes

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