ASTRONOMY 1 – SYLLABUS – WINTER 2014

Section Number 0103 M,T,W,TH 10:50 A.M. – 1:20 P.M.

INSTRUCTOR: Richard Rains

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OFFICE HOURS: M, T, TH, W 1:30 – 3:30 P.M.
Office number: CMS 241

TEXTBOOK

Required: "Astro" by Backman/Seeds, 1st ed
ISBN 0-538-73804-9
Campus Bookstore: $86 new/$65 used

STUDENT LEARNING OUTCOMES

1. Explain the methods astronomers use to explore the natural phenomena of the universe, including observation, hypothesis development, and evaluation of evidence.
2. Demonstrate a working knowledge of the historical development of key astronomical concepts such as the ever-unfolding discovery of our place in the universe, including the latest developments in planetology and cosmology.
3. Identify and evaluate the causes and possible solutions to problems of environmental concern such as global warming, resource conservation and pollution.

COURSE DESCRIPTION: Addresses such questions as:
What is our place in the universe?
What kinds of things occupy the universe?
What am I actually seeing when I look up at the sky (moon, planets, stars, etc)?
What is it like on other planets?
Where did the universe come from? Where is it going?
Is there life elsewhere in the universe?
How do we know what we know?

COURSE OUTLINE: The course outline is the same as the table of contents of the textbook, “Astro”.

GRADES: The final grade will be determined by:

Homeworks:	20%	(Two of these will be dropped)
Lecture Quizzes:	20%	(Two of these will be dropped)
Test 1, Jan 13	20%	(The lowest test will be dropped)
Test 2, Jan 22	20%	
Test 3, Feb 3	20%	
Final Exam, Feb 6	20%	

Grades and syllabus are posted on the online at http://www.lamission.edu/~rainsre

Homework is always due the next class meeting after it is assigned. It is collected only during the first fifteen minutes of that class. No late homework is accepted under any circumstances.

A brief **Lecture Quiz** may be given during the last 10 minutes of each class meeting only. The quiz will cover the lecture and will allow open notes. Missed quizzes may not be made-up and will be recorded as zero. The two lowest Lecture Quiz grades, however, will be dropped at the end of the semester.

The three **tests** will take about one hour each. They are closed book, closed notes. No make-up tests will be given. However, the single lowest test grade will be dropped at the end of the semester. (Not including the final examination.) **The key to passing the one-hour-tests and the final exam is the Study Guide**, which can be found at http://www.lamission.edu/~rainsre .

The **final examination** is closed book, open notes(one page hand-written), and will be comprehensive: it will cover the entire course.

No early or late examinations or quizzes will be given under any circumstances. Please arrange your life accordingly.

LECTURE SCHEDULE:

Week 1
Jan 6: Chapters 1 and 2: The Cosmos; Motions of the Moon, Sun, and Stars
Jan 7: Chapter 3: Copernicus, Kepler, Galileo and Newton
Jan 8: Chapter 4: Light and Telescopes and Other Instruments
Jan 9: Chapter 5: Spectroscopy and the Sun
Week 2
Jan 13: Movie: Myth Busters "Moon Myth": **Test 1:** Chapters 1 through 5
Jan 14: Chapter 6 and 7: Stars: Structure and Formation of Stars
Jan 15: Chapter 8: Deaths of Stars and
Jan 16: Chapter 9: Milky Way Galaxy
Week 3
Jan 20: Holiday: Martin Luther King
Jan 21: Chapter 10: Galaxies
Jan 22: Video: Hubble Space Telescop. **Test 2:** Chapters 6 through 10
Jan 23: Chapter 11: The Universe
Week 4
Jan 27: Chapter: 12: Origin of the Solar System (Except 12.3)
Jan 28: Chapter 13: Earth
Jan 29: Chapter 13: Moon
Jan 30: Chapter 13: Mercury and Venus and Mars
Week 5
Feb 3: Movie: Mars Rovers: **Test 3**: Chapters 11 through 13
Feb 4: Chapter 14: Jupter and Saturn, Uranus, Neptune, Pluto
Feb 5: Chapter 12.3: Comets and asteroids: Chapter 15: Life Elsewhere
Feb 6: Life: Final Exam Chapters 1 through 15

CELL PHONE POLICY: No cell phone activity of any kind, including text messaging, is allowed while class is in session.
MEDIA PLAYER POLICY: Please remove all ear buds and headphones upon entering the classroom.
ETHICS POLICY: Any student found to be cheating on any quiz or test will receive an immediate zero on that activity.
DATES listed on this syllabus may change. Each student is responsible for current class announcements, whether he/she is present in class or not.

Last Day to drop the class without a "W":	Jan 8
Last Day to drop the class with a "W":	Feb 1

NOTE: It is the student's responsibility to drop the class. After the final census date, the instructor is not responsible to exclude students who have become inactive.