Course Syllabus

Fall 2008, Pima Community College, Desert Vista Campus

Solar System (introductory Astronomy) (**AST 101IN**) section code **11470**
Monday & Wednesday 11:30 AM – 2:10 PM, room C122
required materials: *Universe* (7th edition) by Freedman and Kaufmann
PCC-Desert Vista Lab Manual for AST 101IN
scientific calculator (or graphing calculator)
bound composition book with quad ruled (graph paper) pages

Instructor: Carleton F. Stewart
office: TBA office hours: TBA
e-mail: mandrakethebard@cox.net phone: 206-5147 (faculty center)

Prerequisites: Though there are no formal prerequisites, students are expected to have a college reading and writing level, and mathematical principles (arithmetic, algebra, and geometry) will be used throughout the class.

Computer Access: A web site will be maintained that will contain information relevant to this class, as well as copies of assignments. Though most assignments will be printed in the lab manual, any new assignments will be made available on the website, and several assignments will make use of internet resources.. Therefore, all students must have access to the internet (at home or through PCC facilities) as soon as possible.

The course website may be found at the web address -- http://dv.pima.edu/~cfstewart

Course Description: This course is an introduction to the science of the nature and origin of the solar system: the Sun and its family of planets, along with comets and asteroids. This will include the history of Astronomy and special topics regarding space programs. Lab activities will include in-class exercises and outside observation projects. This course will emphasize problem-solving techniques as well as the development of critical thinking abilities.

Detailed course objectives can be accessed at www.pima.edu

Grading: Your grade for this course will be determined as follows:

Three exams	30 %
Labs	40 %
Observing Notebook	10 %
Homework	10 %
In-class activities, video summaries, quizzes, etc.	10 %
Total:	100 %

Please note several items concerning grading:

1) Grades will be assigned as follows: A = 90 – 100 %, B = 80 – 89.9 %, C = 70 – 79.9 %, D = 60 – 69.9 %, F = below 60 %.
2) **All exams except the Final Exam will be taken in the testing center and will only be available for a limited amount of time as indicated on the course schedule.**
3) Labs will be held at various times during the scheduled period as best supports learning. It is your responsibility to make arrangements as early as possible should you miss some aspect of this course. In addition, due to scheduling constraints, the window of time in which to make up a missed lab will be of short duration.

4) Should any student receive assistance from another student on an exam or quiz, they will be given a zero (0) for that portion of the course and possibly be withdrawn from the course.
5) You will have a reasonable amount of class time to work on in-class labs. Further lab work must be done outside of class. Labs will only be accepted for full credit up to the due date given.
6) Work turned in **late** during the semester will lose 10% of its maximum point value for every class-day that it is overdue. After 3 class-days have passed, late work will not be accepted.
7) There will be no grades of P (Pass) or AU (Audit) given in conjunction with this course. Grades of I (Incomplete) and W (Official Withdrawal) will only be given in accordance with the grading policies stated in the Pima Community College Catalog for this term. It is solely at the instructor's discretion that I grades may be given. Students who simply stop coming to class without dropping or discussing the situation with me will receive an F.

Observing Notebooks: All students must keep a notebook to record sky observations made outside of class. These notebooks are due **December 8**, so I will have time to grade them and get them back to you. I am available to advise on suitable observations, but here are some basic guidelines.

1) Observations should be of a wide variety of objects, such as stars, planets, moons, satellites, star clusters, nebulae, meteors, aurorae, rainbows, sunrises, sunsets, haloes, etc.
2) This class runs a little over 15 weeks, and you must have a minimum of 15 separate observations (that's 1 per week if you get started early and keep up…much easier that way)
3) Every observation should be accompanied by an observation number, the observer's name, time, date, location, weather & seeing conditions, and method of observation.
4) Each observation should consist of a detailed **description** of the event, **identification** and explanation of the objects and processes involved, and a labeled **picture**. (this can be a drawing, diagram, photograph, etc.)
5) The observations should be in chronological order, easily distinguishable from each other, and on separate pages. The notebook should be neat and legible, and you should use accurate, appropriate, and precise terminology in your descriptions and explanations.

Assessment: Student progress in this course will be measured through the graded work listed above, and through non-graded group activities throughout the course. Further non-traditional assessment techniques, to be announced later in the semester, may also be utilized.

Attendance Policy: Students will not be graded on attendance, but mastery of this subject is dependent upon regular and punctual attendance. A roll sheet will be passed around at the beginning of each class period. Assignments turned in late because of absenteeism, without a good reason for such absence, will still be subject to policies concerning late work.

Withdrawals: Students may withdraw from this course with a grade of W by seeing an advisor by November 13. The last day to drop the course with a refund is September 9.

The Student Code of Conduct (http://www.pima.edu/studentserv/studentrights/student-conduct/index.shtml) and the Scholastic Ethics Code (http://www.pima.edu/studentserv/studentrights/code/index.shtml) prohibit plagiarism, cheating, and other unacceptable behavior. Students found in violation of these codes will be dealt with in accordance with university policies.

If you have a disability that requires special accommodations, you are strongly urged to contact the Disabled Student Resources (DSR) office at the beginning of the semester so that reasonable accommodations can be made in a timely manner. The DSR office is located in the Plaza Bldg., Room F-109 or contact 206-5151.

COURSE SCHEDULE FOR FALL 2008 (tentative)

Date	Topic	Reading	Labs and Other Work
Aug 27	Science and Astronomy	Ch 1	Video 1, Labs 1&2 (assigned)
	********** **Labor Day HOLIDAY September 1st** **********		
Sep 3	Ancient Astronomers	Ch 2	
8	Classical Astronomy	Ch 4	Video 2, Lab 1 (due)
10	Renaissance Astronomy	Ch 4	Video 3
15	The Moon from Earth	Ch 3	Lab 3 (in class), Lab 4 (assigned)
17	Celestial Navigation & Timekeeping, pt 1	Ch 2	Lab 5 (in class), Lab 6 (assigned)
22	Celestial Navigation & Timekeeping, pt 2	Ch 2	Lab 7 (in class)
24	Our Solar Neighborhood		Lab 8 (in class), Lab 2 (due)
	Exam 1 will be available from September 24 through September 30		
29	Universal Motion	Ch 4	Lab 9 (in class), Homework 1 (due) Labs 10 – 12 (assigned)
Oct 1	Energy & Matter		Lab 6 (due)
6	Light	Ch 5	Video 4, Lab 10 (due)
8	Optics and Telescopes, pt 1	Ch 6	
13	Optics and Telescopes, pt 2	Ch 6	
15	Space Exploration, pt 1		Video 5 pt 1
20	Space Exploration, pt 2		Video 5 pt 2, Lab 13 (assigned)
22	The Solar Nursery	Ch 8	Video 6
27	Our Sun	Ch 19	Video 7, Lab 11 (due)
29	Our Home Planet	Ch 9	Video 8, Lab 4 (due)
Nov 3	The Moon in Detail	Ch 10	Video 9, Lab 13 (due)
	Exam 2 will be available from November 3 through November 8		
5	Mercury: Scorched World	Ch 11	Lab 14 (in class) Homework 2 (due)
10	Venus: Greenhouse Nightmare	Ch 12	Video 10
12	Mars: The Red Planet, pt 1	Ch 13	
17	Mars: The Red Planet, pt 2	Ch 13	Video 11
19	Comparative Planetology	Ch 7	Video 12, Lab 15 (assigned)
24	Jupiter: A Failed Star	Ch 14	
26	The Jovian Satellites	Ch 15	Video 13, Lab 15 (due) Lab 16 (assigned)
	********** **Thanksgiving HOLIDAY November 27 – 30** **********		
Dec 1	Saturn: Ringed Wonder	Ch 14&15	Lab 17 (in class)
3	The Outer Worlds	Ch 16	Video 14, Lab 16 (due)
8	The Solar Vagabonds, pt 1	Ch 17	Video 15
10	The Solar Vagabonds, pt 2	Ch 17	Video 16
15	********** **Exam 3 – given IN CLASS on this date** **********		
17	********** **Last Day – all remaining assignments returned** **********		

Lab and Video reference numbers refer to the list on the last page of the syllabus

SCHEDULED LABS & VIDEOS FOR FALL 2008

	Labs	Videos
1	Scientific Notation	Powers of Ten
2	Conversion Factors	Cosmos – The Backbone of Night
3	The Moon from Earth	The Day the Universe Changed – Infinitely Reasonable
4	The Moon in its Orbit (observational)	Elements of Physics – Properties of Light
5	Sky Familiarization	Nova – To the Moon (transcript available)
6	Calibration (observational)	Nova – Origins, Earth is Born
7	Astronomical Timekeeping	Savage Sun
8	Scale of the Solar System	Planet Earth: The Living Machine
9	Kepler's Laws	The Universe – The Moon
10	Universal Law of Gravitation	The Enigma of Venus
11	Rotation & Revolution of the Earth (observational)	The Universe – Mars
12	The Starfinder	Planet Earth: The Climate Puzzle
13	The Moon (web lab)	The Universe - Jupiter
14	A Model of the Visible Planets	The Universe - Saturn
15	Comparative Planetology (web lab)	The Universe – The Outer Planets
16	Kepler's 3rd Law: The Jovian Satellites	Deadliest Planets
17	Saturn's Rings	