Course Syllabus
Astronomy 191-1 — The Solar System

Fall 2001 **MWF 1:00-1:50** PM **Chem-Phys 155**
http://nimbus.pa.uky.edu/Ast191

Instructor - Dr. Gary J. Ferland,Office CP 291; Telephone 257-8795; Office Hours, Monday. 11-12, Tuesday. 10-11. e-mail: gary@pa.uky.edu

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Course Requirements

Prerequisite AST 191 is a non-mathematical physical sciences course. Two years of high school algebra or MA 108R are listed as a prerequisite, but little math will be used in this course.

Course Goals and Content

This course is the first semester of the Astronomy 191/192 sequence, a non-mathematical introduction to our Universe. Ast 191 concentrates on our solar system, the sun our planets. Astronomy 192 is the companion course and covers stars, galaxies, and the Universe. The two courses may be taken in any order – Ast 191 is not needed to take 192.

Astronomy is the science that studies our place in the Universe. The basic questions we will think about are "where are we?", "how did we get here?", and "where are we going?". The course begins with an overview of planets, stars, galaxies, and the Universe. The sun and the various planets in the solar system are described, compared, and contrasted with the Earth. Understanding how the Earth was formed, how life began here, and the possibility that this occurred elsewhere constitutes a thread running throughout the course.

Course Material

Text: *Voyages Through the Universe*, by Fraknoi, Morrison, and Wolff.
Sample Tests: Copies of last semester's tests are available on the class web site.

Course Grade

The course grade will be earned from four tests, a written component that consists of observations of phases of the moon, and optional extra credit.

Tests. There will be three tests during the semester, and a final exam. All tests are machine-graded multiple choice. Bring a #2 pencil! The first three tests are during normal class time, but the final is at 8-10AM on Dec 11. All tests are in our normal classroom. The final exam counts as much as two hour exams and is half review of the first three exams, and half over material covered since the third test. You must keep your old exams until the course is over in case of problems with how the exam was graded.

Exam Review Sessions will be held Wednesday afternoon before the exams, 5 to 5:50PM, in CP 155.

Makeup Exam. If you know you must miss an exam for a valid reason you can make an appointment to take the exam a day or two early by contacting the TA. All four tests must be taken to complete the course. An exam missed for a valid reason can be made up by taking a makup exam within one week of the missed test. You must make arrangements to take the makeup exam with the TA either before or within one week of the missed exam. More than one make-up exam will only be given in exceptional and well-documented cases that meet the University's criteria for a valid absence.

Ast 191 Course Grade

Component	*Date*	*Points*	*% Grade*
Test 1	Sep 14	100 pt.	19.2%
Test 2	Oct 12	100 pt.	19.2%
Test 3	Nov 16	100 pt.	19.2%
Final	Dec 11	200 pt.	38.5%
Phases of the Moon		20 pt.	3.8%
Cumulative Total		520 pt.	100.0%

Written Component. We will observe the moon 4 times over the period between new moon (Sept 17) and full

moon (2 weeks later), and describe it with a report. All reports must be turned in by Oct 6 to receive credit. New moon marked the beginning of the month for all ancient cultures. Over the following two weeks it will move away from the sun, and we will see increasing amounts of its "day" side. At the end of two weeks the moon will be in its full phase, and it will appear as a bright circle of light. During this time the moon will move from the western to the eastern horizon and will have traveled roughly 700,000 miles. Details for the format of the moon reports will be discussed on the class day when the moon project starts, on Sept .

Extra Credit Earn extra credit by asking questions in class! Extra credit will be offered to encourage communication between students and the instructor. To earn 2 points extra credit, ask one or more questions on a given day in class (or respond to a question asked of you by the instructor). Then write your name, student number and at least one of these questions along with its answer on a sheet of paper and submit this sheet to the instructor after class. You may also earn 2 points extra credit by asking questions during office hours or at other times. Again, you must submit at least one of these questions and its answer on a full sized sheet of paper.

You may earn up to 10 points extra credit in these ways, of which no more than 4 points (2 questions) may be earned after Test 3. This credit is truly *extra* credit. That is, the extra credit system can only augment your grade but not detract from it if you choose not to participate.

Other extra credit opportunities will be announced as the semester progresses. These will generally involve writing small essays concerning topics that come up in class. This extra credit is in addition to the extra credit offered for questions in class, and does not have a 10-point limit.

Internet Access: The moon reports and extra credit must be turned in on the class web site, and grades will be posted there. If you do not have internet access or for other reasons do not wish to submit material this way, you must make special arrangements with the instructor early in the semester.

Posted grades: Grades will be posted on the Internet after each hour exam. This is done to allow you to verify our recordkeeping. You must notify the TA of errors in the posted grades by the time the next test is given. For instance, all questions about grades earned between Test 1 and Test 2 must be asked before Test 3.

Course Outline

Subjects	Text Chapters
Introduction	Prologue, 6
Gravity, Orbits	2
Timekeeping, moon phases, tides, eclipses	1
TEST 1	Sep 14
Light, Telescopes,	5
The Earth, impact cratering	7
impact cratering	7, 8
TEST 2	Oct 12
The Moon, Apollo	8
Age of Solar System, its birth	8, 13
Mercury	8
TEST 3	Nov 16
Venus, Mars	9
Jovian Planets	10
rings, moons	11
Final Exam	Dec 11, 8-10AM

Contents	Bookmark name	Target
Class room	room	Chem-Phys 155
time of class	class_time	MWF 1:00-1:50 PM
semester	semester	Fall
year	year	2001
section number	section	1
Date test 1	test1	Sep 14
test2	test2	Oct 12
test 3	test3	Nov 16
test 4 date	test4	Dec 11
test 4 time	test4time	8-10AM
TA name	TAname	Adam Bryant
TA office	TAoffice	CP 252
TA phone	TAphone	257-3942
TA office hours	Tahours	Mon, Thurs 3:30-4:30
TA E-mail	Taemail	albrya0@pop.uky.edu
1st new moon	NewMoon	Sept 17
1st day visisble	NewMoonVisible	Sept 19
Moon Done	MoonDone	Oct 6