

ASTR 1010: Astronomy of the Solar System

Fall 2007 * Mon/Wed/Fri 11:00 – 11:50 a.m. * Aderhold Learning Center 5

Instructor: Deepak Raghavan
One Park Place South, Room 730
Telephone: (404) 413-6024 *Ask for me, I don't usually answer it*
Email: raghavan@chara.gsu.edu
Class Website: <http://www.chara.gsu.edu/~raghavan/teaching.html>
Research: Extrasolar Planets, Stellar Multiplicity, Solar-Type Stars

Textbook: The Cosmic Perspective, *Fourth Edition*, by Bennett, Donahue, Schneider & Voit

Classes: I strongly encourage you to attend classes regularly. We will have in-class activities that will require your presence to obtain credit. While the classes will follow the textbook material, there will be extra information shared during our interaction, which are fair game for inclusion in the tests. While in class, please help me maintain a disciplined, but interactive and enjoyable learning experience. I encourage active participation from all of you with your questions and comments.

Laboratory: Labs are an essential part of this course and offer a fun, hands-on way to enhance your learning. All labs will be held in 528 Kell Hall. This class is divided into multiple lab sections, and you must attend your lab section based on your registered schedule. If you fail the lab portion due to lack of attendance or otherwise, you will fail the entire course.

Office Hours: Mon/Wed 9:30 – 10:30 a.m., Tue/Thu 10:00 – 11:00, or by appointment
If you feel that you need a bit of extra help, please come and see me outside of class. I want all of you to do well in this course, and will make the time to help.

Performance: Grades will be assigned based on the following:

Homework (4 assignments)	15%
In class activities & quizzes	10%
Laboratory work	25%
In-class exams (best 2 of 3)	30%
In-class final exam	20%

In addition to the above, I will offer the opportunity to earn bonus points throughout the semester. To maintain fairness, I will apply a penalty for assignments turned in late. I will not be able to offer make-up exams, but will only consider your two best scores from the three exams. I strongly encourage you to take all three exams, so your worst score can be dropped. The final exam will include questions from all the material covered. I am not a fan of using curves to assign a grade, and will try my best to avoid it. You are expected to do your own work and to abide by the Policy on Academic Honesty discussed in the GSU *General Catalog*. I take cheating very seriously and will take appropriate disciplinary action.

Class Schedule: The class schedule is detailed on the next page. I plan on following it closely, but may make changes as required.

Class Schedule

Date	Topic	Textbook Sections	Homework
AUG 20	Welcome to Modern Astronomy!	1.1, 3.4	
AUG 22	Scale of the Universe: Size, Age, Numbers	1.2	
AUG 24	<i>Friday Fun: Using clues from the sky</i>		
AUG 27	The Earthly View of the Universe	1.3, 2.1, 2.4, S1.1	
AUG 29	The Seasons & Phases of the Moon	2.2, 2.3	HW 1 Assigned
AUG 31	Solar & Lunar Eclipses	2.3	
SEP 3	LABOR DAY HOLIDAY		
SEP 5	Ancient Astronomy	3.1, 3.2	
SEP 7	The Copernican Revolution, Kepler's Laws	3.3	HW 1 DUE
SEP 10	The Physical Laws, Acceleration, & Tides	4.1, 4.2, 4.3, 4.5	HW 2 Assigned
SEP 12	Light & The EM Spectrum	5.1, 5.2	
SEP 14	<i>Friday Fun: Lengthening Days and Vanishing Months</i>		
SEP 17	Light & Matter	5.3	HW 2 DUE
SEP 19	Learning from Light	5.4, 5.5	
SEP 21	EXAM 1		
SEP 24	Telescopes	6.1, 6.2, 6.3, 6.4	
SEP 26	Solar System Overview & Formation Clues	7.1, 7.2, 8.5	
SEP 28	The Birth of the Solar System	8.1, 8.2	
OCT 1	Formation of the Planets	8.3, 8.4	
OCT 3	The Sun as a Star	15.1, 15.2	
OCT 5	The Sun as Our Star	14.1, 14.2, 14.3	HW 3 Assigned
OCT 8	Mercury	9.1, 9.2, 9.3, 10.3	
OCT 10	Venus	10.1, 9.5, 10.5	
OCT 12	Earth – Geology	9.6	HW 3 DUE
OCT 15	Earth - Atmosphere	10.2, 10.6	
OCT 17	Moon	7.3, 9.3, 10.3	
OCT 19	EXAM 2		
OCT 22	Mars	9.4, 10.4	
OCT 24	Jupiter	11.1, 11.2, 11.3	
OCT 26	<i>Friday Fun: Asteroids & Craters</i>		
OCT 29	Jupiter's Moons	11.1, 11.2, 11.3	HW 4 Assigned
OCT 31	Saturn	11.1, 11.2, 11.3	
NOV 2	Saturn's Moons	11.1, 11.2, 11.3	
NOV 5	Uranus & Neptune	11.1, 11.2, 11.3	
NOV 7	Minor Planets, Kuiper Belt Objects	12.3	HW 4 DUE
NOV 9	<i>Friday Fun: The Pluto Debate</i>		
NOV 12	Comets & The Oort Cloud	12.2	
NOV 14	Detecting Worlds Around Other Suns	13.1, 13.4	
NOV 16	EXAM 3		Bonus Project Assigned
NOV 19	FREE DAY – NO CLASS!		
NOV 21	THANKSGIVING HOLIDAY		
NOV 23	THANKSGIVING HOLIDAY		
NOV 26	The Nature of Other Solar Systems	13.2, 13.3	
NOV 28	Life & Requirements for Life		
NOV 30	<i>Friday Fun: Playing with The Drake Equation</i>		
DEC 3	Life on Earth	24.1	
DEC 5	Life Outside Earth?	24.2, 24.3, 24.5	
DEC 7	Final Review		Bonus Project DUE
DEC 12	FINAL EXAM 10:15 a.m. – 12:15 a.m.	Covers All Material	