

ASTR 1010: Astronomy of the Solar System
Spring 2016 * MW 1:30 - 2:45 pm *** 170 Urban Life Building**

Instructor: Dr. Douglas R. Gies
25 Park Place NE, Room 606
Telephone: (404) 413-6021
E-mail: gies@chara.gsu.edu
Web Site: <http://www.astro.gsu.edu/~gies/ASTR1010/>

Office Hours: TR 1:00 – 2:00 pm or by appointment

Prerequisites: None.

Course Objectives: This is a survey course designed for non-specialists that introduces the science and adventure of astronomy. Students will learn through lectures and reading about the processes that have formed the current universe and develop a perspective about our place and time in the universe.

Textbook: *The Cosmic Perspective* (7th ed.) by Bennett, Donahue, Schneider, & Voit (2014; ISBN 978-0-321-83955-8; Pearson Education). You may also purchase a license key for www.masteringastronomy.com (not required).

Laboratories: You will need to purchase

***** Lab textbook *Activities in Astronomy* 2013 ed., by John Wilson *****

Lab sections: #18508 (M3:00-4:50pm), #18511 (W10:00-11:50am),
#18572 (R11:00am-12:50pm), #18513 (R3:00-4:50pm)

If you have a schedule conflict, you should go through drop/add by Jan. 15.

- See the lab syllabus at <http://www.astro.gsu.edu/lab/>.
- Labs begin the week of January 25 and are held in 528 Kell Hall.
- You are required to attend the same laboratory section each week.
- The lab will include one evening session for observing with telescopes.
- The lab coordinator is Dr. John W. Wilson, (404) 413-6035.
- Bring pencils, eraser, drawing compass, protractor, 30 cm ruler, and simple calculator.
- A passing lab grade is required in order to pass the course.

Grades:	Laboratory	25%	A+:97-100%,A:94-96%,A-:90-93%,
	Best 3 of 4 tests	30%	B+:87-89%, B:84-86%, B-:80-83%,
	Assignments	20%	C+:77-79%, C:74-76%, C-:70-73%,
	Notebook	5%	D:60-69%, F:0-59%
	Final exam	20%	

Because only 3 of 4 tests will be counted, there will be **no** make-up tests.

The course syllabus provides a general plan for the course; deviations may be necessary.

Assignments: I will post five homework assignments on the class web site:

<http://www.astro.gsu.edu/~gies/ASTR1010/>

These will usually be due in class one week after the assignment is posted, although some assignments may take place during class. The assignments will be based on topical content from the text and lectures. No credit will be given for late assignments, so please keep up with the work.

Notebook: Purchase a 3-ring binder for a class notebook. Add dividers to make sections for the syllabus, class handouts and your notes, assignments, tests, and labs. You will present the notebook to me at the end of the semester for inspection and credit.

Exams: Both the tests and final exam will consist of multiple choice and true/false style questions. Scan forms will be provided on the day of the test/exam, and please bring a pencil to enter your answers. The final exam will take place on Wednesday, April 27, 1:30pm – 3:00pm. There will be no opportunity for make-up tests/exam except for exceptional circumstances. Students are expected to do their own work and to abide by the Policy on Academic Honesty (<http://www2.gsu.edu/~wwwfhh/sec409.html>).

Attendance: Regular class attendance is highly recommended; it is usually the key to success. Attendance will be taken on five random dates during the semester, and students will be awarded two bonus points for attendance at each class for a cumulative total of a maximum of 10 bonus points that will be applied to the final grade out of 100%. Laboratory attendance is required each week.

Key Dates: Last day to withdraw and receive a grade of W: March 1.

Tests: Feb. 10, Mar. 2, Mar. 30, Apr. 20; Exam: April 27.

Notes:

Assessment - Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take time to fill out the online course evaluation.

Disability - Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services. Students may only be accommodated upon issuance by the Office of Disability Services of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought.

Receiving a grade of “incomplete” – In order to receive an incomplete, a student must inform the instructor, either in person or in writing, of his/her inability (non-academic reasons) to complete the requirements of the course. Incompletes will be assigned at the instructor’s discretion, and the terms for removal of the “I” are dictated by the instructor. A grade of incomplete will only be considered for students who are (a) passing the course

with a C or better, (b) passing the lab portion of the course, (c) present a legitimate, non-academic reason to the instructor, and (d) have only the exam left to finish.

Key Web sites:

NASA Solar System (JPL): http://www.jpl.nasa.gov/solar_system/
 GSU Hard Labor Creek Observatory: <http://www.astro.gsu.edu/HLCO/>
 Fernbank Science Center and Observatory: <http://www.fernbank.edu/>
 Astronomy Picture of the Day: <http://apod.nasa.gov/apod/>
 Sky and Telescope Magazine: <http://www.skyandtelescope.com/>
 The Evening Sky Map: <http://skymaps.com/downloads.html>

Schedule of Classes (numbers in parentheses give the relevant text chapter):

Mondays		Wednesdays	
Jan11	Introduction (1)	Jan13	Space and time scales (1)
Jan18	MLK Jr. Holiday	Jan20	Night sky, seasons (2)
Jan25	Motion of Moon (2)	Jan27	Motion of Planets (2)
Feb01	Ancient astronomy, Copernicus (3) HW #1 Due	Feb03	Kepler, Galileo (3)
Feb08	Time, sky coordinates (S1)	Feb10	Navigation (S1); Test #1 Chap. 1, 2, 3, S1
Feb15	Newton, motion (4)	Feb17	Gravity, tides (4)
Feb22	Nature of light (5) HW #2 Due	Feb24	Spectroscopy (5)
Feb29	Telescopes (6)	Mar02	CHARA Array; Test #2 Chap. 4, 5, 6
Mar07	Solar System (7) HW #3 Due	Mar09	Space exploration (7)
Mar14	Spring Break	Mar16	Spring Break
Mar21	Birth of Solar System (8)	Mar23	Terrestrial planet interiors (9)
Mar28	Moon, Mercury, Venus, Mars (9) HW #4 Due	Mar30	Earth (9); Test #3 Chap. 7, 8, 9
Apr04	Planetary atmospheres (10)	Apr06	Earth's atmosphere (10)
Apr11	Jovian planets (11)	Apr13	Jovian satellites and rings (11)
Apr18	Meteors, asteroids, comets (12) HW #5 Due, Notebook Check	Apr20	Pluto, Kuiper Belt Objects (12); Test #4 Chap. 10, 11, 12
Apr25	Planets around other stars (13) Notebook Check	Apr27	Exam 1:30 pm – 3:00 pm

LOCAL MEAN TIME OF MERIDIAN PASSAGE

