

## AST 105: Introduction to the Solar System / Fall 2011

**Instructor:** Prof. Michael Zingale, ESS 440, mzingale@mail.astro.sunysb.edu, (631) 632-8225

**Teaching Assistant:** TBD

**Meeting Time/Place:** Tues. and Thurs. 11:20 am to 12:40 pm, Simons Center 103

### Course Description:

This course provides an introduction to the Solar System. We start with exploring the modern science of Astronomy, continue with a development of the physical concepts necessary to understand the Solar System, and then focus on what we know about our Solar System. This course is presented at a level appropriate for non-science majors. Although there are no formal prerequisites for this class, a high school knowledge of science and basic math will be assumed.

*As this is a 3 credit course, you should expect to spend 6-9 hours per week outside of the lectures on this course.*

### Course website:

Course material/announcements will be posted on the AST 105 blackboard webpage: <http://blackboard.stonybrook.edu/>

### Syllabus:

Any changes to this syllabus will be announced in class and on the AST 105 blackboard webpage.

### Contacting the Instructor:

*e-mail:* [mzingale@mail.astro.sunysb.edu](mailto:mzingale@mail.astro.sunysb.edu) (be sure to add "AST 105" to the start of the subject line of any e-mail).

*office hours:* Mon. 10:30 am to 12:00 pm

Wed. 1:00 pm to 2:30 pm

There is no way to pick a set of office hours that can accommodate the schedule of all ~200 students in this class. If you cannot make the scheduled office hours, contact the instructor to set up an appointment or try dropping by.

### Quizzes:

There will be 9 quizzes during the semester, given on Thurs. The quizzes will focus on the reading assigned for that week. Students will have 10 minutes to complete the quizzes. *Note: quizzes can be given at the beginning or end of the class, or any time in-between.* Students who arrive late or miss the class will not be allowed to make up the quiz. Your lowest 2 quiz scores will be dropped in computing your quiz average grade.

Quiz grades will be posted online to blackboard approximately 1 week after the quiz, and graded quizzes will be distributed back to students in class at that time. You should always check to make sure your grade was recorded accurately, and bring any discrepancy to the instructor's attention immediately. Missing grades (i.e. you took the quiz but no grade appears) should be brought to the instructor's attention within 1 week of the posting of the grades.

### Exams:

There will be two midterm exams during the semester, as well as a final exam during finals week. Students are responsible for knowing the material presented in the lectures and in the assigned readings of the text. The exams will contain multiple choice and true/false questions. **No electronic devices (calculators, PDAs, cell phones, . . .) are allowed during the exams. Any notes or books must be placed under your seat during the exam.**

*Students are expected to show up on time for exams, with their student ID card.* Students who arrive late will not be granted extra time. Students arriving more than 30 minutes late may not be allowed to sit for the exam. No exams will be collected until 30 minutes have elapsed in the exam period.

*Students should not expect that they will be allowed to make up an exam. Reasons for wanting to make-up an exam will be judged on a case-by-case basis.* Students wanting to make up an exam must have a *valid* excuse (e.g. hospitalization, athlete in University-related sporting event, jury duty, car accident report) and notify the instructor *before* the scheduled exam. **Students should be prepared to provide documentation supporting their excuse.** Any make-ups will be scheduled within one week of the original exam date and may be different than the in-class exam.

### Final Exam:

According to the University Registrar (<http://www.stonybrook.edu/registrar/exams.htm>), the final exam is currently scheduled for Tues. Dec. 20 from 2:15 to 4:45 pm. Any changes to the time, as well as the location of the exam will be announced in class toward the end of the semester. **All students are expected to take the final exam. There will be no make-ups for the final.**

**In the event of a discrepancy between what is listed here and what is on the Registrar's site, the date/time given by the Registrar will be used.**

**Textbook:**

The required text is “Cosmic Perspective: Solar System, 6th Ed.” by Bennett et al. (Pearson/Addison Wesley). *Note: the exams and quizzes will be based on the assigned reading—therefore it is essential that you keep up with the reading.* You may find it helpful to consult the reserve course text, “The Planetary System, 3rd Ed.” by Morrison and Owen (Addison Wesley)

**Course schedule:**

The lecture notes used in class are based on the course text and reserve book., as well as slides from previous instructors (both A. Evans and G. Denicoló). **The course notes are not intended to replace the course text—you will be responsible for any information in the assigned readings that is not covered in the lectures.** As we will follow the text closely, only a *small subset* of the lecture notes will be posted to the course blackboard site. The course notes are intended for students of AST 105 only.

*Note: there are several University holidays this semester—check the official academic calendar.*

class #	month	day	chapter <sup>a</sup>	topic	quiz schedule
1	Aug.	30	1	Introduction / Scale of the Universe	–
2	Sept.	1	2	Observations Around Us (seasons, eclipses, ...)	–
3	Sept.	6	3	Astronomy as a Science	–
4	Sept.	8	3	Astronomy as a Science	Quiz # 1 (covers Ch. 2 & 3)
5	Sept.	13	4	Concepts from Physics	–
6	Sept.	15	4	Concepts from Physics	Quiz # 2 (covers Ch. 4)
7	Sept.	20	5	Light and Matter	–
8	Sept.	22	5	Light and Matter	Quiz # 3 (covers Ch. 5)
9	Sept.	27	6	Telescopes	–
-	Sept.	29	-	<i>holiday: no class</i>	–
10	Oct.	4	-	<b>Midterm #1</b> (covers Ch. 1–6)	–
11	Oct.	6	7	The Solar System	–
12	Oct.	11	14	The Sun	–
13	Oct.	13	14	The Sun	Quiz # 4 (covers Ch. 7 & 14)
14	Oct.	18	8	Solar System Formation	–
15	Oct.	20	9	Terrestrial Interiors	Quiz # 5 (covers Ch. 8 & 9)
16	Oct.	25	9	Moon, Mercury, and Mars	–
17	Oct.	27	9	Venus and Earth	Quiz # 6 (covers Ch. 9)
18	Nov.	1	10	Atmospheres of Terrestrial Planets	–
19	Nov.	3	10	Atmospheres of Terrestrial Planets	Quiz # 7 (covers Ch. 10)
20	Nov.	8	-	<b>Midterm # 2</b> (covers Chapters 7–10, 14)	–
21	Nov.	10	11	Jovian Planets	–
22	Nov.	15	11	Jovian Planets and Moons	–
23	Nov.	17	11	Jovian Moons and Rings	Quiz # 8 (covers Ch. 11)
24	Nov.	22	12	Asteroids, Comets, and Meteorites	–
-	Nov.	24	-	<i>holiday: no class</i>	–
25	Nov.	29	12	Pluto et al.	–
26	Dec.	1	13	Exoplanets	Quiz # 9 (covers Ch. 12 & 13)
27	Dec.	6	13	Exoplanets	–
28	Dec.	8	24	Life in the Universe (?)	–
finals	Dec.	20 <sup>b</sup>	-	<b>Final exam</b> (covering all chapters)	–

<sup>a</sup>you should be sure to read the assigned reading before each class

<sup>b</sup>students should verify the date and time of the final exam on the Registrar’s website

**Assigned Reading:**

Each lecture in the course schedule has a chapter number listed next to it—this is your assigned reading. *Students are expected to have read the assigned chapters before the corresponding lecture.*

**Nighttime Observing Opportunities:**

Due to construction on the ESS roof, observing opportunities this semester will be limited. A few opportunities to look through a telescope will be made available throughout the semester. These will be announced in class.

**Extra Credit:**

There is no extra credit in this course.

**Course Grade:**

The final grade will be computed out of 100 points based on the following weightings:

Midterm #1:	25%
Midterm #2:	25%
Quizzes (best 7 out of 9):	20%
Final Exam:	30%

Letter grades will be based on a standard grade scale (i.e. an overall score > 90/100 would be an A- or better). However, if necessary, a curve may be applied based on the overall class performance. Individual exams will not be curved or normalized separately.

Students who wish to discuss their grades or class performance should see the instructor in person. *For privacy reasons, grades will not be discussed via e-mail.*

**Americans with Disabilities Act:**

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC(Educational Communications Center) Building, Room 128, (631)632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

**Academic Integrity:**

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at <http://www.stonybrook.edu/uaa/academicjudiciary/>

**Critical Incident Management:**

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

(information on the above required syllabus statements can be found at <http://www.stonybrook.edu/commcms/provost/policies.shtml>)