

ASTRONOMY 101
OUR CORNER OF THE UNIVERSE
FALL 2007
Course Staff & General Information

Lecturer	Prof. Carl Rosenzweig 319 Physics Building 443-5969 e-mail: rosez@phy.syr.edu	
Office Hours	Wednesday, 3:00-4:00 p.m., or by appointments Please bring your CLASS NOTES to any office hour discussion.	
Lectures	Tuesdays and Thursdays, 12:30-1:50 p.m. Tuesdays and Thursdays, 2:00-3:20 p.m. Stolkin Auditorium, Physics Building	
Labs	Meet in room B129E, located in the basement of the Physics Building.	
Administrative Questions	Mrs. Arlene Johnston, Course and Undergraduate Secretary Undergraduate Office, Rm. 111, Physics Bldg. (443-1915) For ALL administrative issues related to this course.	
Textbook	<i>Astronomy A Beginner's Guide to the Universe</i> by Chaisson/McMillan, 5 th Edition, 2007, Pearson Prentice Hall, plus remote control "clicker". This text is available at the Syracuse University Bookstore.	
Teaching Assistants	<p><u>Joseph Kiveni</u> 308 Physics Building e-mail: mkiveni@syr.edu</p> <p><u>Mario Martone</u> 415 Physics Building e-mail: mcmarton@syr.edu</p> <p><u>Naeem Shahid</u> 425 Physics Building e-mail: mnshahid@phy.syr.edu</p>	<p><u>Homin Shin</u> 251 Physics Building e-mail: hshin@phy.syr.edu</p> <p><u>Matthew West</u> 421 Physics Building e-mail: mtwest@syr.edu</p> <p><u>Zhenwei Yao</u> 423 Physics Building e-mail: zyao@syr.edu</p>

COURSE DESCRIPTION

Astronomy 101, Our Corner of the Universe, is devoted to an understanding of the solar system and man's place in it. We will discuss our Earth, the Sun and the Moon, and the planets. We will also deal with simple aspects of the sky, including observations. You will be required to think about 'how' we have gained such a sophisticated understanding of this part of the Universe, not simply to learn the currently accepted facts. In the process, I hope you will better appreciate the nature of scientific inquiry and its human elements.

AST 101 is intended primarily for non-science majors. It qualifies for both the basic and general list requirements in the Natural Sciences and Mathematics Division in the Liberal Arts Core. AST 101 satisfies the Liberal Arts Core requirement as a course with a laboratory. AST101 and any other Physics or Astronomy course on the Basic List constitute a sequence.

LECTURE

Prof. Rosenzweig will give the main course lectures. Attendance is important, especially because material will be covered in the lecture that is not available elsewhere. 10-40% of each exam will be drawn from such material. Questions during lecture are welcome. You are responsible for all announcements regarding curriculum, schedule, etc. made during lecture.

RECITATION & LABORATORIES

Many important course activities take place in the laboratories. Most weeks you will carry out an observation or other active learning exercises. It will be to your benefit to read the lab assignment prior to lab. Some laboratory exercises require you to hand in a pre-lab exercise. Labs are available on the Web (see Astronomy home page) and will be handed out in class.

This course satisfies the requirement of the liberal arts core for one "laboratory course." A course fee of \$25 is charged. This fee helps pay for (i) handouts which are distributed to you; (ii) supplies, small pieces of apparatus, and maintenance for the laboratory and observatory; (iii) supplies and apparatus for lecture exercises and demonstrations.

It is imperative that you attend these weekly laboratory meetings. The week following each lab you will have to turn in a written assignment directly to your lab TA. If you need to be excused from a lab meeting, for a medical or other valid reason, inform your TA. Plan on spending an hour or so on several evenings making astronomical observations. In order to take advantage of relatively good observing weather in September, the lab exercises will not always correlate with the weekly lecture. **ANYONE MISSING MORE THAN THREE (3) LABS WILL RECEIVE A GRADE OF ZERO (0) FOR THE LAB PORTION OF THE COURSE!**

The Star Diary lab is extra credit and will replace your lowest grade or a missed lab.

HOMEWORK

Homework is assigned for each lecture. While homework will not be collected or graded, the homework questions will be the basis for many of the exam questions. Answers will be posted weekly near the Undergraduate Office and/or e-mailed to students via the AST101 listserv.

EXAMS

There will be five exams, **September 11, September 27, October 16, November 6 and November 27**, roughly one for every four lectures. Each exam consists of 20 questions, 2-4 true/false type questions, the remainder multiple choice. Exams cover all material since the previous exam. Questions will come from lectures, texts and recitations. **Bring #2 pencils.** Seats will be assigned and posted in the lobby of Stolkin Auditorium before each exam. I.D.'s **WILL BE CHECKED, SO BRING YOUR I.D. CARD.** Exams will not be returned, but may be examined with Prof. Rosenzweig. If you provide your own code, your exam grades will be posted in the glass case on the East Side of the Physics Building. All questions concerning the grading of exams should be referred to your TA. There are no make-ups!

ROSH HASHANAH

For those who will not be able to attend the lecture on Sept.13, the material will be presented again on Tuesday evening September 18 at 7:30 in Stolkin auditorium.

FINAL

The Final Exam is on **Monday, December 10 at 5:00-7:00 PM.** The final consists of two separate exams, Exams VI and VII. Exam VI is a regular exam on the material covered in the last three lectures. Exam VII is a 20-question comprehensive exam that covers ALL the material discussed in the course.

GRADING

I will drop your two (out of 7) lowest exam grades, and count only your 5 highest grades. Missed exams count as zero. The maximum score on these 5 exams is 100 pts. Your lab/recitation grade is worth 30 pts. Thus, your maximum score will be 130 pts. To pass, you need 74 pts (57%). To be guaranteed an A-, you will need 117 pts. (90%). If you respond to 70% or more of the clicker questions you will receive 3 bonus points, 50%-70% will be worth 2 bonus points toward your total score.

GENERAL

Please feel free to see your TA or myself during our office hours or by appointment to discuss any difficulties or questions you have about the lectures, the texts or the homework.

WORKING WITH FRIENDS

In general, I encourage you to work with friends and learn together with classmates. The preparation of the written assignments, however, must be individual work. Do it **ALONE**. It is easy for the TA's to detect copying on the lab work. We will be strict about enforcing this rule.

Academic Integrity

The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see <http://academicintegrity.syr.edu>

Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498 and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance.” For more information about services and policy, see Office of Disability Services

ASTRONOMY 101 E-MAIL LIST

During the course of the semester I will often contact you with special announcements and notices. In particular I will need to notify you on what nights we will be able to have observing sessions to look at the stars and planets. These sessions can only take place if the sky is clear. Unfortunately in Syracuse this is always an iffy proposition. Often I will not know until late afternoon if it will be worth trying to observe. The best way to notify people at the last minute is via e-mail.

I may also e-mail you with sample questions, homework solutions, schedule changes, etc. **YOU ARE RESPONSIBLE** for **ALL** information I send to the listserve. Make sure you sign up **SOON**.

I have set up an e-mail list for ast101 to facilitate this communication. **You have to subscribe to this list in order to receive my e-mails.** To subscribe send an e-mail message to:

listserv@listserv.syr.edu

For subject say: **subscribe**

In the message say: **Subscribe ast101 Jane Doe** (put your **OWN NAME** in place of Jane Doe)

You will receive a message back with any further instructions and confirming your addition to the list.

Astronomy 101, Our Corner of the Universe Course Calendar, Fall 2007

Unless otherwise stated, all readings are in Astronomy. Readings from Themes of the Times are indicated NYT. Figures and captions, More Precisely, Discovery, Chapter Summary etc. are an integral part of the reading assignments. RD indicates Review and Discussion questions, CST refers to Conceptual Self Test section, P refers to Problems

Date	Topic	Assignments/Lab for Week	
Tuesday, Aug. 28	<i>Introduction; Powers of 10</i>	Reading HW LAB	pp. 1-4; Appendix A-1 p. 22: RD1; CST 1 Lunar Phases I/Sunset Point/Astronomy Go-Round
Thursday, Aug. 30	<i>Night Sky; Celestial Sphere</i>	Reading HW	pp. 4-8 p. 22: RD2-6; CST 2, 13
Tuesday, Sept. 4	<i>Lunar Phases; Seasons</i>	Reading HW LAB	pp. 8-14 p. 22: RD 7-9; CST 4,6,8,10 Lunar Phases II/ Star Diary
Thursday, Sept. 6	<i>Eclipses; Greek Astronomy</i>	Reading HW	pp. 14-19, pp. 24-28 p. 22: RD 10-13; CST 5, 7, 11, 12, 15 p. 40: RD 1,2
Tuesday. Sept. 11	EXAM I	LAB	No Lab this week
Thursday, Sept. 13	<i>Birth of Modern Astronomy</i>	Reading HW	pp. 28-34; NYT 11-14 p. 40: RD 3,4,7-8, 10; CST 1-4, 6,7, 9-13
Tuesday, Sept. 18	<i>Nature of Science</i>	Reading HW LAB	pp. 19-21; NYT 7-10 p. 22: RD 15; p. 40: RD 5,6, 9; CST 14 Sky at Night
Thursday, Sept. 20	<i>Newton & His Laws</i>	Reading HW	pp. 35-39 ; NYT 16-21 p. 40: RD 11-13; CST 15
Tuesday, Sept. 25	<i>Gravity, Satellites</i>	Reading HW LAB	p. 39 p. 40: RD 14,15; CST 8; P -8b Measurements
Th. Sep.27	EXAM II		
Tuesday, Oct. 2	<i>Time & Calendar</i>	Reading HW LAB	p. 8 p. 22: RD 4; CST 3 Earth Orbits
Thursday, Oct. 4	<i>Light & Telescopes</i>	Reading HW	pp.42-46; 48-52; 55-60; pp.70-72; 76-80; 83,88-89 p. 66: RD 1, 4, 8-10; CST 4,5: p. 94: RD 1-3, 14; CST 3-5,8
Tuesday, Oct. 9	<i>Overview of Solar System</i>	Reading HW	pp. 96-103 p. 129: RD 1, 2; CST 1, 2, 8 No labs this week
Thursday, Oct. 11	<i>Cosmogony</i>	Reading HW	pp. 116-128; NYT 38-44 p. 129: RD 9-15; CST5-7, 9-13, 15

Tuesday, Oct. 16	EXAM III	LAB	Scale Model of Solar System
Thursday, Oct. 18	<i>Planet Earth;</i>	Reading HW	pp. 134, 138-149; NYT 68-76 p. 158: RD 3-10; CST 3-11, 14, 15
Tuesday, Oct. 23	<i>Earth and Moon</i>	Reading HW	pp. 135-138, 149-157 p. 158 RD 1,2, 11-15; CST 1,2,12, 13 No labs this week
Thursday, Oct. 25	<i>Venus,</i>	Reading HW	pp. 168-171; 184-186 p. 188: RD 5-9; CST 2-4, 9-11,14
Tuesday, Oct. 30	<i>Mercury and Mars</i>	Reading HW LAB	pp. 160-167; 171-180; NYT 47-48 p. 188: RD 1,2, 10-14; CST 1,5-8,12,15 Lunar Photographs and Topography
Thursday, Nov. 1	<i>Terrestrial Planets</i>	Reading HW	pp. 180-187 p. 188: RD 3,15; CST 10,13
Tuesday, Nov. 6	EXAM IV		No labs this week
Thursday, Nov. 8	<i>Jovian Planets</i>	Reading HW	pp. 190-210 p. 210: RD 1, 3-5, 7-10; CST 1-11,13-15
Tuesday, Nov. 13	<i>Moons & Rings</i>	Reading HW LAB	pp. 212-230 p. 236: RD 1-6, 9, 10,;CST 1-7, 9-11, 14 Kepler's Laws & Jupiter's Moons
Thursday, Nov. 15	<i>Asteriods & Collisions</i>	Reading HW	pp.104-107; 112-115; NYT 62-63 p. 129: RD 3,4; CST 3,6,14 P 8
Tuesday, Nov. 20	<i>Comets & Pluto</i>	Reading HW	pp. 108-112; 231-235; NYT64-67 p.129: RD 5-8; CST 4,6 p.236: RD 14,15;CST 13 No labs this week
Thursday, Nov. 22	Holiday		
Tuesday, Nov. 27	EXAM V		No labs this week
Thursday, Nov. 29	<i>Sun, Our Star</i>	Reading HW	pp. 240-250 p. 262: RD 1-8; CST 1-6, 14, 15
Tuesday, Dec. 4	<i>Sun; Life on Earth</i>	Reading HW LAB	pp. 250-257; pp. 482-490 p. 262: RD 9-11, 15; CST 8-13 p. 498: RD 1-8; CST 1-6,8,9 Course Review
Thursday, Dec. 6	<i>Life in the Universe</i>	Reading HW	pp. 490-497; NYT 124-125 p. 498: RD 11- 15; CST 7, 10- 15
Monday, Dec. 10	EXAM VI & FINAL		5:00 -7:00 PM