ASTR 007 – Introduction to Astronomy
Spring 2017
MWF 1:10–2:00 pm, LL 316

Instructors:

Prof. Ginny McSwain
office: LL 405
email: mcswain@lehigh.edu
phone: 8-5322
Free Help Sessions: MW 2:00–4:00 pm or by appt.

Course Objectives:

1. To explain how celestial bodies appear to move across the sky;
2. To apply the laws of planetary motion and gravity;
3. To understand how the properties of light can be measured with telescopes;
4. To describe the formation and contents of our Solar System (including our Sun, planets, moons, and other small bodies);
5. To understand how fundamental properties of stars can be measured;
6. To describe the properties of the Milky Way and other galaxies; and
7. To understand the expansion history of the Universe.

Materials:

- Kay, Palen, & Blumenthal, *21st Century Astronomy*, 5^{th} edition
  (Please purchase the E-book at https://digital.wwnorton.com/astro5 and register with the SmartWork online platform before Jan. 27.)
- Electronic clicker (Turning Point brand)
- Scientific calculator

All students are encouraged to go "paperless" as much as is reasonable. Announcements will be distributed via your email address listed in Banner, and course notes and other supplementary material will be distributed electronically using Lehigh's Course Site (please print them only if necessary). You are expected to check your email and Course Site frequently for updates.

Grading:

Participation – 10%
Homework – 25%
Hour Exam 1 – 20%
Hour Exam 2 – 20%
Final Exam – 25%

Participation points will be awarded based on electronic clicker participation in class. Please bring your clicker to every class - you will not earn participation points without it. Every student will be given up to 3 "free" participation credits to make up for absences or forgetting your clicker. Sending your clicker to class with another person is considered cheating, and cases will be reported to the Office of Student Conduct.

Reading assignments and homeworks will be posted on the Course Site page in advance of each lecture. You should come to class prepared to discuss the readings.

Late homeworks and makeup exams are not allowed without a valid written excuse. If you have a valid excuse, the professor will work with you to set a fair deadline to complete the work.

Exam grades will not be curved. After the final exam is complete and all student work is accounted for, a curve may be applied to the final averages if necessary.

Your professor will use the following base scale for assigning letter grades. This scale gives the *minimum* grade you could receive for a given score. *Depending on the performance of the entire class, your professor may adjust the scale so that you will receive a higher grade.*

92–100: A	90–91: A-	88–89: B+
82–87: B	80–81: B-	78–79: C+
72–77: C	70–71: C-	68–69: D+
62–67: D	60–61: D-	0–59: F

Electronics Policy:

Limited use of electronics (laptops, tablets, etc.) is allowed in class for note-taking and minimizing paper waste. However, please note that electronic use should remain focused on course material to minimize distractions. Studies have shown that laptop users and the students around them are distracted by the devices, lowering their average grades by 11–17 percentage points on average[1].

[1] http://www.huffingtonpost.ca/2013/08/14/laptops-in-classrooms_n_3756831.html

Academic Integrity:

Academic dishonesty will not be tolerated on any assignment. Copying work from other students or outside sources is considered plagiarism. Outside references (other than the class notes or textbook) must be properly cited if used on any assignment. If I have evidence of copying, cheating, plagiarism, or any other dishonest behavior, I will not hesitate to report my suspicions to the Office of Student Conduct. Their penalties may range from assigning a zero for that assignment, assigning an F for the final course grade, and even expulsion from the university. Please consider this your final warning.

For every assignment, please ensure that the work that you turn in is your own work. When you collaborate on homework assignments with your classmates, you may discuss the problem solving strategy together. Working together is encouraged when it is used as a learning tool. But, at no time should you share your paper or your answers with anyone else. Allowing someone to copy your answers makes you just as guilty as the copier. If someone asks you something like, "What did you get for Problem 2?" you should not provide the final answer. You may, however, tell them what equation you used or refer to the textbook or notes together and discuss the general topic. When you write your solutions, all mathematical calculations and written explanations must reflect your own work. Showing all of the steps of your calculations and explaining your reasoning throughout a problem is an excellent way to guard your independent work and remove suspicions of academic dishonesty.

Accommodations for Students With Disabilities:

If you have a disability for which you are or may be requesting accommodations, please contact both the professor and the Office of Academic Support Services, Williams Hall, Suite 301 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.

The Principles of Our Equitable Community:

Lehigh University endorses The Principles of Our Equitable Community[2]. We expect each member of this class to acknowledge and practice these Principles. Respect for each other and for differing viewpoints is a vital component of the learning environment inside and outside the classroom.

[2]http://www.lehigh.edu/diversity/principles

Tentative Schedule:

Week of Jan. 23:	Course Introduction; Ch. 1: Thinking Like an Astronomer
Week of Jan. 30:	Ch. 2: Motions of Earth and the Moon
Week of Feb. 6:	Ch. 3: Motion of Astronomical Bodies
Week of Feb. 13:	Ch. 4: Gravity & Orbits
Week of Feb. 20:	Ch. 5: Light
Week of Feb. 27:	Ch. 6: Tools of the Astronomer; **Exam 1 Mar. 3**
Week of Mar. 6:	Ch. 7: Birth & Evolution of Planetary Systems
Week of Mar. 13:	Spring Break
Week of Mar. 20:	Ch. 8–9: Terrestrial Planets
Week of Mar. 27:	Ch. 10–11: The Giant Planets, Moons, & Rings
Week of Apr. 3:	Ch. 12: Dwarf Planets & Small Solar System Bodies
Week of Apr. 10:	Ch. 14: The Sun; **Exam 2 Apr. 14**
Week of Apr. 17:	Ch. 13: Taking the Measure of Stars
Week of Apr. 24:	Ch. 15–17: Star Formation & Evolution
Week of May 1:	Ch. 19–22: The Milky Way & Other Galaxies, Cosmology
Date TBD	**Final Exam** (sometime between May 9–17)

This syllabus is only a tentative outline of the course. The grading policy, dates of exams, or the topics covered in class may change as needed.