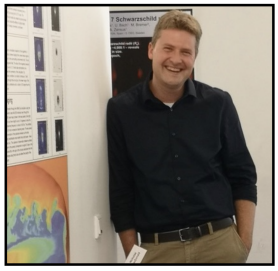
Astro 103

Intro Astronomy of the Solar System

Mon,Wed, 3:00-3:50pm, Rm 101 Lewis Hall (Sections 1-4)

Mon,Wed, 5:00-5:50pm, Rm 101 Lewis Hall (Sections 5-8)



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The syllabus may evolve dynamically depending on class progress.

Course Description: This astronomy course combines lectures, demonstrations in astronomy, laboratory experiences in celestial mechanics and light, and observations through an optical telescope in an integrated lecture-laboratory sequence. Lecture meets twice weekly in the daytime, laboratory meets once weekly in the afternoon or night. Students may not receive credit for both Astr 101 and 103, nor for both Astr 103 and 104 if taken simultaneously, nor for both Astr 103 and 204 if taken simultaneously.

Text: *Astronomy: At Play in the Cosmos, 2nd edition*
Author: Adam Frank; **ISBN:** 978-0-393-53253-1; e-book access is sufficient and included with the *SmartWork* homework system (see this URL).

Course Objectives:
At the completion of this course, students will be able to:

- Characterize the size and time scales of the solar system.
- Understand how our thinking about the sky and the Solar System has evolved in history.
- Describe the physical properties of different astronomical objects: planets, moons, & stars.
- Interpret data & conceptualize Universal Laws of Motion.

Grade Distribution:

Attendance	10%
Lab	30%
Assignments	15%
Summative Quiz 1	10%
Summative Quiz 2	10%
Summative Quiz 3	10%
Final Exam	15%

Course Policies:

- **General**
  - Computers are not to be used unless for note taking.
  - The quizzes and final exams are closed book, closed notes.
- **Grades**
  - Grades will be maintained in Blackboard Learn (https://blackboard.olemiss.edu/) and students are responsible for tracking their own progress.
  - Grading Scale:

    $92\% \leq$ A $\leq 100\%$

    $88\% \leq$ A- $\leq 92\%$

    $84\% \leq$ B+ $\leq 88\%$

    $80\% \leq$ B $\leq 84\%$

    $76\% \leq$ B- $\leq 80\%$

    $72\% \leq$ C+ $\leq 76\%$

    $68\% \leq$ C $\leq 72\%$

    $64\% \leq$ C- $\leq 68\%$

    $60\% \leq$ D $\leq 64\%$

    F $\leq 60\%$
- **Expectations**
  - Students should expect to spend about 4 hours per week reading, doing homework, and preparing for class in order to do well.
  - Study the textbook regularly. Class discussion will not cover all of the material, but students will have the opportunity to ask questions about any aspect of the text.
  - Complete the *Smartwork* questions after the completion of each chapter in lecture. It will take longer to complete the *Smartwork* homework if the textbook reading assignments are not completed first.
  - Homework sets will be assigned using the *Smartwork* online homework system that can be accessed through Blackboard. It is very important to start early and finish homework on time. This will also be very helpful when studying for the quizzes.
  - As scientists and engineers normally work in groups, students are encouraged to work together on homework to teach and learn from each other. However, each student is responsible for understanding all details of a problem solution.
  - Students may be required to turn in written homework solutions for grading. Students should use good problem-solving strategies (which will be demonstrated in class).
- **Labs**
  - Once per week starting the second week of classes, in Lewis Hall Room 1 (enter from the parking lot by the bus stop).
  - For more information on labs, see this URL).

- **Attendance and Absences**
  - Attendance is **mandatory** and will be taken each class (Ole Miss ID card system).
  - Students are responsible for all missed work, regardless of the reason for absence. It is also the absentee's responsibility to get all missing notes or materials.
- **Important Dates**
  - See the academic calendar (http://registrar.olemiss.edu/spring-2024). Summative quiz dates are tentative and subject to change. The final exam date is fixed and cannot be changed.
  - Summative Quiz 1: Tuesday, February 27th, 5:30-6:20pm, Rm 134 Brevard Hall
  - Summative Quiz 2: Tuesday, March 19th, 5:30-6:20pm, Rm 134 Brevard Hall
  - Summative Quiz 3: Tuesday, April 23rd, 5:30-6:20pm, Rm 134 Brevard Hall
  - Final Exam (Sections 5-8): Wednesday, May 6th, 8:00-11:00am, Rm 101 Lewis Hall
  - Final Exam (Sections 1-4): Wednesday, May 9th, 8:00-11:00am, Rm 101 Lewis Hall
- **Academic Integrity**
  - Every student of the University of Mississippi, by virtue of choosing to be part of the university community agrees to abide by the University of Mississippi Creed and the UM Academic Integrity Policy which covers academic integrity. Please consult the M-Book, Academic Integrity document for details on university policy and the academic creed.
  - Cheating is forbidden and will result in a zero grade on the assignment. If a second case of cheating occurs, this will result in an F for the entire course.
  - UM Creed The University of Mississippi is a community of learning dedicated to nurturing excellence in intellectual inquiry and personal character in an open and diverse environment. As a voluntary member of this community:
    * I believe in respect for the dignity of each person
    * I believe in fairness and civility
    * I believe in personal and professional integrity
    * I believe in academic honesty
    * I believe in academic freedom
    * I believe in good stewardship of our resources
    * I pledge to uphold these values and encourage others to follow my example
  - All materials distributed electronically and in hard copy in this class are protected under intellectual copyright. Any attempt to upload these documents onto the Internet (or to distribute them by some other means) or to profit from the distribution (by Internet or other means) of these documents constitutes theft and will be in violation of intellectual property law and the UM Academic Conduct Code unless expressly permitted for by the instructor.

- **Audio and video recording:**
  - Audio and/or video recording of class lectures is not allowed unless explicit permission is given by the instructor. Permission will only be given if the student has a Student Disability Services request. In such cases, recordings may only be used by the student to whom permission is given and all recordings must be deleted at the end of the semester. Recordings may not be distributed online or elsewhere.
- **Disability Access and Inclusion:**
  - The University of Mississippi is committed to the creation of inclusive learning environments for all students. If there are aspects of the instruction or design of this course that result in barriers to your full inclusion and participation, or to accurate assessment of your achievement, please contact the course instructor as soon as possible. Barriers may include, but are not necessarily limited to, timed exams and in-class assignments, difficulty with the acquisition of lecture content, inaccessible web content, and the use of non-captioned or non-transcribed video and audio files. If you are registered with SDS, you must log in to your Rebel Access portal at https://sds.olemiss.edu/rebel-access-portal to request approved accommodations. If you are NOT registered with SDS, you must complete the process to become registered. To begin that process, please visit our website at https://sds.olemiss.edu/apply-for-services. SDS will: 1. Complete a comprehensive review to determine your eligibility for accommodations, 2. If approved, disseminate to your instructors a Faculty Notification Letter, 3. Facilitate the removal of barriers, and, 4. Ensure you have equal access to the same opportunities for success that are available to all students. If you have questions, contact SDS at 662-915-7128 or sds@olemiss.edu.

Other Required Items:

- Online homework and classroom activity system: *Smartwork*. The system can be accessed through Blackboard (blackboard.olemiss.edu). Students must purchase access to *Smartwork* for this class.
- Scientific calculator. Any calculator with trigonometric functions, exponential functions, and scientific notation.

Table 1: Tentative Course Outline

Week	**Content**
Week 1	• Jan.29 - Lecture 1 - Chapter 1: Getting Started (1.1-1.3) • Jan.31 - Lecture 2 - Chapter 1: Getting Started (1.4-1.5)
Week 2	• Feb.5 - Lecture 3 - Chapter 2: A Universe Made, A Universe Discov. (2.1-2.2) • Feb.7 - Lecture 4 - Chapter 2: A Universe Made, A Universe Discov. (2.3-2.4)
Week 3	• Feb.12 - Lecture 5 - Chapter 2: A Universe Made, A Universe Discov. (2.5-2.6) • Feb.14 - Lecture 6 - Chapter 3: A Universe of Universal Laws (3.1-3.2)
Week 4	• Feb.19 - Lecture 7 - Chapter 3: A Universe of Universal Laws (3.3) • Feb.21 - Lecture 8 - Chapter 3: A Universe of Universal Laws (3.4-3.5)
Week 5	• Feb.26 - Lecture 9 - Chapter 4: A Universe of Universal Laws (4.1-4.3) • Feb.28 - Lecture 10 - Chapter 4: A Universe of Universal Laws (4.4-4.5)
Week 6	• Mar.4 - Lecture 11 - Chapter 5: Planetary Systems (5.1-5.2) • Mar.6 - Lecture 12 - Chapter 5: Planetary Systems (5.3-5.4)
Week 7	• Mar.11 - **Spring Break** • Mar.13 - **Spring Break**
Week 8	• Mar.18 - Lecture 13 - Chapter 5: Planetary Systems (5.5) • Mar.20 - Lecture 14 - Chapter 6: Home Base (6.1)
Week 9	• Mar.25 - Lecture 15 - Chapter 6: Home Base (6.2-6.3) • Mar.27 - Lecture 16 - Chapter 6: Home Base (6.4)
Week 10	• Apr.1 - Lecture 17 - Chapter 7: Sibling Worlds (7.1-7.2) • Apr.3 - Lecture 18 - Chapter 7: Sibling Worlds (7.3)
Week 11	• Apr.8 - Lecture 19 - Chapter 7: Sibling Worlds (7.4) • Apr.10 - Lecture 20 - Chapter 8: Gas, Ice, and Stone (8.1-8.2)
Week 12	• Apr.15 - Lecture 21 - Chapter 8: Gas, Ice, and Stone (8.3-8.4) • Apr.17 - Lecture 22 - Chapter 8: Gas, Ice, and Stone (8.5)
Week 13	• Apr.22 - Lecture 23 - Chapter 9: Life and Planets (9.1-9.2) • Apr.24 - Lecture 24 - Chapter 9: Life and Planets (9.3)
Week 14	• Apr.29 - Lecture 25 - Chapter 9: Life and Planets (9.4) • May.1 - Lecture 26 - Class Review
Week 15	• May.6 - **Final Exam** (Sections 5-8) • May.9 - **Final Exam** (Sections 1-4)