Astronomy 103

Intro Astronomy of the Solar System

Fall 2025

Lewis Hall, Room 101
Sections 1 – 4: Mon, Wed, **2:00 pm – 2:50 pm**
Sections 5 – 8: Mon, Wed, **4:00 pm – 4:50 pm**

Course Description
This astronomy course combines lectures, laboratory experiences in physics and astronomy, and observations through an optical telescope in an integrated lecture-laboratory sequence. Lecture meets twice weekly in the daytime, and 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.

Course Objectives
- Characterize the size and time scales of the solar system.
- Describe the physical properties of different astronomical objects: planets, moons, etc.
- Understand the techniques and methods used to gain new knowledge in astronomy
- Conceptualize complex issues or problems
- Interpret data and appraise evidence

Instructor

Mr. Kelvin Au

Call me, "Professor Kelvin" (preferred) or, "Professor Au." "Au" is pronounced, "uh-w"; "uh" as in "undo" and "w" as in "wow." (Coincidentally, I have a very scientific name.)

Phone:	**E-mail:**	**Office Location:**	**Office Hours** (may be subject to change)**:**
662-915-7046	kau@olemiss.edu	Lewis Hall, Room 202	• Tue 1:30 pm – 2:30 pm • Wed 10:30 am – 11:30 am • By appointment

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Grade Distribution

Labs	30%
Attendance	10%
Assignments	15%
Test 1	10%
Test 2	10%
Test 3	10%
Final Exam	15%

Students can check their current grade using Blackboard. Students are responsible for tracking their own progress. *All* material in the course (lectures, discussions in lectures, assignments, the textbook, etc.) is fair game for assessment (assignments, labs, tests, exams, etc.).

Grading Scale

$$\begin{aligned} & \boldsymbol{A} \geq 92\% \\ 88\% \leq\ & \boldsymbol{A-} < 92\% \\ 84\% \leq\ & \boldsymbol{B+} < 88\% \\ 80\% \leq\ & \boldsymbol{B} < 84\% \\ 76\% \leq\ & \boldsymbol{B-} < 80\% \\ 72\% \leq\ & \boldsymbol{C+} < 76\% \\ 68\% \leq\ & \boldsymbol{C} < 72\% \\ 64\% \leq\ & \boldsymbol{C-} < 68\% \\ 60\% \leq\ & \boldsymbol{D} < 64\% \\ & \boldsymbol{F} < 60\% \end{aligned}$$

Labs

Once per week starting the second week of classes in **Lewis 1** (the basement classroom, enter by the bus loop). Lab attendance is mandatory and if you miss more than 3 labs, you will receive an overall grade of F, independent of your overall average. If you must miss a lab for a valid reason (illness, university athletics, etc.), you can arrange a makeup lab with your lab instructor. Contact your lab instructor for all things lab-related. For more information about the lab visit: https://www.phy.olemiss.edu/Astro/Lab/Lab.html.

Attendance

Regular lecture attendance is important for both your learning and your grade. Attendance is mandatory will be taken each class via the scanners in the classroom. Please scan your ID card as you enter the classroom. *All* material in the course (lectures, discussions in lectures, assignments, the textbook, etc.) is fair game for assessment (assignments, labs, tests, exams, etc.).

Assignments

There will be assignments due at midnight of the Friday after each chapter completed in the lectures. The assignments use the Norton homework system and accessed via *Blackboard*. Late homework is accepted with a 5% penalty per day past the deadline. You can purchase access for the eBook, SmartWork, and Interactive Simulations together via the eBook link on *Blackboard*.

Tests

Three tests will be written some Tuesdays (see schedule) 6:00 - 6:50 pm in Brevard 134. Test dates listed in the schedule (see final page) are subject to change. Tests are non-cumulative, and the range of content covered may change if needed. No make-up tests will be given unless arrangements are made **in advance.** If you miss a test without making prior arrangements, you will receive a zero.

Final Exam

A comprehensive/cumulative final exam, as shown on the tentative schedule on the last page. The date of the final exam will not change. If you miss the final exam without making prior arrangements, you will receive a zero.

Textbook and Other Required Materials

- *Astronomy: At Play in the Cosmos*, 2nd edition by Adam Frank (ISBN 9780393428636).
  - eBook access with Norton homework system purchased via Blackboard link
- Scientific calculator without internet access. If purchasing a new calculator, TI-30XS MultiView or TI-36X Pro are recommended.

University-wide Policies

Attendance

The university requires that all students have a verified attendance at least once during the first two weeks of the semester for each course. If your attendance is not verified, you will be dropped from the course and any financial aid will be adjusted accordingly. Please see http://olemiss.edu/gotoclass for more information.

Academic integrity and honesty

According to institutional policy, '[t]he University is conducted on a basis of common honesty. Dishonesty, cheating, or plagiarism, or knowingly furnishing false information to the University are regarded as particularly serious offenses.' We share a responsibility to maintain academic integrity in our work and will follow the procedures outlined in the Academic Conduct and Discipline Policy and the M Book for any instance of academic misconduct. Students are reminded that cheating in any form will not be tolerated. Performance on all tests and assignments shall represent the individual work of the student. Those who violate the Standards of Honesty will be reported and subject to the appropriate sanction, which may include expulsion from the University.

- 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.
- 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

Intellectual property

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.

Nondiscrimination policy

The University complies with all applicable laws regarding affirmative action and equal opportunity in all its activities and programs and does not discriminate against anyone protected by law because of age, color, disability, national origin, race, religion, sex, sexual orientation, handicap, or status as a veteran or disabled veteran.

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 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 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.

EXAMINATIONS AND LAST WEEK OF CLASS

Regulations governing all examinations — A student's failure to appear for an examination without an acceptable excuse, inability to present valid identification, absence from the room during the course of an examination without the consent of the examiner, or attempting any portion of an examination without submitting his or her answers shall result in failure of the examination. Tardiness beyond 15 minutes forfeits a student's right to an examination.

Final examinations

A final examination, to be given at the time posted in the examination schedule, is required in each undergraduate course, unless the appropriate chair and dean have approved an exception. A student who has three or four final examinations in one day may arrange with the course instructor to take the noon or 7:30 p.m. examination at another time. In order to give a final examination at any time other than that shown in the posted examination schedule, an instructor must have prior approval of the department chair and dean.

Last week of class

The following guidelines exist to allow sufficient time for students and instructors to prepare for final examinations. These guidelines apply to the week preceding final examinations for undergraduate courses held during Fall and Spring semesters. During the period of Wednesday through Friday of the last week of class, instructors are not to give exams, tests, or quizzes that contribute more than 10% of the final grade for a class. An instructor can obtain approval of the department chair and dean to give an exam, test, or quiz, of this weight, during this three day period. Instructors should return graded work and/or inform students of their grades on exams, tests, or quizzes prior to the beginning of finals week. Exceptions to the above statement are automatically made for lab-based courses, technical writing courses, seminar courses that assign a term paper, and senior design courses that assign a multi-faceted project in lieu of a final exam. Major projects of the above types, which contribute more than 10% of the final grade and which are due during this Last Week period, should be assigned in the syllabus at the beginning of the semester and any substantial change in the assignment should be made known to students before the drop deadline.

Astr 103 Course Schedule

(subject to change, as needed)

WEEK	CONTENT
1	• Aug 25 – Lecture 1 – Chapter 1: Getting Started (1.1-1.3) • Aug 27 – Lecture 2 – Chapter 1: Getting Started (1.4)
2	• Sep 1 – LABOR DAY HOLIDAY • Sep 3 – Lecture 3 – Chapter 2: A Universe Made, a Universe Disc. (2.1-2.2)
3	• Sep 8 – Lecture 4 – Chapter 2: A Universe Made, A Universe Disc. (2.3-2.4) • Sep 10 – Lecture 5 – Chapter 2: A Universe Made, A Universe Disc. (2.5-2.6)
4	• Sep 15 – Lecture 6 – Chapter 3: A Universe of Universal Laws (3.1-3.2) • Sep 17 – Lecture 7 – Chapter 3: A Universe of Universal Laws (3.3-3.4)
5	• Sep 22 – Lecture 8 – Chapter 3: A Universe of Universal Laws (3.5) • Sep 24 – Lecture 9 – Test 1 (Ch 1-3) Review
6	• Sep 29 – Lecture 10 – Chapter 4: A Universe of Universal Laws (4.1-4.2) • Sep 30 – Test 1 (Ch 1-3) 6:00 pm - 6:50 pm Brevard 134 • Oct 1 – Lecture 11 – Chapter 4: A Universe of Universal Laws (4.3-4.5)
7	• Oct 6 – Lecture 12 – Test 1 (Ch 1-3) Debrief • Oct 8 – Lecture 13 – Chapter 5: Planetary Systems (5.1-5.3)
8	• Oct 13 – Lecture 14 – Chapter 5: Planetary Systems (5.4-5.5) • Oct 15 – Lecture 15 – Chapter 6: Home Base (6.1-6.3)
9	• Oct 20 – Lecture 16 – Chapter 6: Home Base (6.3-6.4) • Oct 22 – Lecture 17 – Test 2 (Ch 4-6) Review
10	• Oct 27 – Lecture 18 – Chapter 7: Sibling Worlds (7.1-7.2) • Oct 28 – Test 2 (Ch 4-6) 6:00 pm - 6:50 pm Brevard 134 • Oct 29 – Lecture 19 – Chapter 7: Sibling Worlds (7.2-7.4)
11	• Nov 3 – Lecture 20 – Test 2 (Ch 4-6) Debrief • Nov 5 – Lecture 21 – Chapter 8: Gas, Ice, and Stone (8.1-8.2)
12	• Nov 10 – Lecture 22 – Chapter 8: Gas, Ice, and Stone (8.3-8.5) • Nov 12 – Lecture 23 – Test 3 (Ch 7-8) Review
13	• Nov 17 – Lecture 24 – Chapter 9: Life and Planets (9.1-9.2) • Nov 18 – Test 3 (Ch 7-8) 6:00 pm - 6:50 pm Brevard 134 • Nov 19 – Lecture 25 – Chapter 9: Life and Planets (9.3-9.4)
14	• Nov 24 – THANKSGIVING HOLIDAY • Nov 26 – THANKSGIVING HOLIDAY
15	• Dec 1 – Lecture 26 – Test 3 (Ch 7-8) Debrief • Dec 3 – Lecture 27 – Course Summary/Final Exam Review
16	• Dec 8 – FINAL EXAM – Sections (1-4) • Dec 12 – FINAL EXAM – Sections (5-8)