Astronomy 103: Intro Astronomy of the Solar System
Fall 2021

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.

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

Lectures: MW 5:00 – 5:50 pm in Lewis 101

Labs: Lewis 1 (the basement classroom, enter by the bus loop)
Section 5 W 7:00-8:50 pm
Section 6 W 9:00-10:50 pm
Section 7 Th 7:00-8:50 pm
Section 8 Th 9:00-10:50 pm

Testing: some Tuesdays (see schedule) 6:00 - 6:50 pm in Brevard 134

Instructor: Dr. Jennifer Meyer (call me Dr. Meyer or Prof. Meyer)

Phone: 662-915-2673

E-mail: jameyer2@olemiss.edu (this is the best way to reach me)

Office Hours: **Monday 3:00-3:50 in Lewis 104**
Tuesday 12:30-1:20 on Zoom https://olemiss.zoom.us/j/9246403326
or 1:1 by appointment in Lewis 211 or Zoom

Textbook: Astronomy : At Play in the Cosmos, 2nd edition by Adam Frank ISBN 9780393428636
e-book access is sufficient and included with the homework system

Required Materials:

- Smartwork5 (online homework) access https://digital.wwnorton.com/cosmos2
- Lab manual purchased before first lab at Printing Services for ~$30
- Scientific calculator without internet access. If purchasing a new calculator, I recommend TI-30XS MultiView or TI-36X Pro.

Lab:

- The first lab meeting will be on either W 9/1 or Th 9/2 depending on your lab section.
- Before the first meeting, purchase a lab manual at Printing Services in Sam Gerard Hall.
- More information and lab syllabus at https://www.phy.olemiss.edu/Astro/Lab/Lab.html.

Grading:		
	Lab	30%
	In-class Activities	10%
	SmartWorks Homework	10%
	At Play in the Cosmos	2% EC
	Explore Further Assignment	5%
	Exam 1	10%
	Exam 2	10%
	Exam 3	10%
	Final Exam	15%

You can check your current grade using Blackboard.

Grading scale:		
	A	percentage ≥ 92%
	A -	90% ≤ percentage <92%
	B +	87% ≤ percentage <90%
	B	82% ≤ percentage <87%
	B -	80% ≤ percentage <82%
	C +	77% ≤ percentage <80%
	C	72% ≤ percentage <77%
	C -	70% ≤ percentage <72%
	D	60% ≤ percentage <70%
	F	percentage <60%

Exams:

Three exams and a comprehensive final, as shown on the tentative schedule on the last page. The dates of the exams and final will not change unless class is canceled for unforeseen reasons (weather, emergency, etc.). The chapters covered on each exam may change, if needed. No make-up exams will be given unless arrangements are made in advance**.** If you miss an exam or the final without making prior arrangements, you will receive a zero.

In-Class Activities:

Before each class meeting, read the textbook sections listed on the schedule. During class, we will often do group activities based on your reading, so it is very important that you complete the reading ahead of class. In-class activities will be turned in for credit.

Homework:

There will be homework due at midnight every Friday. The assignment will be done online, using the Norton Smartwork5 system. 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 for $39.95 here: https://digital.wwnorton.com/cosmos2 OR purchase access for the Ebook, Smartwork, Interactive Simulations AND the videogame At Play in the Cosmos for $55. Completing all the levels of the videogame is worth 2% extra credit.

Explore Further Assignment:

Choose one topic that we have talked about during the semester or another astronomical topic that interests you and dive deeper. Use what you have learned to make a 3-4 minute video. This assignment is worth 5% and is due the last day of class, but you can turn it in at any point during the semester. You

should cite at least two sources besides our textbook. If you aren't sure if your topic is appropriate, just ask me, in person or via email. I'm happy to help you develop your ideas.

Example topics:
Dragonfly mission to Titan
Is there more crime during full moons?
Influence of the geocentric theory on John Donne's "A Valediction: Forbidding Mourning"
The history of Tycho Brahe and Johannes Kepler
Black hole physics in the movie Interstellar
How do astronauts psychologically prepare for long missions?

Attendance:

Regular lecture attendance is important for both your learning and your grade. Attendance will be taken via the scanners in the classroom. Please scan your ID card as you enter the classroom.

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 have to miss lab for a valid reason (illness, university athletics, etc), you can arrange a makeup lab with your TA.

University Classroom Health Requirements:

- Students are expected to comply with the University's protocols when they are in effect. Currently, a mask requirement is in place for vaccinated and unvaccinated people. As a result, proper mask wearing is required indoors and in the classroom. Current protocols can be found at https://coronavirus.olemiss.edu/.
- Students who have a diagnosed health concern that interferes with the wearing of face masks may contact the Student Disabilities Services (SDS) Office to seek a University-approved accommodation. Please contact SDS at https://sds.olemiss.edu/ for more information.
- If students test positive for COVID-19 at any health care facility, they must contact the Student Health Center at 662-915-7274. University Health Services will coordinate contact tracing to lessen the likelihood of spread.
- Students with COVID-19 should seek medical attention at the Student Health Center and contact their instructor to let them know that they will be missing class due to a health-related issue.
- If you are exposed to someone with COVID-19, you should contact the Student Health Center to get tested three to five days following exposure and follow the guidance recommended by the Health Center. If you are not fully vaccinated, you should follow quarantine protocols found at https://coronavirus.olemiss.edu/students/.
- **Currently, COVID-19 guidelines for the Fall 2021 semester include face masks for vaccinated and unvaccinated people inside University buildings; therefore, students should not be in classroom spaces when they are out of compliance with these guidelines unless they have an accommodation approved by Student Disability Services.**
- The University's Academic Conduct and Discipline Policy states that "disorderly behavior that disrupts the academic environment violates the standard of fair access to the academic experience." Failure to adhere to health requirements during the COVID-19 emergency will be deemed as disruptive to the classroom and will be enforced following the Academic Conduct and Discipline procedures.
- **If you need to isolate due to contracting the coronavirus at any point this semester, you should do so, and email me as soon as possible. I will work with you to help you continue your progress in the course.**

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
Students are expected to adhere to the University of Mississippi Creed and the Standards of Honesty as described in Policy Code ACA.AR.600.001 and the M Book. 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.

Intellectual property
All materials distributed electronically and in hard copy in this class are protected under intellectual copyright. Any attempt to upload these documents to a file sharing service or to profit from their distribution by any means 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 approved through SDS, you must log in to your Rebel Access portal to request approved accommodations. If you are not yet approved through SDS, you must contact Student Disability Services (at 662-915-7128 or sds@olemiss.edu) so the office can (i) determine your eligibility for accommodations, (ii) disseminate to your instructors a Faculty Notification Letter, (iii) facilitate the removal of barriers, and (iv) ensure you have equal access to the same opportunities for success that are available to all students.

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.

Reading Schedule: Please read these sections in the textbook before class each day.

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 1 8/23 - 8/27	1.1 - 1.2 Syllabus		1.3 - 1.5		
Week 2 8/30 – 9/3	2.1 - 2.2		2.3		HW 1 due
Week 3 9/6 – 9/10	Labor Day No class		2.4 - 2.6		HW 2 due
Week 4 9/13 – 9/17	3.1 - 3.3		3.4		HW 3 due
Week 5 9/20 – 9/24	3.5	**Exam 1 1-3** 6:00 Brevard134	4.1 - 4.2		HW 4 due
Week 6 9/27 - 10/1	4.3		4.4 - 4.5		HW 5 due
Week 7 10/4 – 10/8	5.1 - 5.2		5.3		HW 6 due
Week 8 10/11– 10/15	5.4		5.5		HW 7 due
Week 9 10/18– 10/22	6.1 - 6.2	**Exam 2 4-5** 6:00 Brevard134	6.3		HW 8 due
Week 10 10/25– 10/29	6.4		7.1 - 7.2		HW 9 due
Week 11 11/1 - 11/5	7.3		7.4		HW 10 due
Week 12 11/8– 11/12	Climate Change	**Exam 3 6-7** 6:00 Brevard134	8.1 - 8.2		HW 11 due
Week 13 11/15– 11/19	8.3 - 8.4		8.5		HW 12 due
Break Week 11/22– 11/26	No class	No class	No class	Happy Thanksgiving!	No class
Week 14 11/29 – 12/3	9.1 - 9.2		9.3 - 9.4		Explore Further due
Finals Week 12/6 – 12/10	**Final Exam** **M 7:30 pm**				