Astronomy 103 Spring 2022: Intro. to Astronomy of the The Solar System rev 1/22

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Lectures: M & W 4:00 PM (sections 1-4) 5:00 PM (sections 5-8).
Labs: one evening/week M, Tu, W, or Th. Lewis 1 (Basement Lewis Hall, enter from bus area)

Office Hours: Monday and Wednesdays 11 AM-3:30 PM, Zoom Q & A + videos: Sundays 3PM

Texts: Cosmic Perspective, The Solar System, Bennett et al., 9th Edition, (7th or 8th ed. are OK)
Astro 103 Spring 2021 Lab Manual (from Ole Miss Media in Gerard Hall, not bookstore)

Learning Objectives:

1. Introduction to the history and physics background of astronomy,
2. Learn the characteristics of solar system's bodies, and
3. Participate in observing the sky and astronomy lab experiments

Read the assigned chapters **before** class. Note: The schedule below is subject to adjustment.

Date	Subject	Chapter
19 Jan	Introduction, Scale of the universe	1
24 Jan	Introduction: History of the universe, spaceship Earth	1
26 Jan	Patterns in the sky: Constellations, Seasons	2
31 Jan	Patterns in the sky: Lunar phases, eclipses, retrograde motion, parallax	2
2 Feb	Ancient astronomy, Copernican revolution, Kepler, Galileo,	3
7 Feb	The nature of science and pseudo-science	3
9 Feb	Physics: Motion, Newton's Laws, Conservation laws,	4
14 Feb	Physics: Gravity, orbits, tides, acceleration of gravity	4
15 Feb	**First Test (5:30 PM Brevard Hall Auditorium)**	**ch 1-4**
16 Feb	Physics: Properties of light and matter	5
21 Feb	Physics: Spectroscopy: learning from light	5
23 Feb	Telescopes: types, characteristics, calculations	6
28 Feb	Our Solar System: Intro Tour and Patterns	7
2 Mar	Our Solar System: Formation and age of the Solar System	8
8 Mar	Terrestrial Planets: planet shaping processes	9
21 Mar	Terrestrial planets: Moon, Mercury, & Mars	9
22 Mar	**Second test (5:30 PM Brevard Hall Auditorium))**	**ch 5-8**
23 Mar	Terrestrial Planets: Venus and Earth	9
28 Mar	Terrestrial planet atmospheres: Atmospheric basics	10
30 Mar	Terrestrial planet atmospheres: Comparing terrestrial atmospheres	10
4 Apr	Giant planets: Planetary Interiors/Atmospheres: Jup., Sat., Ur., Nep.	11
6 Apr	Giant planets: Moons & Rings: Jupiter, Saturn, Uranus, and Neptune	11
11 Apr	Small solar system bodies: Asteroids, Meteorites, and Comets	12
13Apr	Small solar system bodies: Pluto, Kuiper Belt, Impact dangers	12
18 Apr	Extrasolar Planets: Detection, Nature, Formation, Comparison to SS	13
19 Apr	**Third Test (5:30 PM Brevard Hall Auditorium)**	**ch 9-12**
20 Apr	Extrasolar Planets: Detection, Nature, Formation, Comparison to SS	13
25 Apr	Our Star: The Sun, The Sun-Earth Connection	14
27 Apr	Life in the Universe	24
2 May	**COMPREHENSIVE FINAL EXAM (7:30 PM) Lewis Hall)**	**ch 1-14 + 24**
6 May	**COMPREHENSIVE FINAL EXAM (4:00 PM) Lewis Hall**	**ch 1-14 + 24**

Semester Grade Algorithm:

25% Labs: You must do at least 75% of the labs to pass the course. Don't miss labs!
20% Weekly Homework/Quizzes, on Blackboard, due Saturday at midnight
35% Average of the 3 monthly unit tests, on Blackboard, Tuesdays at 5:30 PM
20% Final Exam: chapters 1-14 + 24

Attendance at all classes is expected. Sign in with your Ole Miss ID. More than 3 unexcused absences can affect your grade. Contact me asap if you have an excused absence.

The course syllabus and chapter outlines are posted on Blackboard. The outlines should be used as study guides. Lecture PowerPoints are also posted on Blackboard. Recordings of lectures for review are on Google Drive. The link is https://drive.google.com/drive/folders/12oXETEgYr53siTkBGKSlXjiom4bjCtLA

Weekly open book quizzes are posted on Blackboard. These quizzes are due to be submitted each Saturday by midnight. Access the quizzes on Blackboard under "my courses/course content/content".

Monthly unit tests are on designated Tuesday's at 5:30 in the Brevard Hall Auditorium and ***not*** open book/notes. Tests are in-person, not online.

Answers to HW/quizzes and tests will be on Blackboard. Use back quizzes and tests to correct misunderstandings and to use as study guides. Quizzes and tests will be primarily based on the text though other topics will also be covered during the lectures. You will need Scantrons (form 16485) to take the unit tests and exam.

Weekly in-person labs are required. For questions, contact your lab TA. Copy their contact info when I send it out! More than 3 labs missed and not made up will cause failure for the course. Missed labs may be made up with a valid excuse. Be prompt for labs! Some may be at our off-campus dark observing site.

ASTRO 103 Spring 2022 Lab Manual. Purchase it from Ole Miss Media in Gerard Hall. (not the book store). You will also need a scientific calculator for some labs.

Extra credit reading/journaling and/or outside class video viewing can add to your exam grade. ***Check UMtoday emails for information and class news daily***!

Recommended YouTube videos: "Study Less - Study Smart" by Marty Lobdell
Other class related videos will be recommended in lectures and emails.

Keep up with posted grades. Don't wait to notice missing work at the end of the semester.

Recommended sources to check or to subscribe to: (I'm always looking for other good sites and books. Let me know if you run across good ones.)
APOD (Astronomy Picture of the Day) at **apod.nasa.gov** daily images and information
Space news is at **universetoday.com** **astronomy.com** and **skyandelescope.com**
Monthly sky maps and info at **skymaps.com**
YouTube site for Astrum. Check out the planet and moon videos. Be ready to skip the adds.
https://www.youtube.com/channel/UC-9b7aDP6ZN0coj9-xFnrtw

Recommended supplementary reference (not required, available used online)
"*Destiny or Chance: Revisited*", Stuart Ross Taylor, Cambridge Univ. Press, 2012