# **AST 235. Astronomy: Stars, Galaxies, and Cosmology – Spring 2019**

## Tentative Lecture Schedule, week by week. Tuesdays shaded in gray. Homework is assigned (available on MasteringAstronomy at 11:59am) on the last day a chapter/topic is covered in lecture. Homework/labs are due at 11:59pm the day specified above, generally 1 week after assigned. No homework will be due on days of midterms, but check the lecture schedule: doing homework early may be good exam preparation! Average completion times for last semester’s students in parentheses after the assignment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Date** | **Chapter** | **Topic** | **Homework** | | |
| **Assigned** | | **Due** |
| Jan 15 |  | Introduction to the Course | Tutorial (23mins) | |  |
| Jan 17 | 1.1-1.4 | Lec. 1. Modern View of the Universe | Ch 1 (46mins) | |  |
| Jan 22 | 2.1-2.4 | Lec. 2. What We See in the Sky; math review |  | | Tutorial |
| Jan 24 | 2.1-2.4 | Lec. 3. Half class in the UNCG Planetarium: Earth's Orbit and its Effects | Ch 2 (50mins)  Lab 1 (28mins) | | Ch 1 |
| Jan 29 | 3.1-3.3 | Lec. 4. History of Astronomy, The Scientific Method |  |  | |
| Jan 31 | 3.4, Appendix D | Lec. 5. The Scientific Method | Ch 3 (22min) | Lab 1  Ch 2 | |
| Feb 5 | 4.1-4.2 | Lec. 5. Basic Laws of Physics, I. | Ch 4 (52mins) |  | |
| Feb 7 | 4.3-4.4 | Lec. 6. Basic Laws of Physics, II. |  | Ch 3 | |
| Feb 12 | 5.1-5.2 | Lec. 7. What is light? | Lab 2 (14mins)  Ch 5 (35mins) | Ch 4 | |
| Feb 14 | 5.3-5.4 | Lec. 8. What’s the matter? Real talk about atoms | Ch 6 (31mins) |  | |
| Feb 19 | 6.1-6.3 | Lec. 9. Astronomical telescopes and types of observation | Lab 3 (14mins) | Lab 2  Ch 5 | |
| **Feb 21** | **1-6** | **Mid-Term Exam 1** | | | |
| Feb 26 | 14.1-14.2 | Lec. 10. The Sun |  | Ch 6  Lab 3 | |
| Feb 28 | 14.3, 15.1-15.2 | Lec. 11. Properties of stars | Ch 14 (14mins) |  | |
| *Mar 5, 7* | *Spring Break* | | | | |
| Mar 12 | 15.1-15.2 | Lec. 12. Properties of Stars | Lab 4 (10mins) |  | |
| Mar 14 | 15.3, 16.1 | Lec. 13. Star formation/birth of stars | Ch 15 (33min) | Ch 14 | |
| Mar 19 | 16 | Lec. 14. Stellar Life Cycles: low mass stars | Ch 16 (12mins) | Lab 4 | |
| Mar 21 | 17.1-17.2 | Lec. 15. Stellar Life Cycles: high mass stars |  | Ch 15 | |
| Mar 26 | 17.2-17.3 | Lec. 16. Stellar evolution after the main sequence | Ch 17 (20mins) | Ch 16 | |
| Mar 28 | 18 | Review for midterm 2: 14-18 | Ch 18 (21mins) |  | |
| **Apr 2** | **14-18** | **Mid-Term Exam 2** | | | |
| Apr 4 | 19 | Lec. 17. The Milky Way Galaxy | Ch 19 (23mins)  Lab 5 (11mins) | Ch 17  Ch 18 | |
| Apr 9 | 20 | Lec. 18. The Variety of Galaxies and Hubble’s law | Ch 20 (16mins) |  | |
| Apr 11 | 21 | Lec. 19. Galaxy evolution | Lab 6 (8mins) | Ch 19  Lab 5 | |
| Apr 16 | 22 | Lec. 20. The Birth of the Universe | Ch 22-23 (27mins) | Ch 20 | |
| Apr 18 | 23 | Lec. 21. Dark Matter and Dark Energy |  | Lab 6 | |
| Apr 23 | 24 | Lec. 22. Life in the Universe |  | Ch 22-23 | |
| Apr 25 | 13 *(in e-textbook)* | Lec. 23. Exoplanets | Ch 13 (19mins) |  | |
| Apr 30 | 1-6, 13-24 | Review for final exam: mostly covering Ch. 13, 19-24; some 1-6 content will appear |  | Ch 13 | |
| May 9 | **1-6, 13-24** | **Final Exam (12:00 - 3:00 p.m.)** | | | |