

Astronomy 10G - Fall 2013 - Syllabus

Note: syllabus may change, keep checking the website

Date	Topics	Lecture	Assignment Due	Associated Reading	Relevant Links
Thurs, 26 Sep	Intro to the Universe. Astronomical scales and units.	Lecture 1		Chapter 1 Chapter 2.1 (angular sizes)	Comparing sizes of planets and stars Interactive Scales in the Universe (very cool!) How big is the Universe? Scientific Notation Significant Figures
Tues, 01 Oct	Kepler's Laws	Lecture 2		Chapter 3.3-3.5	
Thurs, 03 Oct	Gravity according to Newton	Lecture 3		Chapter 4.1-4.2, 4.4	
Tues, 08 Oct	Energy Gravity according to Einstein Kepler's Laws revisited The Virial Theorem	Lecture 4	Quiz#1	Chapter 4.3, 4.5 (except for tides) Chapter S3.1-S3.3	
Thurs, 10 Oct	Matter Light and Thermal Radiation	Lecture 5	HW#1	Chapter 5.1-5.4	How hot is hot?
Tues, 15 Apr	Spectral Lines	Lecture 6	Quiz#2	Chapter 5.4-5.5	
Thurs, 17 Apr	Telescopes	Lecture 7	HW#2	Chapters 6	See the Big Scopes Laser Light Show
Tues, 22 Oct	Midterm I	Midterm I (ch. 1-6, S3)			
Thurs, 24 Oct	Our Sun How Stars Produce Light The Properties of Stars	Lecture 8		Chapters 14.1-14.2, 15.1	The Neutrino Problem Stellar Spectra
Tues, 29 Oct	The H-R Diagram Star Clusters	Lecture 9	Quiz#3	Chapter 15.2-15.3	Sizes of stars (and planets) Hipparcos H-R Diagrams
Thurs, 31 Oct	The Death of Low-Mass Stars White Dwarfs	Lecture 10	HW#3	Chapter 17.1-17.2, 17.4	
Tues, 05 Nov	The Death of High-Mass Stars Two types of Supernovae Neutron Stars	Lecture 11	Quiz#4	Chapter 17.3 Chapter 18.2 Chapter S4.3-S4.4	Watch a Star Blow up Stellar Evolution Chart
Thurs, 07 Nov	Black Holes Gravity and the Curvature of Spacetime	Lecture 12	HW#4	Chapter 18.3 Chapter S3.1-S3.3	Truth about Black Holes Voyage to a Black Hole Fall into a Black Hole Even more travel to a black hole

Tues, 12 Nov	Introduction to Galaxies The Milky Way	Lecture 13	Quiz#5	Chapter 19.1	Pictures of the Milky Way Structure of the Milky Way The Local Group
Thurs, 14 Nov	Midterm II	Midterm II (ch. 14,15,17, 18,S3,S4)			
Tues, 19 Nov	Galaxy Components and Types	Lecture 14	Quiz#6	Chapter 19.1, 20.1	Galaxies Galore
Thurs, 21 Nov	Motions in Galaxies Dark Matter Gravitational Lenses Galaxy Clusters	Lecture 15	HW#5	Chapter 22.1-22.2 Chapter 20.1	
Tues, 26 Nov	Formation of Galaxies Galaxy Mergers	Lecture 16	Quiz#7	Chapter 19.3 Chapter 21.1-21.2	Fate of the Milky Way Galaxy Merger Simulations Do your own galaxy merger
Thurs, 28 Nov	Thanksgiving	Thanksgiving			
Tues, 03 Dec	Distance Measurements The Expansion of the Universe.	Lecture 17	Quiz#8	Chapter 20.2-20.3	Are we the center of the Universe?
Thurs, 05 Dec	Curvature of Spacetime. The Fate of the Universe.	Lecture 18	HW#6	Chapter 22 Chapter S3.2	
Thurs, 12 Dec	FINAL EXAM at 8:00AM (Roessler 66)				
