

ASTRONOMY 10 – FALL 2009
GENERAL SCHEDULE OF ACTIVITIES

WEEK #	WEEK BEGINNING	LECTURE TOPICS AND ACTIVITIES	TEXTBOOK READING*	HOMEWORK**	3RD HR EXERCISE	CPS QUIZ
1	8/31	Enrollment Check, Introduction and Objectives Overview of Astronomy and the Universe Distance and Time Scales, Our Place in the Cosmos	Chapter 1	Assignment 0 No Due Date	PT	—
2	9/7 Monday Holiday	Planetarium Sky Demonstrations – Terminology and Motions Seasons, Precession, Moon Phases, Eclipses Ancient Mysteries – Retrograde Motion and Stellar Parallax	Chapter 2	Assignment 1 Due 09/11	A	—
3	9/14	Early History and the Geocentric Models, Ptolemy Origins of Modern Astronomy – Copernicus, Brahe, and Kepler Galileo – Nature of Science, Observations, and Inertia and Motion Newton’s Three Laws of Motion, Force and Acceleration	Chapter 3 Chapter 4	Assignment 2 Due 09/18	B	AA
4	9/21	Conservation Laws, Momentum and Energy Law of Universal Gravitation, Orbits and Tides Properties of Light, The Stefan-Boltzmann and Wien Laws Atoms and Spectra, the Doppler Shift, Atmospheric Absorption	Chapter 4 Chapter 5*	Assignment 3 Due 09/25	C	BB
5	9/28	Structure and Dynamics of the Solar System Clues to the Formation of the Solar System Physical Processes and the Creation of the Planets Other Planetary Systems	Chapter 6	Assignment 4 Due 10/2	D	CC
6	10/5	The Earth – A Comparative Planetology Approach The Moon – Physical Characteristics and Origin Terrestrial Planets – Mercury, Venus and Mars	Chapter 7	Assignment 5 Due 10/9	E	DD
7	10/12	Overview of the Outer Planets – Jupiter, Saturn, Uranus, Neptune The Jovian Moons and Ring Systems	Chapter 8	Assignment 6 Due 10/16	F	EE
8	10/19	Solar System Debris – Asteroids, Meteoroids, Comets Pluto, Dwarf Planets, and the Kuiper Belt Cosmic Collisions and Consequences Take-Home Midterm Available (Part 1)	Chapter 9	Assignment 7 Due 10/23	G	FF

* Sections of the text that are not required reading are: Parts of 5.3 concerning telescopes and all of Chapter 18.

** Assignments are found on the “Mastering Astronomy” web site for “The Essential Cosmic Perspective”.

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 (continued)

WEEK #	WEEK BEGINNING	LECTURE TOPICS AND ACTIVITIES	TEXTBOOK READING†	HOMEWORK††	3RD HR EXERCISE	CPS QUIZ
9	10/26	Physical Characteristics and Processes of the Sun Sunspots, Solar Activity Cycle, and the Sun-Earth Connection In-Class Midterm (Part 2) in Third Hour (Bring Scantron 882) Extra Credit (first 10 pts) – Due 10/30 by 12:00 Noon	Chapter 10	Take-Home Midterm (Part 1-50 pts) Due 10/30	In-Class Midterm (Part 2 – 50 pts)	GG
10	11/2	Properties of Stars – Luminosity, Temperature, Mass, Radius Magnitude System, Parallax, and Binary Star Systems Stellar Classifications and the HR Diagram Globular and Open Star Clusters, Stellar Birth and Aging	Chapter 11	Assignment 8 Due 11/6	H	HH
11	11/9 Fri Holiday	Theories of Stellar Formation, Evolution, and Death Low-Mass vs High-Mass Stars, Creation of the Elements	Chapter 12	Assignment 9 Due 11/13	I	II
12	11/16	White Dwarfs, Neutron Stars, and Black Holes Accretion Disks, Novae, Supernovae Pulsars, X-Ray Binaries and Bursters, Gamma-Ray Bursts	Chapter 13	Assignment 10 Due 11/20	J	JJ
13	11/23 Thurs, Fri Holiday	The Milky Way Galaxy – Characteristics and Dynamics Galactic Recycling, Star-Forming Regions, The Spiral Arms History of the Milky Way, The Galactic Center	Chapter 14	Assignment 11 Due 11/27	K†††	KK
14	11/30	Galaxy Types – Spirals, Ellipticals, and Irregulars Galaxy Distances and Standard Candles, Cepheid Variables Hubble Law, Universal Expansion, and the Lookback Time Galactic Evolution, Collisions, and Starbursts Quasars and Other Active Galaxies, Supermassive Black Holes	Chapter 15	Assignment 12 Due 12/4	L	LL
15	12/7	Dark Matter and Dark Energy – Evidence and “Composition” The Large Scale Structure of the Universe The Big Bang and the Evolution of the Universe Observational Evidence & the Need for Inflation, Olbers’ Paradox	Chapter 16 Chapter 17	Assignment 13 Due 12/11	M	MM
16	12/14	Final Exam (110 pts, 3 parts – see <i>Final Exam Outline</i>) and Sky Quiz (30 pts) Balance of Extra Credit Due 12/18 by 12:00 Noon	—	—	Final	—

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††† Since Wednesday night classes are cancelled this week, the instructor will explain how to complete Third-Hour K.