

Introduction to the Universe (lecture slides)

HH§1,2, 4(p. 110-114) (also Shu §1, Rees §1)

Nature of Matter (notes I, II)

HH§4 (p. 85-98) (also Shu §3.1, Allday §1, §7.4, §11, Rees §3)

Nature of Light (notes I, II)

HH§4 (p.99-110) (also Shu §2.2, §3.2, §4.3, Allday §2.4, §3.1, 3.2, 3.6.5, 3.6.6, 3.7.3)

Nature of Space & Time (notes I, II)

HH§6, 8 (optional HH chap. 7, also Shu §3.3, Allday §13, Shu §15.2, Rees §10)

Dark Matter (notes I, II)

HH§15 (also Shu §12.1, 12.2, Allday §14)

Expansion of the Universe & Dark Energy (notes I, II, III, IV)

HH§10,11, 13 (for a slightly different narrative, see Allday §15.3, Rees §6, §7)

Big Bang & Cosmic Microwave Background (notes I, II, III, IV, inflation)

big bang: HH§12,14, (also Shu §16, Allday §12)

inflation: HH§16 (also Allday §15, Rees §8)

Origin of Complexity: galaxies

HH§ 15 (also Shu §12.1, Rees §5, 9)

Origin of Complexity: stars, planets & life

HH§5, (also Shu §18.1, 18.3, §20.1, 20.3, Rees §2, 4)

Week	Lecture I	Lecture II
Jan 7	Introduction to the universe	Introduction II
Jan 14	Nature of matter	Nature of matter II
Jan 21	Nature of light	Nature of light II
Jan 28	Nature of space & Time	Nature of space & Time II
Feb 4	Expansion of the Universe	Dark Matter
Feb 11	Dark Matter II <i>Guest lecture by Dr. Anne-Marie Weijmans</i>	ATTENTION in-class mid-term
Feb 18	(reading week)	
Feb 25	Expansion II	Expansion III
Mar 4	Big Bang	Big Bang II: CMB <i>Guest lecture by Dr. Amir Hajian</i>
Mar 11	Big Bang III	Big Bang IV
Mar 18	Big Bang V: Inflation <i>1/2 hour guest lecture by Serguei Ossokine: inflation</i>	Structure Formation <i>Guest lecture by Dr. Marcelo Alvarez</i>
Mar 25	Stars and Planets	(Easter Friday, no class)
Apr 1	Stars and Planets II <i>1/2 hr guest lecture by Charles Zhu: lives of stars</i>	Final Review

course review