

# Physics 153 Syllabus

May change so keep checking

Week	Topics	Reading	Notes
1	Astronomical Scales and Units Redshifts and local distances The magnitude system The Virial Theorem	C&O: Chapters 3.1-3.2, 2.4	
2	Virial Theorem (continued) Stars as Thermal Emitters	C&O: Chap. 3.4-3.5 Chap. 8.1 (1st 3 pages) and 8.2 Chap. 25.1	HW#1 due on Thursday
3	Stellar Populations Galaxy Types and the Hubble Sequence Surface Brightness Distributions	C&O: Chap. 25.2 and 25.4	HW#2 due on Tuesday
4	Rotation Curves and Dark Matter <b>MIDTERM 1</b>	C&O: Chap 25.2 and 25.4	<b>Midterm 1 on 28 Jan</b>
5	Stellar motions in galaxies Tully-Fisher and Faber-Jackson laws The Fundamental Plane Galaxy Interactions	C&O: Chap 26.1	HW#3 due on Tuesday
6	Gas cloud collapse Galaxy Formation	C&O: Chap. 10.1 Chap. 12.2 (Jeans Criterion & Homologous Collapse) Chap. 26.2	HW#4 due on Tuesday
7	The Distance Scale The Expansion of the Universe Groups and clusters	C&O: Chap 27.1 - 27.3 Shu: pp. 332-350	HW#5 due on Tuesday

Groups and clusters

8	(continued) Luminosity Functions Brief intro to GR	C&O: Chap 27.3 Chap 17.1 - 17.2	HW#6 due on Tuesday
9	<b>MIDTERM 2</b> Gravitational Lenses	<u>Gravitational lens handout:</u> pp. 1-13, 21-31, 36-38	<b>Midterm 2 on 2 Mar</b>
10	Distance Measurements and Cluster Masses Revisited Active Galaxies (if time)	C&O: Chap 28	HW#7 due on Tuesday

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**Tuesday 16  
March**

**FINAL EXAM at 8:00AM**

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