Atmospheric Sciences 5300: Fall 2023

Schedule (first half, thermodynamics)

Week	Date	Day	Topics	Reading	HW
1	8/21	M	Introduction		
	8/23	W	Moisture variables; dry adiabatic processes	WH 3.5, K 5.4, P 7.1, 7.3.1, 7.4	
	8/25	F	Moisture variables; dry adiabatic processes	(same)	
2	8/28	M	Skew T-log p diagram: dry adiabatic processes	K Fig. 7 (p. 27), P 1.4.4, 5.4.3, 7.5-6	
	8/30	W	Skew T-log p diagram: dry adiabatic processes	(same)	# 1
	9/1	F	Skew T-log p diagram: dry adiabatic processes	(same)	
3	9/4	M	*(Holiday: no class)*		
	9/6	W	Skew T-log p diagram: saturated adiabatic processes	K 5.5-7, P 7.2, 7.7.1-2, 7.8-9	
	9/8	F	Skew T-log p diagram: saturated adiabatic processes	(same)	# 2
4	9/11	M	Skew T-log p diagram: saturated adiabatic processes	(same)	
	9/13	W	Skew T-log p diagram: saturated adiabatic processes	(same)	
	9/15	F	Skew T-log p diagram: liquid water and total water	K 5.7, P 7.10.3-4	# 3
5	9/18	M	Skew T-log p diagram: liquid water and total water	(same)	
	9/20	W	Precipitation rate; snow versus rain	(lecture notes)	
	9/22	F	Saturation adiabatic lapse rate	K 7.1.2, P 7.7.3	# 4
6	9/25	M	Saturation adiabatic lapse rate	K 7.1.2, P 7.7.3	
	9/27	W	Stability; buoyancy oscillations	K 7.2, P 8.1-3	
	9/29	F	CAPE, LCL, LFC, NBL; maximum updraft speed	K 7.3, P 8.4-5	
7	10/2	M	Skew T-log p diagram: microburst downdrafts	(lecture notes)	# 5
	10/4	W	Skew T-log p diagram: microburst downdrafts	(lecture notes)	
	10/6	F	Heat capacity	K 4.2	# 6
8	10/16	M	**Review**		
	10/18	W	**Midterm Exam**		
	10/20	F	TBD		# 7

K = Thermodynamics notes, WH = Wallace & Hobbs, P = Petty