Week	Date	Day	Lect #	Topics	Readings	Due	Recitation	Prelims
1	8/25	M	1	Intro, systems, thermo "laws", types of interactions	1.1-1.3		Systems	
	8/26	T						
	8/27	W	2	properties, process variables, properties - intrinsic and extrinsic	1.5,1.7			
	8/28	R						
	8/29	F	3	pressure, types of energy, work & heat transfer	1.6, 2.1-2.4	HW 1		
2	9/1	M	NO CLASS				NO REC	
	9/2	T					NO REC	
	9/3	W	4	PdV work, equilibrium vs quasi-equilibrium	2.2			
	9/4	R						
	9/5	F	5	1st law for closed systems, types of work	2.5			
	9/8	M	6	Cycles. Power cycles. Refridgeration vs heat pump. Efficiency. Metrics. Storage	2.6-2.7	HW 2	Quiz 1	
	9/9	T					Quiz 1	
	9/10	W	7	Review. Pure Substances / states of matter. Phase diagrams	3.1-3.2			
	9/11	R						
	9/12	F	8	Saturated states. Intrinsic properties.	3.3-3.5			
	9/15	M	9	Saturated states. Super heated vapor.	3.6-3.7	HW 3	Quiz 2	
	9/16	T					Quiz 2	
	9/17	W	10	Subcooled liquid. Enthalpy.				
	9/18	R						
	9/19	F	11	Ideal gas, specific heat	3.9,3.12			
	9/22	M	12	Ideal gas, specific heat	3.13	HW 4	Quiz 3	
	9/23	T					Quiz 3	
	9/24	W	13	Incompressible substance	3.10, skim 3.11			
	9/25	R						
	9/26	F	14	Where are we? What are we missing to analyze real world systems? Control volumes	4.1			through here on Prelim 1
	9/29	M	15	Mass balance	4.2-4.3	HW 5		

	9/30	T						
	10/1	W	16	Prelim 1 Review				
	10/2	R						PRELIM 1
	10/3	F	17	Energy conservation for control volumes, steady state, flow work	4.4, 4.5			
	10/6	M	18	Control mass vs control volume perspective, turbines, compressors, pumps	4.6-4.8	HW6 (will be short)		
	10/7	T						
	10/8	W	19	Nozzles, diffusors, throttles	4.6, 4.10			
	10/9	R						
	10/10	F	20	Heat exchangers	4.9			
	10/13	M	NO CLASS				NO REC	
	10/14	T	NO CLASS				NO REC	
	10/15	W	21	System integration	4.11			
	10/16	R						
	10/17	F	22	Unsteady energy balance	4.12			
	10/20	M	23	Second law concept, reversible vs irreversible processes	5.1-5.4	HW 7	Quiz 4	
	10/21	T					Quiz 4	
	10/22	W	24	Second law concept, reversible vs irreversible processes				
	10/23	R						
	10/24	F	25	Fully reversible cycles, Carnot efficiency	5.5-5.10			
	10/27	M	26	Fully reversible cycles, Carnot efficiency		HW8	Quiz 5	through here on Prelim 2
	10/28	T					Quiz 5	
	10/29	W	27	Second law - entropy, Clausius inequality	5.11			
	10/30	R						
	10/31	F	28	Using entropy as a state variable	6.1-6.3			
	11/3	M	29	Prelim 2 Review				
	11/4	T						PRELIM 2
	11/5	W	30	Combining first and second laws	6.4-6.10			
	11/6	R						
	11/7	F	31	Combining first and second laws				
	11/10	M	32	Equations of state and alternative free energy functions	11.1-11.5	HW9	Quiz 6	

	11/11	T					Quiz 6	
	11/12	W	33	Equations of state and alternative free energy functions				
	11/13	R						
	11/14	F	34	Isentropic processes and efficiencies. The PV and TS perspectives.	6.11-6.13			
	11/17	M	35	Rankine cycle revisted	8.1-8.5	HW10	Quiz 7	
	11/18	T					Quiz 7	
	11/19	W	36	Rankine cycle revisited				
	11/20	R						
	11/21	F	37	Brayton cycle	9.5-9.9			
	11/24	M	38	Turbojets	9.11-9.14	HW 11		
	11/25	T						
	11/26	W	NO CLASS					
	11/27	R						
	11/28	F	NO CLASS					
	12/1	M	39	Otto cycle	9.2			
	12/2	T						
	12/3	W	40	Diesel cycle	9.3			
	12/4	R						
	12/5	F	41	Refridgeration cycles	10.1-10.4, 10.6			
	12/8	M	42	Cycles review and Modeling materials		HW 12	NO REC	
	12/14	Su	FINAL EXAM					