

ES202 Schedule - Winter 2009-10

Week	Lecture	Topic	Review Material	New Material
1	1	Intro to Thermodynamics & Steady-state Devices	6.1, 6.2, 6.4	
	2	Ideal gas properties	4-6, 5-3, 5-4, 8-4 through 8-7	4-7, 8-9
	3	Applications	5-5	8-8
2	4	Pure substances (1)		4-1 through 4-5, 8-3
	5	Pure substances (2)		
	6	Isentropic efficiency	6-4, 8.1, 8.2, 8.8	8-12
3	7	Carnot power and refrigeration cycles	7-1 through 7-6, 23-1*	7-7 through 7-11, 23-2, 23-9, 23-15*
	8	Brayton & Otto/Diesel power cycles (ideal gas)		23-3 through 23-8*
	9	Rankine power cycle & vapor compression refrigeration cycle		23-10 through 23-13, 23-16 through 23-19*
4	10	Catch-up day, Enrichment activity		
	11	Intro to Fluid Mechanics, Hydrostatics (1)		9-1, 9-2, 9-3, 9-6, 2-7, 2-8, Chpt. 10
	12	Exam #1 (Friday after winter break)		
5	13	Hydrostatics (2)		
	14	Hydrostatics (3)		
	15	Bernoulli & Mechanical Energy (1)		pg. 66, 12-1 through 12-4
6	16	Bernoulli & Mechanical Energy (2)		
	17	Bernoulli & Mechanical Energy (3)		
	18	Boundary Layers: Laminar & Turbulent Flow		
7	19	Internal flow (1)		Chpt. 14
	20	Internal flow (2)		
	21	Internal flow (3)		
8	22	Catch-up day, Enrichment activity		
	23	External Flow (1) - Skin friction		Chpt. 15
	24	Exam #2 (Friday 8th week)		
9	25	External Flow (2) - Pressure effects		
	26	External Flow (3) - Lift & Drag		
	27	External Flow (4) - Lift & Drag		
10	28	Cons. of mass and linear momentum on differential C.V. (1)		Class notes
	29	Cons. of mass and linear momentum on differential C.V. (2)		
	30	Wrap-up/course evaluations		

*Chapter 23 is online in a PDF

Lab Schedule

Week	Topic
1	ES203
2	Property Tables
3	ES203
4	Cycle Analysis
5	Dimensional Analysis
6	Momentum Deficit
7	Shared w/ ES204 - Fluid Friction
8	Shared w/ ES204 - Fluid Friction
9	ES204
10	ES204