



## SYLLABUS

Sep	8	W	Integral Balances: Energy	6	5.16
Sep	10	F	Integral Balances: Energy	6	
Sep	13	M	Integral Balances: Energy	6	6.12
Sep	15	W	Shear stress Laminar Flow	7-8	6.23
Sep	17	F	Shear stress Laminar Flow	7-8	8.3
Sep	20	M	Differential Eqns Fluids	9	8.12
Sep	22	W	Test Review		
Sep	24	F	Test # 1		
Sep	27	M	Differential Eqns Fluids	9	
Sep	29	W	Differential Eqns Fluids	9	9.18
Oct	1	F	Dimensional Analysis	11	9.20
Oct	4	M	Dimensional Analysis	11	11.1
Oct	6	W	Boundary layers and drag	12	11.2
Oct	8	F	Boundary layers and drag	12	
Oct	11	M	Pipes / Friction Factors	13	12.10 <sup>*0</sup>
Oct	13	W	Pipes / Friction Factors	13	13.2
Oct	15	F	Sec. A: HYSIS Lab† / Sec. B: Pipes	13	13.7
Oct	18	M	FALL BREAK – NO CLASS		
Oct	20	W	Sec. B: HYSIS Lab† / Sec. A: Pipes	13	13.13 <sup>*1</sup>
Oct	22	F	Test Review		
Oct	25	M	Test #2		
Oct	27	W	Flow in Packed Beds	Handout	
Oct	29	F	Fluidized Beds	Handout	Packed Bed HW
Nov	1	M	Filtration	Handout	
Nov	3	W	Heat Transfer Intro: Conduction	15	Filtration HW
Nov	5	F	Heat Transfer Intro: Convection	15	
Nov	8	M	Heat Transfer Intro: Radiation	15	15.7 <sup>*2</sup>
Nov	10	W	Steady State Conduction	16, 17	15.28
Nov	12	F	Steady State Conduction	17	15.16
Nov	15	M	Steady State Conduction	17	17.8
Nov	17	W	Steady State Conduction	17	17.26 <sup>*3</sup>
Nov	19	F	2D Conduction	17	17.29
Nov	22	M	2D Conduction	17	17.39
Nov	24	W	Test 3 Review		17.46
Nov	26	F	HOLIDAY – NO CLASS		
Nov	29	M	Test 3		
Dec	1	W	Unsteady Conduction	18	
Dec	3	F	Unsteady Conduction	18	18.1
Dec	6	M	Unsteady Conduction	18	18.8, 18.19
Dec	8	W	Unsteady Conduction	18	Projects Due
Dec	10	F	Semester Review		
Dec	15	W	Final exam: 8:00 – 10:50 AM		

† Meet in L2232 Computer Lab

<sup>\*0</sup>12.10: fluid is air

<sup>\*1</sup>13.13: Ignore interest. Just calculate the most economical diameter based on initial installation plus operating costs over 20 years. Pipe length is 2 km, NOT 2 m.

<sup>\*2</sup>15.7: Gradient should be 15K/cm.

<sup>\*3</sup>17.26: Older books may give the wrong heat generation rate. It should be 51,700 kW/m<sup>3</sup>