

Syllabus CM3110 Fall 2017 version 31Aug2017

week	date	class	Exams	Sunday Homework Discussion with TA Chem-Sci 101	Readings (see www.chem.mtu.edu/~fmorriso/cm310/reading_assignments.html for which selections are selected)
0	Pre-Requisite Classes		0	Math, physics, CM2110, CM2120 Preparation	Week 0 review readings
1	Monday, September 04, 2017	1			Chapter 1 (selected sections) plus Pre-req review
	Wednesday, September 06, 2017	2		Why study fluid mechanics? MEB/math/physics	
2	Monday, September 11, 2017	3		How fluids behave? Viscosity, drag, turbulence	Chapters 2 & 3 (selected sections)
2	Tuesday, September 12, 2017	4		EXAM 1	
2	Wednesday, September 13, 2017	5	Exam 6:30-8pm	Continuum mechanics/Control Volume	
3	Monday, September 18, 2017	6		First momentum balance start	Chapter 4 (selected sections)
3	Wednesday, September 20, 2017	7		Shell Balances	
4	Monday, September 25, 2017	8		Navier-Stokes - microscopic momentum balance	Chapters 5, 6, & 7 (selected sections)
4	Wednesday, September 27, 2017	9		Poiseuille flow in a tube	
5	Monday, October 02, 2017	10		More complex flows	Chapters 5, 6, & 7 (selected sections)
5	Wednesday, October 04, 2017	11		Non-Newtonian fluids (rheology); Exam prep	
6	Monday, October 09, 2017	-		No class (out of town)	Chapters 5, 6, & 7 (selected sections)
6	Tuesday, October 10, 2017	12	Exam 6:30-8pm	EXAM 2	
6	Wednesday, October 11, 2017	-		No class (out of town)	
7	Monday, October 16, 2017	13		Internal flows/correlations/dimensional analysis	Chapter 9 (selected sections)
7	Wednesday, October 18, 2017	14		Macroscopic momentum balances	
8	Monday, October 23, 2017	15		Macroscopic momentum balances	Chapters 8 & 10 (selected sections)
8	Wednesday, October 25, 2017	16		External flows/correlations/dimensional analysis	
9	Monday, October 30, 2017	17		Boundary Layer/Numerical Solutions/Compressible flow	Geankopolis Chapter 4 (selected sections)
9	Wednesday, November 01, 2017	1		Fourier's law	
10	Monday, November 06, 2017	2		Fourier's law/ 1D Heat transfer (rectangular); exam prep	Geankopolis Chapter 4 (selected sections)
10	Tuesday, November 07, 2017	18	Exam 6:30-8pm	EXAM 3	
10	Wednesday, November 08, 2017	3		1D Heat transfer (radial)	
11	Monday, November 13, 2017	4		2D Heat Transfer/Unsteady-state heat transfer	Geankopolis Chapters 4 & 5 (selected sections)
11	Wednesday, November 15, 2017	-		No class (out of town)	
B	Monday, November 20, 2017	-		no class- Thanksgiving	
B	Wednesday, November 22, 2017	-		no class- Thanksgiving	
12	Monday, November 27, 2017	5		Dimen. Anal./Heat Transfer Coefficients	Geankopolis Chapter 4 (selected sections)
12	Wednesday, November 29, 2017	6		Heat Transfer Coefficients (forced convection)	
13	Monday, December 04, 2017	7		Heat transfer coefficients (natural convection); exam prep	Geankopolis Chapters 4 & 5 (selected sections)
13	Tuesday, December 05, 2017	8	Exam 6:30-8pm	EXAM 4	
13	Wednesday, December 06, 2017	9		Heat exchanger Design/effectiveness/fouling	
14	Monday, December 11, 2017	10		Heat Transfer with phase change/Evaporators/Radiation	Geankopolis Chapters 4 & 5 (selected sections)
14	Wednesday, December 13, 2017	11		Radiation	
F	Monday, December 18, 2017	-		(exam week Monday)	HW6 6:30-7:30
	Wednesday, December 20, 2017	29	3:00-5:00pm	Final EXAM	