Fall 2018

CHE 312 - Chemical Process Safety

Thomas Devine

ChE612, Chemical Kinetics and Reactor Design

Fall 2018 Syllabus, NJIT

Time and Location: Monday, 6pm-9pm --- Kupfrian Hall 203

Instructor: Mirko Schoenitz,
Email: schoenit@njit.edu
Phone: office 973-596-5260, cell 609-902-3445
Course materials: http://moodle.njit.edu
Office hours, Mo-Fr 10am-5pm only by prior appointment

Teaching assistant TBA

Textbook, required: Elements of Chemical Reaction Engineering (5th ed),
H. Scott Fogler, Prentice Hall, ISBN: 0-13-388751-0

Exams: Two Midterm exams, One Final exam, One Term Project
Exams are open book/open notes. Exams are cumulative.
The exams and the term project each count for 25 % of the final grade.

Grading: 100-90 %: A 89-80 %: B+ 79-70 %: B
69-60 %: C+ 59-50 %: C < 50 %: F

Date	Topics	Assigned reading
10-Sep	Introduction and review of undergraduate material	Review of chapters 1 – 3
17-Sep	--"--	Review of chapters 4 – 6
24-Sep	Steady state energy balance	Sections 11.1 - 11.5. 12.1 - 12.4
1-Oct	Unsteady state energy balance	Sections 13.1 - 13.4
8-Oct	Midterm 1	
15-Oct	Data analysis and Multiple reaction systems	Sections 7.1-7.4, 8.1-8.4, 8.6
22-Oct	Non-elementary reactions, Bio-/enzymatic reactions	Sections 9.1-9.3
29-Oct	Assignment of term project	
5-Nov	Heterogeneous catalysis	Sections 10.1-10.4, 10.7, 5.5
12-Nov	Diffusion and Mass transfer in catalysis	Sections 14.1-14.4, 15.2-15.3
19-Nov	Midterm 2	
26-Nov	Non-ideal reactors	Chapter 16
	progress memo for term project due	
3-Dec	Segregated flow, mixing, dispersion	Sections 17.1-17.2
10-Dec	Reactor combinations	Sections 18.1-18.2
	term project due	
15-Dec – 21-Dec (expected Monday, 17-Dec)	Final exam	