Fall 2018

CHE 612 - Chemical Kinetics and Reactor Design

Mirko Schoenitz

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**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


**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:**

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<th>Percentage</th>
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<tr>
<td>100-90 %</td>
<td>A</td>
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<td>89-80 %</td>
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**Date** | **Topics** | **Assigned reading**
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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 | 
revision 2018-08-01