

ChE460 – Separation Processes II – Fall 2016

(Central King Building 204; Wednesday 6:00 – 9:05 PM)

Instructor: Dr. Saeid Savarmand, Sun Chemical Corporation

Office Hours: Wednesday 5:00 – 6:00 PM at Tiernan 373 Conf. room.

Teaching Assistant: Will be announced once appointed by the dept.

Description This is a second course on separation technologies used in various industrial applications. Building up on the first course on staged processes, this course focuses on membrane separation processes, external force-based separations, separation *via* fixed-bed absorption columns, evaporation and drying separation processes.

Prerequisites: ChE360 & ChE370

Textbooks:

Required: Geankoplis, 4th Ed., Prentice Hall (You already have this book as it is the textbook of ChE260/CHE370).

Recommended:

McCabe, W.L., Smith, J.C. & Harriot, P., “Unit Operations of Chemical Engineering”, 7th Ed., McGraw-Hill.

Seader, J.D. & Henley, E.J. “Separation Process Principles”, 3rd Ed., Wiley

Course Outline:

1. Introductory remarks & Dimensional Analysis.
2. Membrane separation processes
3. Filtration and Centrifugal separation processes
4. Fixed-bed separation processes
5. Evaporation and Drying processes

Grading: Two mid-term exams accounting 20% each (Oct. 12th and Nov. 9th) and the final exam (Dec. 15–21) of 34% together with 13% quizzes/homework make up 87% of the total grade. A term project with presentation of 13% makes up the rest. Course letter grades will be as following: A = 85+; B+ = 80+; B = 75+; C+ = 70+; C = 65+; D = 60+; F < 60.

Exams Policy: Only justifiable absence warrants a make-up test.

Classroom Policy: Eating and talking with friends are not permitted in the class. Use of cell phones, notepads, tablets and laptops is not allowed. Cell phones should be silent or preferably turned off.

NJIT Honor Code: The NJIT honor code will be followed at all times.

Attendance: Students are expected to be in the class earlier than the class starts or at least on time. The attendance sheet should be signed at each of the two evening sessions. More than 4 unaccounted absences can lower the overall grade.