

Material and Energy Balances

CHE 2800 - Winter 2002

Department of Chemical Engineering and Materials Science
Wayne State University

Lecture: 8:30-10:20 am, M W, Room 0028 Mano
8:30-9:25 am, F

Instructor: Jeffrey Potoff, PhD, Assistant Professor
Office: 1127 Engineering
Tel: (313) 577 9357
Email: jpotoff@chem1.eng.wayne.edu

Web site: <http://potoff1.eng.wayne.edu/che2800/>

Office Hours: 2:00-3:00 pm, W, or by appointment

Textbook: Felder, R. M., and Rousseau, R. W., "Elementary Principles of Chemical Processes," 3rd ed., John Wiley and Sons (1999).

Objectives: The major objective of this course is to teach students basic problem solving skills required for future studies in chemical engineering.

Topics include: An introduction to units, curve fitting, material balances for (a) non-reactive and (b) reactive processes, energy balances for (a) non-reactive and (b) reactive processes, reaction stoichiometry, combined energy and material balances, phase equilibria, and psychrometric charts

Grading:	Homework	10%
	Exam #1 (mass balances, phase equilibria)	30%
	Exam #2 (energy balances, psychrometric charts)	30%
	Final Exam (comprehensive)	30%

Scale: A: 100-85%, B: 85-70%, C: 70-50%, D: 45-35%

Exams are *tentatively* scheduled for **February 11** and **March 25**.

Homework: Homework should be done neatly, preferably on "engineering" paper, written on one side only. While the homework accounts for only 10% of your final grade, a strong correlation has been found between homework and exam averages. Students with homework averages of 60% or less have never received a final grade higher than a C, while those with homework averages of > 80% generally have final grades of B+ or better.