

Material and Energy Balances

CHE 2800 - Winter 2004

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, Room 0028 Mano

Instructor: Jeffrey Potoff, PhD, Assistant Professor
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Web site: <http://www.blackboard.wayne.edu>

Office Hours: 1:00-2:00 pm, F, or by appointment

Prerequisites: CHM 1225, 1230, 1240, 1250
MAT 2010, 2020
PHY 2170/2175

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%
Class participation and quizzes	5%
Exam #1 (mass balances, chemical reactions)	15%
Exam #2 (multiple reactions, phase equilibria)	20%
Exam #3 (energy balances, psychrometric charts)	20%
Final Exam (comprehensive)	30%

Scale: A: 100-85%, B: 84-70%, C: 69-55%, D: 54-35%

FINAL GRADES ARE NOT CURVED!

Exams are *tenatively* scheduled for **February 9**, **March 10**, and **April 14**.

Final Exam: 8:30-10:30 am, Wednesday, April 28, 2004

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- Homework:** Homework will be assigned on Mondays and is due the following Monday. Homework sets are expected to be neat and only written on one side of the paper. "Doublesided" homework solutions will be returned to the student with a score of 0.
- Add/Drop:** As per College of Engineering policy, no drop forms will be signed after February 9, 2004. Failing the course is not a valid reason for withdrawal.
- Missed Exams:** Students who must miss an exam for any reason are expected to contact the course instructor before the date of the exam. Valid excuses for missing an exam are: illness, car crash, death in the immediate family, and jury duty. Students must provide documentation (doctor's note, police report, death certificate, etc), before make-up examinations will be administered.
- Attendance:** Students are expected to attend all classes. Missed classes will result in a reduced "Class Participation" grade. Rain, snow, etc. are not valid excuses for missing class if the university is open.
- Cheating:** Students caught cheating on any assignment will receive a grade of 0 on that assignment and be subject to disciplinary action.