

ChE 302
Chemical Engineering Thermodynamics II
Course Information & Policies
Fall 2008

Description. ChE 302 is the second half of a two-semester course dealing with the applications of thermodynamics to chemical process systems, especially phase and chemical equilibria and the behavior of real fluids. Chemical Engineering majors must earn a C or better in this course.

Prerequisite. Completion of ChE 301 with a C or better

Objectives. Students who successfully complete ChE 302 will demonstrate the ability to do the following:

1. Model Building. Given a verbal or pictorial description of an engineering system, create a useful mathematical model of that system, including an informative schematic sketch, reasonable simplifying assumptions, appropriate balances and state relations, and so forth.

2. Thermodynamic Methods. Solve thermodynamic problems using

Thermodynamics charts and tables;

Caloric equations of state;

Principle of Corresponding States;

Thermal equations of state;

Fugacity;

Partial properties;

Activity and activity coefficient models;

Equilibrium ratios.

3. Computational Tools. Apply modern computational tools—such as spreadsheets, property databases, and process simulators—to solve thermodynamic problems.

Instructor

Dr. P. K. Andersen

Jett Hall 286

646-8153

pka@nmsu.edu

Required Texts

P. K. Andersen (2008). *Thermodynamics: Principles and Applications*.

S. I. Sandler (2006). *Chemical, Biochemical, and Engineering Thermodynamics*, 4/e.
(Hoboken, NJ: John Wiley & Sons)

Attendance You are required to attend three 50-minute lectures per week, 11:30 a.m.–12:20 p.m. on Monday, Wednesday, and Friday. If you must miss a class because of an interview, plant trip, or other commitment, please notify Professor Andersen in advance. Otherwise, absences may be excused only in cases of illness, accident, or other emergencies.

WebCT Please check the course WebCT site frequently for announcements and information.

Homework Homework problems will be assigned but not collected.

Quizzes A quiz may be given in class at any time. A missed quiz may not be made up, except in the case of an excused absence.

Tests Several tests will be given during the semester, according to the course schedule. A missed test may not be made up, except in the case of an excused absence.

Final exam A comprehensive final exam will be given during finals week. A missed exam may not be made up, except in the case of an excused absence.

Rescoring If we make a mistake in grading a quiz or exam, be sure to request a re-scoring within seven days. After that, the scores will be “frozen.”

Grading Approximately 1200 points will be possible. Your course grade will depend on quizzes (approximately 480 points), tests (approximately 480 points) and the final exam (approximately 240 points). Course grades will be assigned according to a straight scale:

A 90 to 100%

B 80 to 90%

C 70 to 80%

D 60 to 70%

F Below 60%

A grade of *Incomplete* (I) may be given only if the student is passing and cannot complete the required work for reasons beyond the student's control. Please refer to the current NMSU Undergraduate Catalog for regulations regarding Incompletes.

Conduct You are expected to abide by the standards of behavior set forth in the “Student Code of Conduct” in the *NMSU Student Handbook*. Violation of these standards may result in disciplinary action, according to the procedures described in the handbook.

Disabilities If you think you may have a disability, you are encouraged to call or visit the Office of Disabled Student Programs in the Garcia Annex (646-1921). If you have a condition that could affect your ability to exit the building in case of an emergency, or which may cause an emergency during class, please discuss this with the ADA Coordinator (646-7795).