

Chemistry 274: Principles of Analytical Chemistry
Spring 2008 Course Syllabus
TR 10:30 –11:45 Bilger 335

Instructor: Dr. David Shinn
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Office hours: 11:45-12:45 TR, or by appointment. Note that I am also assigned four CHEM 274L lab sessions which run from 1:30-4:15 on MTWR in Bilger 201. If needed, please feel free to drop by Bil 318 or Bil 201 during these times and we should be able to meet.

Required Textbooks:

- (1) Skoog, West, Holler, Crouch, "Fundamentals of Analytical Chemistry," 8th edition.
- (2) "Student Solutions Manual," by Gary Kinsel

These two books including an interactive Analytical Chemistry CD-ROM are available at the UH Bookstore at a reduced package price.

Course Description: Selected methods and principles, e.g., phase equilibria, ionic equilibria, electrode equilibria, separations, spectroscopy, automation, and process control. Pre: CHEM 162 or 171 or 181A and MATH 215 or MATH 241 or MATH 251A.

Pace of the Course: About 15-20 pages of reading from the text and about ~10 review questions/problems per lecture.

Exams: Three mid-term exams and a final exam will be given during the course. The material covered on each of the 3 mid-term exams will incorporate material covered up to 1-2 lectures prior to each scheduled exam. The final exam will be two hours in length and will be comprehensive for the entire course.

For homework/exams, scientific calculators (**not to be shared during exams**) and writing materials are necessary and must be provided by the student.

Examination Absences: No make-up examinations will be given. Absence from an examination will be excused for illness if certified by a written statement from a physician. If you are unable to take an examination, please notify me prior to the exam, if at all possible. In any event, you must contact me if you miss an exam or a score of zero will be assigned.

Final Grade Determination:

Hour Exams (3)	25% each (75% total)
Final Exam	25% total

Course Grading:

A: 90-100%	B: 80-89%	C: 65-79%	D: 50-65%	F: below 50%
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Tutorial Room: In addition to my office hours and appointments, there is a study/tutorial room (Bilger 337) staffed by graduate teaching assistants for about 25 hours per week. Please check the posted schedule for the times when tutors are available. This tutorial is a huge resource that should not be overlooked! Hopefully you will find fellow students in the tutorial that can further develop into a study team at the same time.

Students with Disabilities: Near the beginning of the term, in accordance with the Americans with Disabilities Act, any student requiring assistance with a particular disability should consult with the instructor so such assistance can be provided as effectively as possible. Further information about the KOKUA Program is available at www.hawaii.edu/kokua

Path to Success in the Course:

Read all the assigned material and complete all of the assigned problems. Only as a last resort should you depend on the solutions manual for checking your efforts. Sometimes the solutions manual or text will be in error. Don't get too upset about such a nuisance and instead consider it a learning exercise!

In addition to completing assigned exercises, reviewing previous hour exams provided via email by the instructor will also be an important task to complete. These will be provided roughly one week prior to each of the three hour exams. The process of producing the exams you will be taking will begin with these as templates!

Generally speaking, you should provide for a time input of ~4-5 hours per lecture outside of class. In reality, you should spend all the time you need to understand things thoroughly.

Relevant problems will be assigned on a chapter by chapter basis as the course develops.

COURSE ACTIVITIES AND SCHEDULED ASSESSMENTS:

1/15 – 2/7 Selected Topics Chs. 1, 4, 5-11...The Analytical Process and Equilibria
Tuesday 2/12 MID-TERM EXAM 1

2/14 – 3/13 Selected Topics Chs. 12-17.....Classical Methods of Analysis
Tuesday 3/18 MID-TERM EXAM 2

3/20 – 4/17 Selected Topics Chs. 18-20, 24...Electrochemistry and Spectroscopy
Tuesday 4/22 MID-TERM EXAM 3

4/24 – 5/6 Selected Topics Chs. 29-32.....Phase Equilibria and Separations
Tuesday 5/13 FINAL EXAM 9:45 – 11:45