



CHEMISTRY & BIOCHEMISTRY
FLORIDA STATE UNIVERSITY



CHM 3120 - INTRODUCTION TO ANALYTICAL CHEMISTRY

Spring, 2010

Course Introduction

Instructor: Dr. William T. Cooper, 415 DLC, 644-6875

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Office Hours: 11:00 – 12:00 AM Monday

4:00 – 5:00 PM Tuesday

2:00 – 3:00 PM Wednesday

Lecture: 316 HCB; 9:30 – 10:30, TR

Texts: *Analytical Chemistry: An Introduction, 7th Edition*

Douglas A. Skoog, Donald M. West, F. James Holler, Stanley R. Crouch

Prerequisites: CHM 1046, CHM 1046L

Content: *Introduction to Analytical Chemistry* is a detailed survey of the fundamental principles of modern *quantitative chemical analysis*. The material taught in this course serves as a foundation for all advanced courses in analytical chemistry and is a prerequisite for CHM 4130 and CHM 4130L, "Advanced Analytical Chemistry". Analytical Chemistry has played a particularly important role in many of the most significant technological advances of the past 20 years. This course will thus include both detailed descriptions of the science of chemical analysis, as well as discussions of applications in areas such as molecular biology, materials science, environmental and earth sciences, pharmaceuticals, and nutrition and human health.

CHM 3120, the lecture portion of *Introduction to Analytical Chemistry*, consists of two one-hour lectures per week. CHM 3120L, the companion laboratory course, includes two three-hour laboratory meetings per week. The lecture portion of this course is divided into four approximately equal parts:

1. statistics and stoichiometry;
2. acid-base equilibria and titrations;
3. an introduction to spectroscopic methods;
4. electrochemistry and analytical separations, including chromatography.

There will be four one-hour exams during the semester (at the conclusion of each section), as well as a comprehensive Final Exam. Several quizzes will also be administered on-line *via* the Blackboard web site. Dates for the exams can be found in the accompanying Lecture Schedule; in general, there will be a quiz during weeks when no exam is scheduled. NOTE that the **Final Exam is Friday, April 30th at 12:30 PM.**

Grading:	4 one-hour exams (15% each, 60% total)	<u>Scale</u>
	On-line quizzes (20% total)	85-100 A
	Final Exam (20%)	72.5-84 B
		60-72.5 C
		50- 59 D
		< 50 F

Problems: It is expected that all assigned problems will be completed, even though they will not be graded or turned in. Working and thoroughly understanding problems are essential for properly mastering this course. For some reason, homework problems also have a way of turning up on exams unannounced! A *Solutions Manual* will be available in the course web site.

Course Web Page: All important information regarding this course can be found on the course web page. This web page can be accessed directly from your *Blackboard* account at <https://campus.fsu.edu>.

The course web page is divided into sections that can be accessed by simply clicking on the appropriate heading in the menu bar along the left side of the screen. You will find links to the following:

Announcements

- news and information

Staff Information

- biographical sketch of the course instructor

Syllabus

- course introduction
- lecture outline

Lecture Notes

- pdf files containing the PowerPoint lecture presentations

Solutions to Assigned Problems

- solutions to all assigned problems; these will be made available one week before each exam

Exams Topics

- a detailed listing of topics that will be covered in each exam
- equation “cheat sheets” for exams

Old Exams

- exams from previous semesters

Communication

- a vehicle to send messages, questions and comments to me or the class

Student Tools

- on-line gradebook for checking grades

Cool Analytical Chemistry Links

Chemistry Department Home Page

Academic Honor System: The Academic Honor System at Florida State University is based on the premise that each student has the responsibility to:

- 1) uphold the highest standards of academic integrity in the student’s own work,
- 2) refuse to tolerate violations of academic integrity in the academic community, and
- 3) foster a high sense of integrity and social responsibility on the part of the University community.

Please NOTE that violations of the Academic Honor System will not be tolerated in this class. Specifically, incidents of any type, including the use of unauthorized materials during exams, will result in a grade of F being assigned for the term.

For more information on the FSU Honor Policy, visit the following web site:
<http://dof.fsu.edu/honorpolicy.htm>

American Disabilities Act: Students with disabilities needing academic accommodations should do the following:

- 1) register with and provide documentation to the Student Disability Resource Center (SDRC);
- 2) bring a letter to the instructor from SDRC indicating your need for and the nature of academic accommodations. This should be done within the first week of class.