

Abbreviated Syllabus for Chem 352 (Spring 2019)

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Class Meetings: WF from 12:30 – 1:30

Course Goals. The goal of Chem 352 is to provide an introduction to how chemists and biochemists leverage equilibrium chemistry to control the speciation of chemically and biochemically important compounds, and to separate into their constituent parts complex mixtures of such compounds. As with any area of chemistry, the possible topics are too broad to cover in a single semester; our content-specific goals, which necessarily are modest, are to:

- review acid-base, complexation, solubility, and redox equilibria
- learn to visually represent systems at equilibrium
- determine the composition of an equilibrium system using approximate and exact mathematical models
- understand why equilibrium constants are not constant
- examine the application of equilibrium chemistry to chemical and biochemical extractions
- explore chromatographic and electrophoretic methods for separating and analyzing complex mixtures

In addition to these content-specific goals, we have several broader goals; these are to:

- become more adept at solving complex mathematical problems
- learn how to use visualizations as tools for analyzing problems
- become proficient in reading chemical literature

Course Web-Site. Many useful materials, including a detailed schedule, copies of course materials, and answer keys to worksheets, suggested problems, and exams, are available at the course's web site. The link to the site is:

<http://bit.ly/2iWmlQI>

Course Evaluation. Your evaluation in this course is based on three exams and a variety of miscellaneous take-home assignments.

Official Syllabus. A more detailed, official syllabus is available on the course's web site. You are responsible for reading and understanding the syllabus.