Topic

Quantitative Analysis: Why do I have to take this class
  Cover webpage/site
  Cover syllabus
History:
  CHEM232: What is it?
  Course material
  CHEM232: Why is this course so HARD?
Some of you are thinking: not a chem major, major is FS
Some of you are thinking:
Helpful hints toward success in this course (and probably other courses)
My teaching philosophy:
1. chem139-140 same material as high school but more rigorous
   Purpose: to bring everybody up to the same chemistry knowledge
   ▶ why some people never had HS chemistry
   ▶ chem139-140
     ▶ was easy: you were well prepared
     ▶ was hard: you were not well prepared - Ex. I had no HS chem.
   ▶ some review of chem139-140
     ▶ I will assume you have seen this material
     ▶ maybe you have not mastered it
     ▶ THAT IS OK!
     ▶ if you struggle with this early material, seek help sooner than latter, because this material is the foundation for the rest of this course (and others)
   ▶ reinforcement of some of the knowledge
   ▶ re-investigate some of the knowledge but with more rigor: more complicated problems
in chem139-140 you often made assumptions.
we will begin to explore the chemistry where these assumptions aren’t true

new knowledge

equilibrium chemistry
  if you don’t know what this means you will learn
analysis of equilibrium mixtures
electrochemistry
Experimental error and statistics (mostly in the lab)

Generally all chemistry fits into 2 categories:

<table>
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<tr>
<th>synthesis</th>
<th>measurement</th>
<th>Theoretical</th>
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<tbody>
<tr>
<td>make stuff</td>
<td>determine what and how much is in a chemical system</td>
<td>Why the other two work</td>
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Even though this division exists, almost always for every chemical study, or investigation, or research both are necessary.
Often chem232 seems much harder than any other (chem) course you have taken in college
- My theory for this reason:
  - in chem139-140 you may have already seen the material in HS so those courses were a review and therefore easier.
  - chem232 maybe is your real first course in your major and as such will prepare you for all the rest of your courses
  - Chemistry is a difficult major

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<th>CHEM</th>
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Job Requirements http://www.aafs.org/resources/employment-opportunities-short

- schedule a time to study for this class
  - make it frequently (maybe once or twice a week)
  - don’t cram
  - keep to your schedule

- helpful resources
  - come to my office hours
  - use the WALC
  - study in groups

- study tips
  - rewrite and organize your notes
  - do homework
  - do practice problems
  - learn to check your answers
    - ask your self "Does this answer make sense?"
  - learn to use your calculator and computer tools
  - practice your algebra
Learning is an active process, I can not open your head and pour in the knowledge

My job is to facilitate your learning, not to supply you with information so that you can vomit it on to the exams and quizzes.

Very few questions on your examinations will simply be restating what I have said in lecture or what you have read in the book, but rather will require you to understand what you have been told and to applying that information to new situations. This is called problem solving or sometimes thinking.