The Syllabus and Course Content of the Chemistry Portion of Your Course

Instructor: Dave Laude
Class meeting time and location: Welch 2.224 from 10 till 11:30 each day
Contact: e-mail to dalaude@mail.utexas.edu
Office Hours: From 11:30 till 12:30 in GEA 105 each day after class (starting Friday)

Chemistry Daily Schedule—note there are two 30 to 45 minute lectures each day.

June 2

Session 1: Exam Preparation—math skills, study techniques, test taking
Session 2: High School Chemistry—stiochiometry, descriptive chemistry, chemical reactions

June 3:
Session 3: The Atom—quantum mechanics, electronic configurations, periodic table trends
Session 4: The Molecule—bonding and chemical structures

June 6:
Session 5: Gases— kinetic molecular theory, gas law calculations, kinetics
Session 6: Condensed Matter—intermolecular forces, properties of liquids and solids

June 7
Session 7: Thermodynamics—chemical systems, state functions, heat and work, spontaneity
Session 8: Equilibria—phase changes, colligative properties, law of mass action, LeChatelier

June 8
Session 9: Mixing—theory of mixing, solution concentration, solubility equilbria
Session 10: Acids and Bases—theory, equilibria and calculations

June 9
Session 11: Electrochemistry—redox reactions, electrochemical cells, cell current and potential
Session 12: Passages—strategies for working problems across content areas

Two chances to test your knowledge in real testing environment.

A practice version of the chemistry portion of the MCAT will be given on Thursday, June 9th from 7 till 8 pm. Right afterward from 8 till 9 pm Dr. Laude will work through the exam answering questions and offering strategy tips.

The final exam for this course will be an additional MCAT-style exam covering the physical science and biological science content taught during the six weeks. It will be given from 9 am until noon on Saturday, July 9th.

THREE INCREDIBLY IMPORTANT THINGS TO UNDERSTAND ABOUT A COURSE WITH THIS STRUCTURE

You have been given far more material than you can manage in a week. Don't fall apart trying to work every problem and watch every video. My web site isn't going away.

Get organized. The only problems worth studying are the ones on a test that you don't know how to do. Random disorganized study will actually make things worse.

You will get out of this course what you put into it. This is a platitude but sadly, it is true.

Thoughts on How to Approach the six days of Dr. Laude's Section of the Course:

Dr. Laude's web site is a wealth of information to study general chemistry.

http://laude.cm.utexas.edu/courses/

Understand that it is material used to teach CH301 and CH302 at UT Austin from an honors chemistry test. So not all of the material is relevant to the MCAT. Moreover, not all of the material is stuff you need to study—you may already know it!!

Note that the introductory review material, atoms and molecules, states of matter, and thermodynamics are found In the CH301 link. Equilibria, acid base chemistry, kinetics and electrochemistry are found in the CH302 link.

What you might use from the CH301 and 302 links:

- About 50 "Daily Lectures Notes" that describe the typical chapters in a general chemistry text.
- About 40 "Worksheets" with answer keys that allow you to practice the concepts in the lectures.
- About 1000 "Videoclips" that are 2 to 5 minute (20 to 100 MB) Quicktime videos of what Dr. Laude would say in a lecture. Fairly decent descriptions of what the video is about are found in the link name. Most videos should be working. Some may not be—let me know if you find a dead link. You can either watch these links as specific ways to answer questions within a topic area or one after another within a lecture to get the equivalent of about an hour of formal lecture.

One or two homework sets for each set of lectures is found on Quest. To find them:

Log into http://quest.cns.utexas.edu/student
Click on the arrow beside "Get Started" (probably sends you into the login step)
Make sure that the "Hello" in the upper right-hand corner has your name.
Click on the name of your course -- NSC f309 MCAT Science Review
Click on the name of the assignment

How to use a 6 day 24 hour cycle of this course:

- Go to lecture from 10 to 11:30 to learn about 2 new topic areas each day.
- Print out the HW associated with the 2 lectures and work them.
- Go to one of the office hours during the afternoon to get help.
- Form study groups to work problems together throughout the day.
- Go to Dr. Laude's 11:30 to 12:30 office hour the next day and ask about questions from the homework

Rinse, repeat x 6.

Note that the Official Guide to the MCAT from AAMC is a recommended supplement. I will not teach from this book but it includes a practice MCAT and loads of relevant information about the test and how the students and professional schools use it.