CHEM 481 (Physical Chemistry I)

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*Office Hours:* Mondays at 4:00 pm, or stop by. If not in my office check my lab (Caudill 123). I prefer that if you have questions about lecture or problems that you come to my office. If you ask me a question in an email that is not easy to answer in a short note, I may ask you to stop by my office.

**Prerequisites:** CHEM 102 or 102H; PHYS 116, 117; and pre- or corequisite, MATH 383 It is an honor code violation to be enrolled in a course lacking the proper pre- and co-requisites.

**Text:** There is no required text; however, I would recommend that you find a book to read as we go through the course, mostly to give you a different perspective on the material covered in the lecture. I would suggest the following:

**Atkins - Physical Chemistry** (Thermodynamics and Kinetics)

Here is the link to the 9th edition, but any edition since the 6th would be fine, and the earlier editions might even be better. I saw online that you could purchase the 8th edition for $1.


I used Atkins (probably 5th edition) when I was first developing this course. The early part of the class (up through 2nd law) will resemble this text the most.

**Engle and Reid - Physical Chemistry** (Thermodynamics)

http://www.amazon.com/Physical-Chemistry-3rd-Thomas-Engel/dp/032181200X/ref=sr_1_1?ie=UTF8&qid=1407597759&sr=1-1&keywords=engle+and+reid

This is the link for the 3rd edition, but the earlier editions are probably fine too. The structure of the class (i.e. order of topics covered) will follow Engle/Reid after we discuss the 2nd law.

I have requested that the 5th and 6th editions of Atkins (and solution manuals) put on reserve in the library.

**Topics to be covered:** We will cover Gases, First Law of Thermodynamics, Second Law of Thermodynamics, Phase Transitions, Mixtures, Phase Diagrams and Equilibrium.

**Quizzes, Exams and Grading:**  **Midterm Exams (60%):** There will be two (2) midterm exams (Oct 3 and Nov 19).  **Final Exam (40%):** A cumulative final exam will be given on the date specified by the university.
Make-up exams (or quizzes) will be given only with a valid excuse. If you miss an exam without a valid (written) excuse you will receive a score of zero. Valid excuses include sickness and family emergencies. Even with a valid excuse, I reserve the right not to provide a make-up exam under certain circumstances (e.g. could not be scheduled prior to handing back the exam/quiz to the rest of the class). If this is the case, your final grade will be computed based on the appropriate reduced total score. For example, if the total number of possible quiz “points” is 100 and you miss a 10 point quiz, your quiz grade will be based on total possible score of 90 (instead of 100). Participation in sports events is also a valid excuse. You must notify me two weeks prior to the event.

Lecture Note Link: For online version of lecture notes click here.