

CHEM 7020

Statistical Mechanics

Tue/Thur 12:00 noon - 1:20 pm, ML 151

**Instructor:** David Farrelly

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**Office Hours:** Anytime I'm available

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**Course Description:** Chemistry 7020 is a graduate level course in Statistical Mechanics

**Prerequisite(s):** Quantum Mechanics/Chemistry at advanced u/g or graduate level.

**Text:** *Statistical Thermodynamics*, by D. A. McQuarrie, (Any edition. Used recommended.) We will cover Chaps. 1 - 10 and selected topics from Chaps. 11 - 15

**Grading: PART A.** You will give **five 20 - 25 min talks** on some aspect of Statistical Mechanics, or an application of Statistical Mechanics. The topic will be of your choice but you will need to circulate a title and short abstract a week in advance. These talks should be self-contained and will start in February. There should be a **minimum** of 1 talk per student in Feb., Mar., and April. As important as your understanding of the material will be, your presentation will be equally important. One aim of the course is to develop skills at scientific speaking. **PART B. There will also be a number of Problem Sets.** After you complete each homework set (by its stated deadline) you will be asked to solve one problem, chosen at random in class, on the whiteboard. You may use your notes. Again, you will be graded on presentation as well as the solution itself. The talks and the problem solving presentations will be graded Pass or non-Pass (P/NP). If you get an NP you may take 1 more attempt to get a pass but it must be on the same material. Repeats can be done anytime but you may, if you wish, defer repeats until the last week of classes. To receive an A you need to get 4 Ps from Part A *and* 4 from Part B; 7 Ps in total = A-; 6 Ps in total = B+; 5 Ps in total = B; Fewer than 5 Ps in total will result in a C.

**Academic Honesty Policy Summary:** The Academic Honesty Policy exists to inform students and Faculty of their obligations in upholding the highest standards of professional and ethical integrity. All student work is subject to the Academic Honesty Policy. Professional and Academic practice provides guidance about how to properly cite, reference, and attribute the intellectual property of others. The administration of Chem 7020 will adhere strictly to the academic policies outlined in the current USU General Catalog.

**Americans with Disabilities Act:** In accordance with the Americans with Disabilities Act, reasonable accommodations will be provided for all persons with disabilities in order to ensure equal participation in Chem 1210. In cooperation with the Disability Resource Center, reasonable accommodation will be provided for students with disabilities. Please meet with the instructor during the first week of class to make arrangements. Alternative format print materials, large print, audio, diskette or Braille, will be available through the Disability Resource Center.