

Instructor Prof. William R. Simpson  
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Email [wrsimpson@alaska.edu](mailto:wrsimpson@alaska.edu)  
Class meeting Monday, Wednesday, and Friday 10:30 - 11:30 AM, REIC 165  
Laboratory Tuesday, 11:30 – 2:30 PM, REIC 245 (sometimes in Chemistry computer  
Section lab, REIC 172)  
Office hours Mon, Fri 11:30AM—12:30PM, Tu 10:30-11:30AM, and by appointment  
Text “Physical Chemistry” by Atkins and de Paula, 10<sup>th</sup> edition  
Handouts for laboratory section

\_\_\_\_\_ Atomic and molecular structure, and spectroscopy, and statistical mechanics. Course teaches these concepts using both lecture and laboratory instruction. Special fees apply. Prerequisites: CHEM F331; MATH F253X; or permission of instructor. (3+3)

\_\_\_\_\_ : Chemistry 332 is the second semester of a two-semester series in physical chemistry. Our goal is to understand how physical and mathematical theories can be used to explain chemical behavior.

\_\_\_\_\_ In this semester, you will study quantum mechanics with applications in atomic and molecular structure, spectroscopy, and statistical mechanics. At the end of the course, you should have gained new mathematical methods for solving chemical problems, and learned advanced concepts that allow you to understand chemical behavior from a quantum mechanical basis.

\_\_\_\_\_ The course follows your text in the order described in the attached schedule of topics. Specific reading assignments for each coming class will be posted to the Blackboard course management system within a few hours of the end of the prior class. During Monday and Wednesday classes, I will lecture on the material in the book, answer questions, and may have students interact through problem solving or discussions. Reading the book \_\_\_\_\_ the lectures will be important for following and understanding the lectures. The Monday classes are a combination of lecture and in-class quizzes. These Monday quizzes are a very important part of the course as they will help you to stay current with and to understand the material of the course. The course also has a laboratory section to give physical examples of the concepts you learn in class.

\_\_\_\_\_ : Your course grade will be based on the total points of the hour exams, the final exam, the quiz scores, reading questions, laboratory (see below), and possibly extra credit from reading questions (see below). Material assigned in readings, in lecture, in laboratory, or in homework problems may appear on an exam. The maximum number of points for each is given below:

Exercise

\_\_\_\_\_The exams will be given during class, and will be one hour in length. You are permitted to use a calculator, a unit sheet (distributed with the exams), and a half sheet of paper (8.5"x5.5") containing only formulas. You should continually prepare this formula sheet as you study the material. Don't copy your friend's sheet. Preparing and organizing material is essential. I will look at the sheet during the exam and may collect the sheet. Chemistry Department regulations require that any student caught cheating on graded work will be assigned a course grade of F. Course drop forms will not be signed in these cases. Homework, quiz, and exam solutions will be

\_\_\_\_\_ Make-up exams will be allowed if you have a good reason. If you anticipate an absence (work commitments, intercollegiate sports), talk to me

a problem. Many of the problems will be conceptual in nature. These questions address the theoretical connections between various physical chemistry problems.

\_\_\_\_\_ The quizzes will be given during class on Mondays, and will be about 15 minutes in

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