

Physical Chemistry II

Chem 3070

Spring, 2019

MWF, 9:30-10:20, Widtsoe 330

Instructor: Steve Scheiner, Maeser 273
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Office Hours: M, F, 10:30 - 11:20; other times by appointment.

Text: " *Physical Chemistry* " I. N. Levine, 6th Ed

Content: The course will cover topics presented in Chapters 17-23 of the text. Students are encouraged to read the chapters and work the practice problems in the text.

Grading: Students will be evaluated in a number of ways.

In-Class Exams: 300 points.

There will be four 50-min exams. Each student may drop the lowest of their four grades. Students who take only 3 exams will have all three grades count. Students missing more than 1 exam will receive a grade of 0 on any missed in excess of 1.

Quizzes: ~100 points

Some lecture classes will end with a short quiz. These quizzes will not be announced in advance, so students should come prepared to take a quiz each day (please bring a calculator). There will be roughly 11 such quizzes during the semester, each worth 10 points. Each student taking all quizzes will be able to drop their lowest grade.

Problem Sets: ~220 points

Students will be required to turn in problem sets during the semester, approximately 11 such sets. Each will be worth 20 points. No grades will be dropped.

Final Exam: 200 points. This exam will be comprehensive, covering material from the entire course. It is scheduled for **Weds, May 1, 9:30 - 11:20 AM.**

Learning Objectives Students will learn to do the following:

Apply the Schrodinger equation to simple systems

Explain the significance of quantum numbers

Apply valence bond and molecular orbital methods to chemical bonds

State the electron configuration of atoms

Apply principles of electronic, rotational, and vibrational spectra

Use the partition functions of simple systems to explain properties

Derive the properties of crystalline solids from their molecular properties

Analyze the properties of liquids in terms of intermolecular forces

Assessment Assessment of student learning will be performed via gain-score exams.

In accordance with the Americans with Disabilities Act, reasonable accommodation will be provided for all persons with disabilities in order to ensure equal participation in Chemistry 3070. A student who requires an accommodation must contact the Instructor. The disability must be documented by the Disability Resource Center. In cooperation with the Disability Resource Center, reasonable accommodation will be provided for students with Disabilities. Course material may be requested in alternate formats through the Disability Resource Center. The administration of Chemistry 3070 will adhere strictly to the academic regulations stipulated in the most recent USU General Catalog. The complete code of Policies and Procedures for Students can be viewed at:

<http://www.usu.edu/student-services/studentcode/>

CALENDAR**NOTE: ALL DATES ARE APPROXIMATE AND SUBJECT TO CHANGE**

January

7 Ch 17	9 Ch 17	11 Ch 17
14 Ch 17	16 Ch 17	18 Ch 18
21 <i>MLK Day</i>	23 Ch 18	25 Ch 18
28 Ch 18	30 Exam 1	//////////

February

//////////	//////////	1 Ch 18
4 Ch 19	6 Ch 19	8 Ch 19
11 Ch 19	13 Ch 19	15 Ch 19
18 <i>Pres Day</i>	20 Ch 19	22 Exam 2
25 Ch 19	27 Ch 20	//////////

March

//////////	//////////	1 Ch 20
4 Ch 20	6 Ch 20	8 Ch 20
<i>Spring Break</i>		
18 Ch 20	20 Ch 21	22 Ch 21
25 Exam 3	27 Ch 21	29 Ch 21

April

1 Ch 21	3 Ch 21	5 Ch 22
8 Ch 22	10 Ch 22	12 Ch 22
15 Exam 4	17 Ch 23	29 Ch 23
22 Ch 23	//////////	//////////

Final Exam Weds, May 1, 9:30 - 11:20 AM