

Chem 4110/6110

Spring Semester, 2018

3 Semester Credits

**Professor:** Dr. Hamed Laroui, 522 PSC, (e-mail: hlaroui@gsu.edu)

**Office Hours:** Tu 1-2 p.m. or by appointment

**Lecture Time and Location:** Tu-Th from 4:00-5:15 p.m. in 104 CLSO

**Course Prerequisites:** Chem 1212K; Math 2212; Phys 2211K and 2212K. It is of critical importance for you to have mastered the prerequisites. You can use Appendix B for a brief review of some mathematical relationships.

**Text:** *Thermodynamics, Statistical Thermodynamics and Kinetics* by Engels and Reid, Pearson, 2006.

**Course Description:** Physical Chemistry I is a 3 credit hour semester course that covers the principles of thermodynamics, transport, kinetics. Chapters 1-10 and 16-19 of the text will be covered in the first semester.

**Quizzes, Exams, Grading:** There will be **5 quizzes** and an ACS test. The quizzes count for 75% of your overall grade. **The ACS test must be taken and will count for 25% of the grade.** A comprehensive "Makeup" quiz will be given as the final exam for anyone who misses one of the regularly scheduled quizzes. **Quizzes will not be given at any time other than the scheduled lecture period. Should you miss a quiz, you may use it as your drop grade or take the makeup quiz.**

The Makeup exam will be on Tuesday, May 1 at 5:00 p.m. and will count as much as a regularly scheduled quiz.

**Last day to withdraw: Tuesday, February 27, 2018**

The University requires that faculty members must, on a date after the midpoint of the course to be set by the Provost (or his designee):

- 1) give a WF to all those students who are on their rolls but no longer taking the class; and
- 2) report the last day the student attended or turned in an assignment.

**Holidays:** \*Martin Luther King, January 15  
Spring Break, March 12-18  
\*(does not affect this course)

## Tentative Schedule

Date	Chapter	Subject	Lecturer
1/9	1	Ideal and Real Gases	HL
1/11, 16	2	First Law of Thermodynamics	HL
1/18, 23	3	Energy, Enthalpy	HL
1/25	1, 2, 3	Quiz 1	HL
1/30	4	Thermochemistry	HL
2/1, 6	5	Entropy, Second Law	HL
2/8, 13	6	Chemical Equilibrium	HL
2/15	4, 5, 6	Quiz 2	HL
2/20	7, 8	Real Gases, Phase Diagrams	HL
2/22, 27	8, 9	Phase Diagrams, Solutions	HL
3/1	7-9	Quiz 3	HL
3/6, 8	(1-9)	Review	HL
3/13, 15	----	Spring Break	--
3/20	(1-9)	ACS Exam (Mandatory)	HL
3/22, 27	16, 18	Introduction to Kinetics, Mechanisms	HL
3/29, 4/3	18, 19	Relaxation	HL
4/5, 10	19	Kinetics Mechanisms, Enzyme Catalysis	HL
4/12	16-18	Quiz 4	HL
4/17, 19	10	Electrolytes	HL
4/24	17	Transport	HL
4/26	10, 17, 18, 19	Quiz 5	HL
5/1	1-19	(Make up quiz) (5:00 p.m.)	HL