Chem. 120A Physical Chemistry
Introduction to Quantum Mechanics and Spectroscopy

Lectures

11:00 AM – 12:00 PM; Monday, Wednesday and Friday; 120 Latimer

Instructors

Professor David Chandler
208 Gilman Hall, 510-643-6821

Professor Eran Rabani
220 Gilman Hall, 510-643-0841

Prof Office Hours: Tuesday 1:30 PM and Wednesday 1:00 PM, with Prof teaching that week, in that Prof's office.

GSI Qinghui (Grace) Ge	Office hours: Bixby Commons Thursday 3:00 PM and Friday 4:00 PM
GSI Samia Hamed	Office hours: Bixby Commons Monday 10:00 AM and Friday 9:00 AM
GSI Matthew Koc	Office hours: Bixby Commons Tuesday 3:00 PM and Thursday 11:00 AM
GSI Nicholas Lewis	Office hours: Bixby Commons Monday 3:00 PM and Tuesday 10:00 AM

Students unable to make office hours but with need to meet with one of the Graduate Student Instructors (GSIs) for course-related issues should contact GSIs either through *Piazza* (preferred) or by email (Chem120A.S15@gmail.com). Instructions for *Piazza* will be sent to you by email.

Course Mechanics and Grading

Problem sets will be assigned for homework, roughly one each week, due at the end of class about one week after assigned. Specific due dates for problem sets and examinations are given in the Course Outline and Schedule. There will be two midterm examinations, and a final examination, the dates for which are also noted on the Course Outline and Schedule. Grades will be based upon scores on midterm and final examinations and homework. Homework in total will count as much as one midterm examination, and the final examination will count as much as two midterm examinations.

Course Website

Problem Sets, Solutions, Lecture Notes and other supplemental material will be made available on our course website hosted through bCourses. Students having trouble accessing the website should email the GSIs at Chem120A.S15@gmail.com.

Discussion Sections

In addition to the regularly scheduled Lectures on Monday, Wednesday and Friday at 11:00 AM in 120 Latimer Hall, we offer optional Discussions. Starting January 28, these Discussions are held each Wednesday evening beginning at 6:00 PM in 180 Tan Hall.

Textbooks and Reading Assignments
The textbook for the course is

> D. A. McQuarrie & J. D. Simon, *Physical Chemistry, a Molecular Approach* (University Science Books, Sausalito, 1997).

Reading assignments from this book are given in the Course Outline and Schedule. Web postings of Professor Chandler's *Lecture Notes in Physical Chemistry: Quantum Mechanics* should also be read. Additional readings from other texts will on occasion be suggested. These other texts include the solution manual for McQuarrie and Simon,

> H. Cox, *Problems & Solutions to Accompany McQuarrie-Simon Physical Chemistry: A Molecular Approach* (University Science Books, Sausalito, 1997),

a general physical chemistry book

> P. W. Atkins & J. de Paula, *Physical Chemistry, 9th Edition* (Freeman, NY, 2009),

as well as the more focused texts

> P. W. Atkins & R. S. Friedman, *Molecular Quantum Mechanics 5th Edition* (Oxford University Press, Oxford, 2010),
>
> T. Engel, *Quantum Chemistry & Spectroscopy 3rd Edition* (Pearson, NY, 2013)
>
> R. P. Feynman, R. B. Leighton & M. Sands, *The Feynman Lectures on Physics. III Quantum Mechanics* (Addison-Wesley, Reading, 1965),
>
> D. J. Griffiths, *Introduction to Quantum Mechanics 2nd Edition* (Prentice Hall, NY, 2004)
>
> M. Karplus & R. N. Porter, *Atoms & Molecules: an Introduction for Students of Physical Chemistry* (Benjiman/Cummings, Menlo Park, 1970).

First reading assignment: Chapters 1 - 2 in McQuarrie & Simon.