

# **Chemistry 163A**

## **Quantum Mechanics & Basic Spectroscopy**

Department of Chemistry and Biochemistry  
University of California, Santa Cruz

Yat Li

# Instructor

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## Yat Li

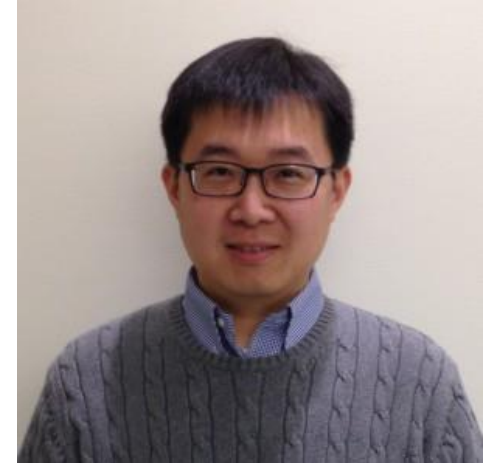
Office: Physical Science Building (PSB) 160

Email: [yatli@ucsc.edu](mailto:yatli@ucsc.edu)

Office hours:

Mondays 3-4pm (PSB 357)

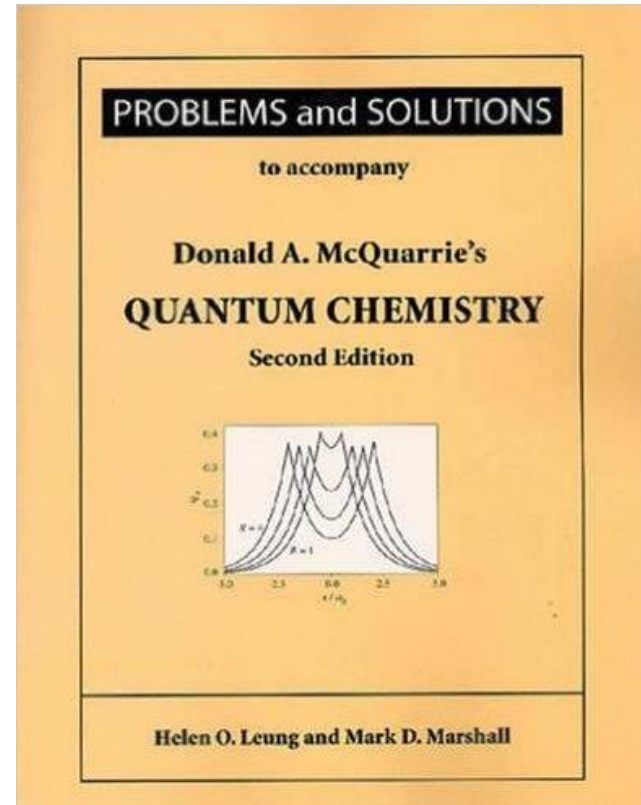
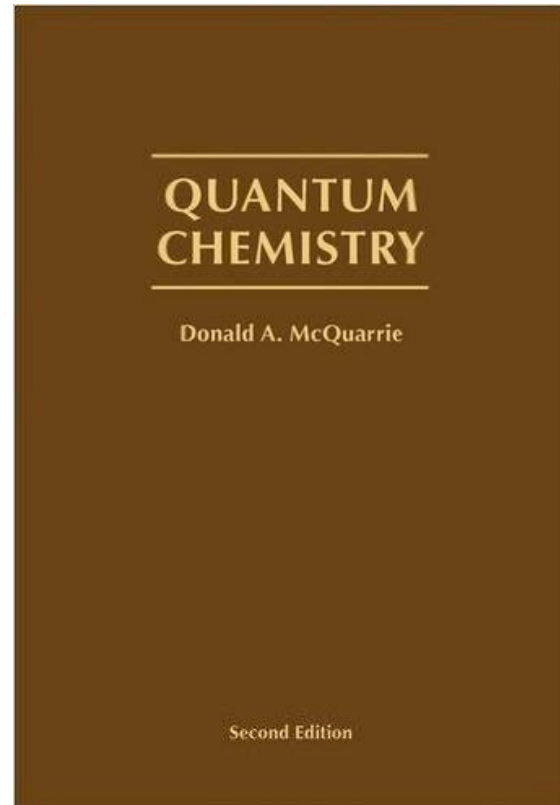
Fridays 2-3pm (PSB 357)



You are welcome to email me or stop by!

# Textbook

***Quantum Chemistry***, 2nd Edition by Donald A. McQuarrie  
(ISBN 978-1-891389-50-4)



# Quantum Chemistry (Donald A. McQuarrie)

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Chapter 1: 1.1-1.14

Chapter 2: 2.1 - 2.4

Chapter 3: 3.1-3.9

Chapter 4: 4.1 - 4.8

Chapter 5: 5.1-5.10, 5.12

Chapter 6: 6.1-6.8

Chapter 7: 7.1-7.9

Chapter 8: 8.1-8.3

Chapter 9: 9.1-9.5, 9.9-9.13

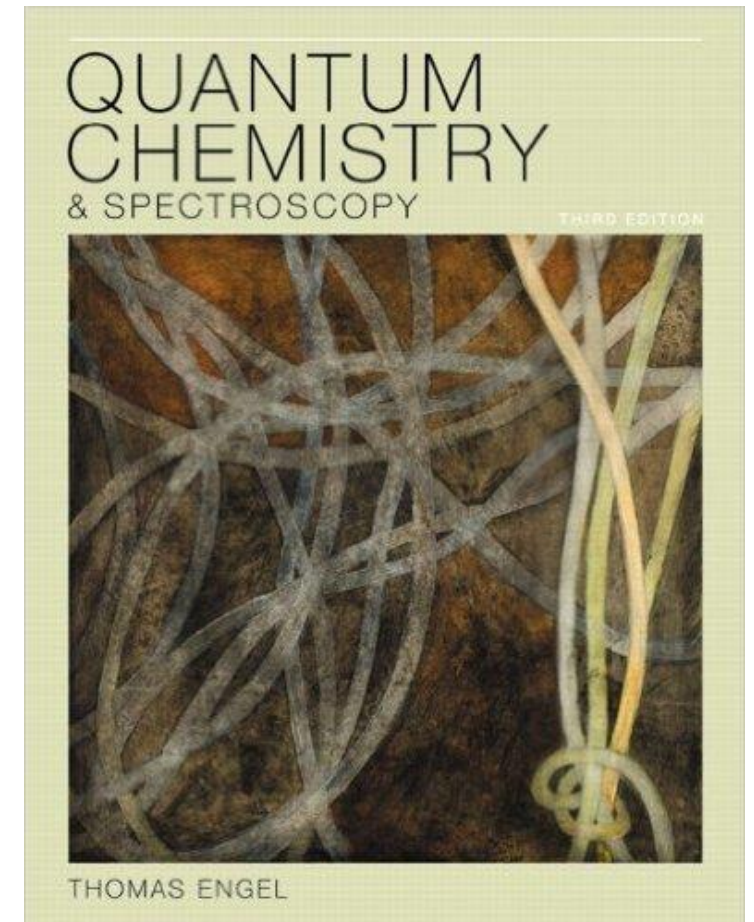
Chapter 10: 10.1-10.4

Chapter 11: 11.1-11.7

# Supplementary Book

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*Quantum Chemistry and Spectroscopy*  
3rd Edition by Thomas Engel  
(ISBN-13: 978-0321766199)



# Course Grade

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Midterm: 28%

Final: 40%

Problem Sets: 16%

Quizzes: 16%

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Total: 100%



*Passing score*: 50 (out of 100) **or** 1 standard deviation below the class average

# Homework, Quizzes & Exams

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- ▶ Homework assignments (4 in total) are due in **Tuesday** class
- ▶ Weekly quizzes (4 in total) will be scheduled and taken in **Thursday** class.
- ▶ Each quiz will have 2 questions (10-15 min)
- ▶ Mid term will have 4 questions (1.5 hours)
- ▶ Final exam is accumulative, 8 questions (3 hours)

# General Policies

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1. Academic Misconduct Policy for Undergraduates  
[https://www.ue.ucsc.edu/academic\\_misconduct](https://www.ue.ucsc.edu/academic_misconduct)
2. Weekly quizzes will be scheduled and taken in class. If you missed a quiz, you will get zero mark for that quiz. In case of emergency, please get approval from the instructor *before* the lecture.
3. No late homework assignment (zero mark for that assignment).
4. Graphical calculators are not allowed to be used in exams/quizzes



# Communication

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- ▶ Instructor is happy to take your questions via email and can usually get back to you within a day
- ▶ Instructor will NOT answer any quiz- and exam- related questions outside the classroom
- ▶ Homework sets, answers, grades, supplementary materials and important announcements will be posted on UCSC Canvas
- ▶ Graded homework assignments and quiz will be returned in class

# DRC Student Accommodation

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*UC Santa Cruz is committed to creating an academic environment that supports its diverse student body. If you are a student with a disability who requires accommodations to achieve equal access in this course, please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me privately during my office hours or by appointment, preferably within the first two weeks of the quarter. At this time, we would also like us to discuss ways we can ensure your full participation in the course. We encourage all students who may benefit from learning more about DRC services to contact DRC by phone at 831-459-2089 or by email at [drc@ucsc.edu](mailto:drc@ucsc.edu).*

# Class Schedule

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Month/dates	Tuesday	Thursday
June	26 (chapter 1 & 2)	28 (chapter 3 & 4) + Quiz 1
July	Lecture canceled + HW1	5 (chapter 4 & 5) + Quiz 2
July	10 ( <b>Midterm</b> + chapter 6) + HW2	12 (chapter 7) + Quiz 3
July	17 (chapter 8 & 9) + HW3	19 (chapter 9 & 10) + Quiz 4
July	24 (chapter 11) + HW 4	26 ( <b>Final</b> )

# Keys to Success in This Class

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- ▶ **U** can do it! Be confident.
- ▶ **C**ome prepared
- ▶ **S**tart earlier
- ▶ **C**ooperation

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# Questions?