

课程大纲

COURSE SYLLABUS

1.	课程代码/名称 Course Code/Title	CHE5007/量子化学
2.	课程性质 Compulsory/Elective	专业课
3.	课程学分/学时 Course Credit/Hours	2.00/32
4.	授课语言 Teaching Language	中文
5.	授课教师 Instructor(s)	
6.	先修要求 Pre-requisites	无

7.	教学目标 Course Objectives	<ul style="list-style-type: none"> - To understand the knowledge and concept of Quantum Chemistry. - To make good use of the theory of Quantum Mechanics in chemistry problems; - To guide the students to think about microcosmic phenomena ; - To expand the tools to explain and research in chemistry.
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8.	教学方法 Teaching Methods	<ol style="list-style-type: none"> 1. By means of explaining the development of the discipline to build up a methodology for study. 2. By giving examples from literatures and books, make the concept easier to be understood. 3. Tutorials are necessary to solve the problems immediately. 4. Group discussions will be organized to provide opportunities to propose ideas and raise new questions.
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9.	教学内容 Course Contents	
	Section 1	Schrodinger equation and the solution
	Section 2	Operators
	Section 3	The Harmonic Oscillator
	Section 4	Angular Momentum
	Section 5	The Hydrogen Atom
	Section 6	Theorems of Quantum Mechanics
	Section 7	Electron Spin and the Pauli Exclusion Principle
	Section 8	Perturbation Theory
	Section 9	
	Section 10	
	

10.	课程考核 Course Assessment	① 考察; ② 30% homework, 30% mid-term exam and 40% final exam.
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11. 教材及其它参考资料
Textbook and Supplementary Readings

Quantum Chemistry (7th Edition)
Author: Ira N. Levine