Topics in Quantum Chemistry
CHEM 5500 (Fall 2016)

Time: M/W 8:00-9:20AM (10/3/16-12/9/16)
Location: TBA

Course Instructor: Dr. Yihan Shao
Office: SLSRC 1130
Office Hours: M/W 9:20-10:30AM or by appointment
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Description
The purpose of this course is to introduce fundamental concepts of quantum mechanics and its application in chemistry. The emphasis in the first 1/3 of the course (following the book by Levine) is on the postulates and theorems in quantum mechanics. In the second 1/3 of the course, we look into modern quantum chemistry methods for solving molecular electronic structures. In the final 1/3 of the course, we use the Spartan software to study several chemical/biochemical systems.

The course is directed towards graduate and advanced undergraduate students in physical chemistry, inorganic chemistry, materials chemistry, biochemistry, bioengineering and chemical engineering.

Pre-requisites
At least one undergraduate-level Physical Chemistry and one Calculus course are required, or consult with the lecturer.

Grading Scheme
Homework: 70%
Final Exam: 30%

Textbooks
Course Policies

Make-up exam and homework extensions

Make-up exams or assignment deadline extensions will be given only under extreme circumstances and only with prior notification and documentation. There will be no extra credit assignments given.

University Policies

Academic Integrity

Cheating is strictly prohibited at the University of Oklahoma, because it devalues the degree you are working hard to get. As a member of the OU community it is your responsibility to protect your educational investment by knowing and following the rules. For specific definitions on what constitutes cheating, review the Student’s Guide to Academic Integrity at http://integrity.ou.edu/students_guide.html.

Religious Observance

It is the policy of the University to excuse the absences of students that result from religious observances and to reschedule examinations and additional required classwork that may fall on religious holidays, without penalty.

Reasonable Accommodation Policy

Students requiring academic accommodation should contact the Disability Resource Center for assistance at (405) 325-3852 or TDD: (405) 325-4173. For more information please see the Disability Resource Center website http://www.ou.edu/drc/home.html Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

Title IX Resources and Reporting Requirement

For any concerns regarding gender-based discrimination, sexual harassment, sexual assault, dating/domestic violence, or stalking, the University offers a variety of resources. To learn more or to report an incident, please contact the Sexual Misconduct Office at 405/325-2215 (8 to 5, M-F) or smo@ou.edu. Incidents can also be reported confidentially to OU Advocates at 405/615-0013 (phones are answered 24 hours a day, 7 days a week). Also, please be advised that a professor/GA/TA is required to report instances of sexual harassment, sexual assault, or discrimination to the Sexual Misconduct Office. Inquiries regarding non-discrimination
policies may be directed to: Bobby J. Mason, University Equal Opportunity Officer and Title IX Coordinator at 405/325-3546 or bjm@ou.edu. For more information, visit http://www.ou.edu/eoo.html.

**Adjustments for Pregnancy/Childbirth Related Issues**

Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact your professor or the Disability Resource Center at 405/325-3852 as soon as possible. Also, see http://www.ou.edu/eoo/faqs/pregnancy-faqs.html for answers to commonly asked questions.