课程代码（Coursenumber）
Chemistry 3890 (389)

课程对象（Audience）
Primarily for Undergraduates

开课教师（Teacher）
Professor Ezra

学期（Semester）
Fall

课程描述（Description）
课程提纲（Syllabus）
1. The need for Quantum Mechanics
2. The wavefunction and the Schr¨odinger equation
3. Solving the Schr¨odinger equation
4. Particle in a box
5. Free particle
6. QM operators, eigenvalues & eigenfunctions
7. Quantum states and measurement
8. Barrier problems
9. Harmonic oscillator
10. QM in 3 dimensions: Cartesian coordinates
11. QM in 3 dimensions: Spherical polar coordinates
12. Rotational energy & angular momentum
13. 2-particle systems & central forces
14. Hydrogen atom
15. Angular momentum & magnetic fields
16. Indistinguishable particles
17. Approximation methods: Variational principle
18. Approximation methods: Perturbation theory
19. Chemical bonding & QM
20. Spectroscopy: general aspects
21. Spectroscopy of diatomic molecules

课时信息（Totalhours）

教参信息（Textbookinfo）
Intro to Quatum Mechanics (ISBN - 9780132259026),
Physical Chemistry: A Molecular Approach (ISBN – 9780935702996)
1 Physical Chemistry by Ira N. Levine (Hardcover - May 9, 2008)
ISBN-13: 978-0716787594
世界各地拥有馆藏的图书馆（OCLC）:97
2 Physical Chemistry by Peter Atkins and Julio de Paula (Hardcover - Mar. 10, 2006)
ISBN-13: 978-0072538625
世界各地拥有馆藏的图书馆（OCLC）:99
3 Physical Chemistry by Robert J. Silbey, Robert A. Alberty, and Moungi G. Bawendi (Hardcover - July 1, 2004)
ISBN-13: 978-0471215042
世界各地拥有馆藏的图书馆（OCLC）:245
4 Physical Chemistry: A Molecular Approach by Donald A. McQuarrie and John D. Simon (Hardcover - July 1, 1997)
ISBN-13: 978-0935702996
5 Physical Chemistry by Peter Atkins and Julio dePaula (Hardcover - Dec. 18, 2009)
ISBN-13: 978-1429218122
世界各地拥有馆藏的图书馆（OCLC）:30
6 Schaum's Outline of Physical Chemistry (2nd Edition) by Clyde R. Metz (Paperback - July 1, 1988)
ISBN-13: 978-0070417151
7 Applied Mathematics for Physical Chemistry (3rd Edition) by James R. Barrante (Paperback - Sept. 25, 2003)
ISBN-13: 978-0131008458
世界各地拥有馆藏的图书馆（OCLC）:156
8 Physical Chemistry by Peter Atkins and Julio de Paula (Hardcover - Dec. 7, 2001)
ISBN-13: 978-0716735397
世界各地拥有馆藏的图书馆（OCLC）:205
9 Physical Chemistry Student Solutions Manual by Charles Trapp, Marshall Cady, Carmen Guinta, and Peter Atkins (Paperback - Aug. 11, 2006)
ISBN-13: 978-0716762065
世界各地拥有馆藏的图书馆（OCLC）:32
10 Physical Chemistry: Principles and Applications in Biological Sciences (4th Edition) by Ignacio Tinoco, Kenneth Sauer, James C. Wang, and Joseph D. Puglisi (Hardcover - Aug. 16, 2001)
ISBN-13: 978-0130959430
世界各地拥有馆藏的图书馆（OCLC）:222
11 Physical Chemistry for the Chemical and Biological Sciences by Raymond Chang (Hardcover - Mar. 1, 2000)
ISBN-13: 978-1891389061