Chemistry 4300
Physical Chemistry - Spring Semester 2017

Lecture: TuTh, 11:10 am - 12:30 am, McPherson Lab 1015
Course web site: `www.grandinetti.org/chem-4300-physical-chemistry`
Carmen: `carmen.osu.edu`

Instructor: Philip Grandinetti
Office: 0044A McPherson Lab
Email: grandinetti.1@osu.edu
Office Hours: Tu and Th at 1:00-2:30 PM or by appointment

Textbook: "Physical Chemistry: Quanta, Matter, and Change," 2nd Edition, Atkins, de Paula, & Friedman

Section	Recitation Time	Location	TA	Email	Office
27395	Mo, 8:00 am- 8:55 am	254 ECB	Stephen Londo	londo.6@osu.edu	0036 MP
27396	Mo, 9:10 am- 10:05 am	2144 SL	Brendan Wilson	wilson.3559@osu.edu	0044 MP
27397	Tu, 9:10 am- 10:05 am	446 HH	Mithila Agnihotri	agnihotri.2@osu.edu	2124 NW

MP=McPherson Lab, SL = Smith Lab, ECB = Enarson Classroom Bldg, HH = Hitchcock Hall,
CBEC = Chemical and Biomolecular Engineering and Chemistry

Lecture Topics

Read the online notes before lecture. Topics will not be covered in the order presented in the text.

Topic	Topics
Fundamentals	1, 2, 3
The Principles of Quantum Mechanics	4, 5, 6, 7, 8
The Quantum Mechanics of 1D Motion	9, 10, 12, 15
The Quantum Mechanics of 3D Motion	11, 13, 14, 41
Atomic Structure and Spectra	17, 18, 34, 16, 19, 20, 21
Molecular Structure	22, 23, 24, 25, 26
Molecular Spectroscopy	40, 42, 43, 44, 45
Molecular Structure	27, 28, 29, 30
Chemical Kinetics	82, 83, 84, 85, 86
Reaction Dynamics	88
Processes in Fluid Systems	91
Processes on Solid Surfaces	96, 97

If you miss lecture you are expected to get announcements, etc. from other students in the class.

Grading

Recitation Quizzes	20%	
First Exam	25%	
Second Exam	25%	
Final Exam	30%	Monday May 1, 10:00 - 11:45 am

There is NO extra credit. Recitation quizzes will be given at the end of each recitation. Only the 10 highest will be counted. OSU ID cards will be checked when you turn in your exams.

Make-up exams will be given only for documented medical reasons, or pre-approved university conflicts. Students with University conflicts should provide the lecturer with their complete course schedule, including the conflict, at least two weeks before the exam so an alternate exam can be scheduled.

Homework Assignments

Homework assignments are given in the notes. They will not be graded.

Requirements Fulfilled

Chemistry 4300 is a Physical Science course in the Natural Science category of the GE, which has these goals and objectives:

Goals: Students understand the principles, theories, and methods of modern science, the relationship between science and technology, the implications of scientific discoveries and the potential of science and technology to address problems of the contemporary world.

Learning Objectives:

1. Students understand the basic facts, principles, theories and methods of modern science.
2. Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
3. Students describe the inter-dependence of scientific and technological developments.
4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Disability Services (ODS)

All students with documented disabilities, who need accommodations, should see the instructor privately to schedule an appointment as early in the quarter as possible. If your disability requires materials in alternative format, please contact the Office for Disability Services at 292-3307, Room 098 Baker Hall, 113 West 12th Avenue.

STANDARDS OF ACADEMIC CONDUCT IN CHEMISTRY

Any material submitted in Chemistry must represent your own work. Violations of this standard will be referred to the University Committee of Academic Misconduct (COAM) as required by Faculty Rules.

It is the responsibility of COAM to investigate all reported cases of student academic misconduct; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations, quizzes, and graded assignments. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information see the Code of Student Conduct on the web at:

`http://studentaffairs.osu.edu/pdfs/csc_12-31-07.pdf`

Copying, use of "crib" material, or use of stored constants and formulas in calculators on quizzes, examinations or the final exam is regarded as a severe violation of academic standards no matter how small the action. The Department of Chemistry will recommend as the **minimum penalty a grade of E for the course for any such violations**.