

Chemistry 360

Introductory Physical Chemistry

Fall 2009

<http://www.chem.indiana.edu/academics/ugrad/courses/c360/default.asp>

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AI:

Office Hours: Monday and Thursday, 10:00 am – 11 am
Or by appointment (set up by email)

Lecture (3 CR)

1827	12:20pm-1:10pm	MWF	BH 330
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Prerequisites: CHEM-C 177 or C 106, N 330
Strongly recommended: MATH-M 119, PHYS-P 201 or equivalents.

Discussion (DIS)

1828	4:40pm-5:30pm	T	KH 203
1829	4:40pm-5:30pm	W	SE 240

Text: ISBN 0-07-041715-6
Schaum's Outlines: Physical Chemistry
2nd Edition
Clyde R. Metz
McGraw Hill

Introductory Physical Chemistry will cover all topics of Physical Chemistry, including thermodynamics, kinetics, quantum mechanics, and (very briefly) statistical mechanics. The laws of thermodynamics will be applied to practical problems of reactivity. Reaction rates for simple reactions (first order and second order) will be derived, and the link between reactivity and thermodynamic quantities will be explored. The postulates of quantum mechanics will be derived in a heuristic manner, and unique quantum mechanical molecular properties will be introduced. Finally, classical thermodynamics will be derived from statistical mechanics, so the student can appreciate how all bulk properties can be derived from microscopic phenomena.

Grading:	40%	Homework
	2 x 15%	Two midterms
	30%	Final exam

Discussion:

Discussion sessions will include math reviews, working through example problems, and ideas for homework. Discussion time will also be spent on practice midterm and final examinations.

Homework:

Ten homework sets will be assigned. Homework will be assigned on Fridays, and collected at the beginning of class on a following Friday (usually one week after assignment). Late homework scores will be penalized by 10% per day late, and not accepted more than 3 days late. Homework assignments and solutions will be posted on the Chemistry undergraduate website (see top)

Midterms:

Two midterms will be given at strategic points in the material. ***No make-up midterms will be given.*** If, because of some medical emergency you have to miss one, your grade will be extrapolated from your quizzes, remaining midterm, and final if you produce a note from your doctor.

Final Exam:

This will cover the material for the entire semester. A practice final will be given the second to the last week of classes to go over in discussion.

Problem sets and reading assignments can be found on the website, along with supplemental notes.