

**Physical Chemistry I (Chemistry 301)**  
**Fall 2010**

Instructor: Urban Bren  
Office: Flanner Hall (FH)-314A  
Office Hours: Monday&Wednesday 11:00 - 12:00  
Phone: (773) 508-3078  
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Lectures: Tuesday&Thursday 13:00 - 14:15 Cudahy Hall, Room 202  
Discussion session: Monday&Wednesday 9:20 - 10:10 Cudahy Hall, Room 202  
Textbook: Walter J. Moore, Physical Chemistry, 4<sup>th</sup> Edition (1972), Prentice Hall, ISBN 0136659683.  
Non-programmable scientific calculator: TI-30Xa  
Recommended book: Applied Mathematics for Physical Chemistry, 3<sup>rd</sup> ed. by James R. Barrante

Physical Chemistry represents one of the five fundamental branches of Chemistry. This course will cover:

- 1) Gases and the Zeroth Law of Thermodynamics
- 2) The First Law of Thermodynamics
- 3) The Second and Third Law of Thermodynamics
- 4) Free Energy and Chemical Potential
- 5) Equilibrium in Single-Component Systems
- 6) Equilibrium in Multiple-Component Systems
- 7) Introduction to Chemical Kinetics

Exams:

Fifty-minute exams I and II will provide a maximum of 25 points each. Two-hour cumulative final exam will provide a maximum of 50 points. All exams will consist of multiple-choice and open-choice questions. Students will be allowed to use a one-page pre-prepared hand-written letter-size sheet with formulas and constants of their choice, a non-programmable scientific calculator TI-30Xa, and a periodic table. The sheet has to be signed and handed in together with the exam. Instances of academic dishonesty will warrant immediate failure of the exam plus a referral to the Arts and Sciences Dean's office.

Homework consisting of one open-choice or multiple-choice question will be assigned during each of the first thirteen Thursday lectures. It should be returned in person at the beginning of the following lecture. Each correct solution will be rewarded with 1 point.

Grading scale:

Number of points	Letter grade
94-113	A

88-93	A-
82-87	B+
76-81	B
70-75	B-
64-69	C+
58-63	C
50-57	C-
45-49	D+
40-44	D
0-39	F

Schedule:

In a typical week, Tuesday&Thursday will feature lectures and Monday&Wednesday will feature discussion session.

Monday 083010 First Class

Monday 090610 Labor Day Holiday

Wednesday 092210 Exam I

Monday 101110 Mid-Semester Break

Tuesday 101210 Mid-Semester Break

Monday 110110 Exam II

Wednesday 112410 Thanksgiving Break

Thursday 112510 Thanksgiving Break

Thursday 120910 Last Class

Thursday 121610 Final Exam at 13:00 - 15:00

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