

CYL110 - Physical Chemistry: Concepts and Applications [4 cr. (3-1-0)]

Semester I 2012-2013, M, Th 3:30-4:50 PM (L in VILT1) & M-F 10-10:50 AM (T in II-378)

Instructors: Dr. Sameer Sapra (SS) & Prof. Siddharth Pandey (SP)

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Grading based on:

Minor Test I	20%
Minor Test II	20%
2 Quizzes	20%
Major Test	40%

Passing grade is $\geq 30\%$. If your attendance is $< 75\%$, you will receive one grade lower.

Tentative Course Description:

- (i) Chemical Thermodynamics – Free energy and entropy changes in chemical processes, phase rule and phase equilibria, equilibrium electrochemistry
 - (ii) Chemical Dynamics – Reaction rates, homogeneous and heterogeneous catalysis
 - (iii) Quantum Chemistry – Quantum mechanical principles of structure and bonding in molecules and thermodynamic connection
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Books and Reference Material:

- (i) Physical Chemistry by Atkins and de Paula (*Preferred Text Book*)
- (ii) Physical Chemistry by Silbey and Alberty
- (iii) Physical Chemistry by Levine
- (iv) Physical Chemistry by Berry, Rice, and Ross
- (v) Physical Chemistry: A Molecular Approach by McQuarrie and Simon
- (vi) Physical Chemistry by Laidler, Meiser, and Sanctuary