

# Syllabus for Chemistry 301

## Loyola University: Fall 2009

**Instructor:** Dr. Conrad Naleway; Office Flanner 422  
**Office Hours:** TTh 2:30-3:30pm and by Appointment

### Meeting Times; Days & Rooms

**Lecture:** TTh 1:00-2:15pm in Damen Hall 144

**Discussion & Quizzes:** 9:20-10:10am Cudahy Hall 207 or Computer Lab (when assigned)

**Textbook:** Physical Chemistry, A Molecular Approach, McQuarrie and Simon  
(secondary text options will be discussed in class)

### Topics to be covered:

This course will cover essential material of Chapters 19-26. These topics will include:

- 1) Physical properties of gases, ideal and otherwise.
- 2) First, Second, and Third Laws of Thermodynamics and Chemical Applications.
- 3) The State of Chemical Equilibrium.
- 4) The Properties of Solutions.
- 5) Equilibrium between Solid, Liquid, and Gas Phases.

And possibly an introduction to Statistical Mechanics (17-19) and/or/nor Reaction Dynamics (28)

Please note that the text(s) is(are) a secondary source of information to help clarify concepts presented in lecture. The primary information is presented in class and also appears on website and lecture handout materials. *Thus it is imperative that one come to every class possible!*

### Exams:

There will be two eighty minute exams and one two-hour cumulative final. Each exam will consist of questions and problems representative of the text and lecture material.

All exams must be signed in the front, upper right hand corner. This signature will be taken as a statement of honest and completely independent work. Instances of academic dishonesty will warrant **immediate failure** of the course plus referral to the Dean's office. For more information on university policy, please read:

[http://www.luc.edu/cas/pdfs/CAS\\_Academic\\_Integrity\\_Statement\\_December\\_07.pdf](http://www.luc.edu/cas/pdfs/CAS_Academic_Integrity_Statement_December_07.pdf)

Exams will be graded and returned as soon as possible, usually the next class period. ALL grading questions, points of clarification and grading errors must be brought to the instructor's attention during office hours **no later than one week after exam is returned**. There will be no exceptions to this rule! Each returned exam must be copied with original being returned to instructor with a hand written note stapled to exam addressing concern(s). ***Only exams completed in INK are eligible for possible regrading.***

### Assignment of Grades:

<b>A</b>	<b>100-88</b>
<b>B</b>	<b>87-76</b>
<b>C</b>	<b>75-60</b>
<b>D</b>	<b>59-50</b>
<b>F</b>	<b>&lt;50</b>

**Grades** will be assigned by weighting the

<b>Two eighty minute exams</b>	<b>40%,</b>
<b>Problem sets (HW)</b>	<b>10%</b>
<b>Quizzes (Individual &amp; Group)</b>	<b>10%</b>
<b>Group Presentation</b>	<b>10%</b>
<b>Final exam</b>	<b>30%,</b>

***with consideration given to improvement during the semester.***

An aim of the grading policy is to allow time and incentive for improvement. Physical chemistry is not easy to learn, but the process can be rewarding if necessary effort is made to master fundamentals as they appear. Students are urged to contact the instructor to discuss problems before they become serious.

**Problem Sets:** Several problem sets will be assigned during the semester based on the text and lecture materials. Students are urged to work as many problems as possible with the help of each other and the instructor.

**Quizzes:** Several quizzes will be prepared during the semester and addressed during the discussion periods.

**Group Presentation:** Selecting from a group of topics, you will be able to research the literature and utilize some of the tools that you have learned in our class to better understand and present timely research issues.

**Xerox Materials:** There will be multiple hand-outs during the semester. These will include exams, quizzes, and problem sets. Errors should be brought to the instructor's attention as soon as possible.

## Schedule:

In the typical week, Tuesday and Thursday afternoons will feature lectures. Mondays and Wednesday mornings will be a mixture of Lectures, Quizzes and Computer Lab Assignments. *We'll see how this works out best!*

M	August 24	First Class Meeting. We will begin with Overview of Thermo from Chem 102 and quickly move on to Chapter 19
M	September 7	Labor Day Holiday ☺🎵
<b>Th</b>	<b>October 1</b>	<b>Exam I at 1:00pm: the exam will emphasize 1<sup>st</sup>-3<sup>rd</sup> Laws</b>
MT	September 5-6	Fall Break Holiday ☺🎵
<b>Th</b>	<b>November 19</b>	<b>Exam II at 1:00pm: the exam will emphasize material of Equilibrium Systems</b>
WTh	November 25-26	Thanksgiving Break Holiday ☺🎵
<b>Th</b>	<b>December 10</b>	<b>Cumulative Final Exam at 1:00-3:00 pm</b>