Physical Chemistry I (Chemistry 301)
Fall 2008

Instructor: Urban Bren
Office: Flanner Hall (FH)-314A
Office Hours: Monday & Wednesday 11:00 – 12:00
Phone: (773) 508-3078
E-mail: ubren@luc.edu

Lectures: Tuesday & Thursday 13:00 – 14:15 Damen Hall, Room 641
Discussion session: Monday & Wednesday 9:20 – 10:10 Damen Hall, Room 436
Non-programmable scientific calculator: TI-30Xa

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) Introduction to Chemical Equilibrium
6) Equilibrium in Single-Component Systems
7) Equilibrium in Multiple-Component Systems

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:

<table>
<thead>
<tr>
<th>Number of points</th>
<th>Letter grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>94-113</td>
<td>A</td>
</tr>
<tr>
<td>88-93</td>
<td>A-</td>
</tr>
<tr>
<td>82-87</td>
<td>B+</td>
</tr>
<tr>
<td>76-81</td>
<td>B</td>
</tr>
<tr>
<td>70-75</td>
<td>B-</td>
</tr>
<tr>
<td>64-69</td>
<td>C+</td>
</tr>
<tr>
<td>58-63</td>
<td>C</td>
</tr>
<tr>
<td>50-57</td>
<td>C-</td>
</tr>
<tr>
<td>45-49</td>
<td>D+</td>
</tr>
<tr>
<td>40-44</td>
<td>D</td>
</tr>
<tr>
<td>0-39</td>
<td>F</td>
</tr>
</tbody>
</table>

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

Monday 082508 First Class
Monday 090108 Labor Day Holiday
Wednesday 091708 Exam I
Monday 100608 Mid-Semester Break
Tuesday 100708 Mid-Semester Break
Monday 102708 Exam II
Wednesday 112608 Thanksgiving Break
Thursday 112708 Thanksgiving Break
Thursday 120408 Last Class
Friday 121208 Final Exam at 13:00 – 15:00