Welcome to Chemistry 128!!! This course will cover many foundational principles of Chemistry. Topics this quarter will include mathematical methods in chemistry, solutions, colligative properties, chemical kinetics, thermodynamics, equilibrium and electrochemistry.

**Course Instructor**

Prof. Seth Bush  
127 Faculty Offices East (Bldg. 25)  
(805) 756-2746

sbush@calpoly.edu  
http://chemweb.calpoly.edu/sbush/

**Office Hours**

Open office hours: Mon & Wed 9 – 10 am, Tue 1 – 2 pm

Reviews and problem sessions: Thur 4:30-6 pm in 38-131

In general, my door is always open and you are welcome to drop by with questions, problems or concerns.

**Reading Material**

Silberberg, *CHEMISTRY; The Molecular Nature of Matter and Change* 7th Edition. Tentative reading assignments are posted on the back of this document. To make the most of each class period, reading assignments should be completed before lecture. Be sure to re-read tough sections. Please note: the 5th and 6th editions of Silberberg are an acceptable substitutes.

**Lecture**

Lectures are held M, W & F 1:10 to 3pm in 33-286. While attendance is not mandatory, material for exams will be drawn directly from lecture. It is difficult to do well in this class if you do not attend lecture regularly.

**Exams**

There will be two midterm exams and one cumulative final exam. Exam material will be drawn from homework, lecture, and your text. See back for exam dates.

**Homework Quizzes**

Homework problems for each chapter are outlined on the back of the syllabus. In addition, I will post “you can do it” questions after each lecture. These are questions you should be able to do based on the day’s lecture. While written homework assignments will not be turned in, there will be weekly homework quizzes in the first ten minutes of each Friday’s lecture. Quiz material will be drawn from the previous week's assignment.

**Quick-Writes**

During each lecture period you will be asked to complete a “Quick-Writes” assignment. These 1-3 minute assignments are designed to help you gauge your progress in class and allow you to plan accordingly.

**Laboratory**

Your laboratory performance will constitute 20% of your final grade. See your instructor’s laboratory syllabus for details.

**Class Policies**

- There will be no make up exams! If you know you are going to miss an exam or quiz for a legitimate reason you must contact me prior to the exam or quiz date.
- You may only use non-programmable calculators in this class. You may not share calculators during exams.
- Cutoffs for grades will be no higher than those listed below, but may be lowered if appropriate.

<table>
<thead>
<tr>
<th>Graded Material</th>
<th>Points</th>
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<tbody>
<tr>
<td>Homework Quizzes</td>
<td>100 (20/quiz)</td>
</tr>
<tr>
<td>Quick Writes</td>
<td>30 (2/QW)</td>
</tr>
<tr>
<td>Midterm Exams</td>
<td>300 (150/MT)</td>
</tr>
<tr>
<td>Final Exam</td>
<td>210</td>
</tr>
<tr>
<td>Laboratory</td>
<td>160 (scaled to)</td>
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<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Other</th>
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<tbody>
<tr>
<td>90</td>
<td>80</td>
<td>70</td>
<td>60</td>
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Course Management
Making the transition to college level work can be a daunting task. This class will cover a substantial amount of material in a relatively short amount of time. Keeping on top of things is key to your success. Below are a few tips that I believe will help you succeed in this class:

**BE ACTIVE IN CLASS** (Chemistry Class is not a spectator sport):
- Take good notes. Your notes from class are essential for working homework problems and preparing for exams. Taking notes also help you keep focused on lecture.
- Work problems with the class. These are “good” problems (hint hint wink wink). They will help you with your homework and exams.
- Participate in class discussions and Ask Questions. Don’t be afraid to be wrong or look foolish in class. Everyone is wrong now and then. You will learn from your mistakes. Further, the only bad question is the one you don’t ask.

**BE ACTIVE OUTSIDE OF CLASS:**
- **Study a Minimum of 8-10 hours a Week.** This should include working lots of problems, actively reading your text, and digesting your notes from class. Note: The Homework assignments represent a bare minimum of problems you should work to do well in this class.
- Form a study group to work through problems. You will learn by teaching and you might just make friends. As a note of caution: This should supplement independent work, not take its place.
- Come to office hours and reviews with questions and problems you would like to see worked out.

**GET OUTSIDE HELP** (if you need it):
- Take responsibility for your education. If you need more help or feel that you are under-prepared for this course, you should not hesitate to enroll in Supplemental Instruction.

Ultimately you are responsible for your education. The more energy and time you put into this class the more you will get out of it. If you feel yourself getting lost and you need some guidance, come see me. Together we can get you back on the right path.

### Tentative Course Calendar

<table>
<thead>
<tr>
<th>Week</th>
<th>Reading</th>
<th>Notes</th>
<th>Week</th>
<th>Reading</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:</td>
<td>4/1 – 5</td>
<td>*Chapter 13</td>
<td>Chavez, No Mon.</td>
<td>6:</td>
<td>5/6 - 10</td>
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<tr>
<td>2:</td>
<td>4/8 - 12</td>
<td>Chs. 13&amp;16</td>
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<td>7:</td>
<td>5/13 – 17</td>
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<tr>
<td>3:</td>
<td>4/15 - 19</td>
<td>*Chapter 16</td>
<td></td>
<td>8:</td>
<td>5/20 – 24</td>
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<tr>
<td></td>
<td></td>
<td>MT I Fri. 4/26*</td>
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<td>9:</td>
<td>5/27 – 31</td>
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<tr>
<td>4:</td>
<td>4/22 – 26</td>
<td>MT I Fri. 4/26*</td>
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<td>10:</td>
<td>6/3 - 7</td>
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<tr>
<td>5:</td>
<td>4/29 – 5/3</td>
<td>Chapter 17</td>
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**Final Exam:** Friday 6/14 1:10 – 4:00 pm

### Homework Problems

**Chapter 13:**
- Week 1: 5, 7 ,12, 14, 28, 33, 40, 51, 55, 57, 58, 63, 64, 67, 68, 71, 77
- Week 2: 47, 49, 84, 92, 95, 97, 100, 104, 106, 107, 122, 123, 129, 162

**Chapter 16:**
- Week 3: 17, 20, 23, 25, 31, 33, 34, 38, 39, 41, 42, 44, 48, 50, 80, 84
- Week 4: 55, 62, 64, 72, 75, 81, 83, 85, 87, 100, 112

**Chapter 17:**
- Week 5: 8, 17, 18, 19, 29, 30, 34, 36, 37, 87, 92
- Week 6: 42, 45, 46, 48, 51, 55, 63, 64, 67, 70, 74, 76, 80, 81

**Chapter 20:**
- Week 7: 13, 16, 20, 22, 28, 33, 34, 36, 42
- Week 8: 48, 50, 57, 59, 60, 62, 64, 68, 78, 80, 82, 83, 86

**Chapter 21:**
- Week 9-10: 10, 13, 14, 15, 21, 26, 28, 30, 33, 34, 42, 45, 46, 56, 57, 60, 61, 71

* Exam dates are approximate and may be subject to change