Chemistry 201B Syllabus  Cuesta College  General College Chemistry II  Fall 2015  5 units

Dr. Greg Baxley  
Office # 2302  
546-3100 ext. 2669  
gbaxley@cuesta.edu  

Lecture (2402): T, R 8:30–10:20  
Lab in 2105  

Lab times:  
70247 M 9:30 – 12:20  L. Baxley  
72845 M 1:00 – 3:50  G. Baxley  

Lab times:  
70247 M 9:30 – 12:20  L. Baxley  
72845 M 1:00 – 3:50  G. Baxley  

Course website:  
http://academic.cuesta.edu/gbaxley/chem1B/chem1b.htm  
https://piazza.com/cuesta/spring2015/chem201b  

course information  
Piazza discussions  

Office Hour:  
M 11-12,  T 12:30-1:20, Friday 11:30-12:30, and Free tutoring Friday 10:30-11:30 in 2402  

Free tutoring:  
F 10:30–11:30 am in 2402  

Prerequisites:  
Math 27 or intermediate algebra,  AND  Chem 201A (grade of “C” or better)  

Required Supplies:  
Chemistry, A Molecular Approach, 3rd ed. N. Tro Prentice Hall, 2014 ($100 used, $174 new at bookstore)  
Chemistry 201B Lab Manual and Course Packet available in Cuesta bookstore  
Mastering Chemistry Online HW, free with new book, $55 at Cuesta bookstore, $47 online  

Please see the web link on the Chem 201B website for information about Mastering Chemistry.  
Student Guide and Solution manuals are optional  

1) A non-programmable scientific calculator for exams and quizzes with Exponential notation (EE or EXP on most calculators,) and logs (LOG and LN). No TI-8X series calculators for exams or quizzes.  
2) Chemical splash goggles. Goggles must completely enclose the area around the eyes, without perforations on the outside. The goggles at the bookstore are a good choice.  

Course Description:  
This is the 2nd semester of a one-year course in chemistry for science majors, and emphasizes kinetics, equilibrium, aqueous equilibrium, thermodynamics, electrochemistry, nuclear chemistry, and qualitative analysis. In this class, you will gain a technical perspective for current issues and develop problem solving skills. Real-world examples and hands on learning will be emphasized. The course is designed for students who have been successful in previous chemistry courses, and requires diligent study habits, good attendance, and a positive attitude.  

This class is a heavy load, and constitutes a part time job, so schedule your time appropriately. Many successful students report that they commit 7 hours in class plus 7-10 hours out of class for Chem 201B alone. You may be overwhelmed if you have 16 units and work 15 or more hours a week.  

Student learning outcomes:  
Upon completion of this course, a student should be able to:  
1. Use chemical evidence to develop a qualitative analysis scheme, and use the scheme for the determination of unknown cations in solution.  
2. Evaluate and interpret numerical and chemical scientific information, including the determination of a rate law or equilibrium constant based on experimental data.  
3. Solve mathematical problems in chemistry, including stoichiometry, dilution, equilibrium constants, rate laws, electrochemistry, and energetics.  
4. Communicate chemical concepts through the use of molecular formulas, structural formulas, and names of compounds.  
5. Perform laboratory experiments based on gravimetric, volumetric, and instrumental analysis techniques and effectively utilize the appropriate experimental apparatus and technology.  

Attendance is mandatory. Students who attend class regularly learn more and are less stressed. Material and discussions may be presented in class that cannot be found in the text. Laboratory attendance is even more critical. Excessive absences (missing 6 lectures, 2 labs, 2 quizzes, or 2 exams), or tardiness (chronic lateness) may result in a drop. Missing 3 or more lab experiments will result in a non-passing grade. You are responsible for obtaining any course work or schedule changes missed during absences.  

Assistance: I am here to help you learn and enjoy the course material. If you are having trouble, please come and see me early and often. If you cannot come to office hours, please use Piazza, or call or email with your questions. I encourage relevant questions during lecture and lab periods.  

Withdrawal: If you discontinue the course for ANY reason, you are responsible for making an official withdrawal. You must also check out of your lab drawer.
Evaluation:

**Homework:** Required problems will be assigned via Mastering Chemistry and suggested problems will be provided on the course website for each chapter. The required problems represent the bare minimum; you are strongly encouraged to work the suggested problems and worksheets for extra practice. Think of it as a challenge to get them all right eventually. Don’t slack off and skip the suggested HW. Don’t let others do your homework for you; do some practice on your own. There may be some other paper based HW assignments.

**Quizzes:** There will be about 7 quizzes in class throughout the semester. The quiz questions will be similar to lab, homework, and worksheet questions, so make sure you do the work!

**JITL:** “Just In Time Learning” assignments may be announced in class, usually due one class period later. These will be a few problems collected at the beginning of a specified class. They will be announced 1 class day ahead of time. Not all JITL’s will be collected, but be ready!

**Exams:** There will be three exams throughout the term (see schedule) and a comprehensive final exam. Make up exams will only be considered for absences with prior approval. At the instructor’s discretion, the make-up midterm may be administered during finals week.

**Labs:** Most labs have a prelab assignment that must be completed before the lab starts, plus data and report sheets. Your lab instructor may have slightly different requirements. Incomplete prelabs may result in dismissal from that lab. There are no make up labs, but the lowest lab score will be dropped (Exp 12 is required). You must attend your designated lab.

### Approximate Point Distribution:

<table>
<thead>
<tr>
<th></th>
<th>Approx %</th>
<th>Approximate Letter Grades</th>
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</thead>
<tbody>
<tr>
<td>ACS exam</td>
<td>35</td>
<td>5%</td>
</tr>
<tr>
<td>Quiz (20 pts each)</td>
<td>150</td>
<td>10%</td>
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<tr>
<td>HW</td>
<td>250</td>
<td>15%</td>
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<tr>
<td>Midterms (125 pts ea)</td>
<td>375</td>
<td>30%</td>
</tr>
<tr>
<td>Lab assignments (25 pts ea)</td>
<td>275</td>
<td>20%</td>
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<tr>
<td>Final</td>
<td>300</td>
<td>20%</td>
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<tr>
<td><strong>Approximate Point Total</strong></td>
<td>1350</td>
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**Plus/Minus grades:** Cuesta College allows for +/- grading, which will be used in borderline cases, usually based on the final exam score (state law does not allow grades of “C-” at CA Community Colleges). Plus/minus grades will earned for totals of approximately 78-82% and 88-92%.

**Late assignments:** All assignments are due before the class period starts. Any assignment turned in late must have an NQA attached. Turn in late assignments after class is over. Do not disrupt the class by turning in late work. See the NQA directions.

**Classroom Etiquette:** Please be considerate of your other classmates. Some students are easily distracted, so I ask that you arrive on time, ready to learn, and do not depart early. Students who disrupt the class will be asked to leave. No talking, and turn off your phone while in class. No texting during class. Audio or video recording is acceptable with a permission form.

**Academic Honesty:** Academic dishonesty in any form, including plagiarism, either party of copying HW or labs, falsifying lab data, or unauthorized aids on exams, will not be tolerated. Do not copy anyone else’s work! This is not learning, it is cheating. If you violate the academic honesty policy, you may receive a “0” for the assignment AND an equivalent assignment, or an F for the course. Be sure to give proper citations when quoting or paraphrasing sources of information. Enter all calculations into your own calculator. See the Cuesta College schedule for official student conduct policies.

While you are encouraged to study in groups, assignments turned in must represent your own work, which means your own thoughts in your own words. No one learns effectively by merely copying someone else’s paper.

It is allowed and expected that students will work together on lab reports and other assignments. It is also expected that each student will do their own work, and write their answers in their own words, with their own calculations. A good way to work together is to talk about a question, discuss an answer, and then each person writes an answer in their own words and to do independent calculations. An unacceptable way to work together is for one person to say or write an answer, and then for another person to write the same answer. Do not use results that someone else has punched into their calculator.

**Special Note:** If you have any special concerns or disabilities that could affect your learning, please see me or contact DSPS at 546–3148 as soon as possible. DSPS testing forms must be submitted at least 2 days prior to testing.
<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Thursday</th>
<th>Notes:</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>8/24-8/28</td>
<td>Check in, Exp 1: Crystal Violet</td>
<td>Ch 13 cont.</td>
<td>Ch 13 cont. Ch 14: Equilibrium</td>
<td>Quiz 1</td>
</tr>
<tr>
<td>3</td>
<td>8/31-9/4</td>
<td>Exp 2: Shifting Reactions</td>
<td>Ch 14: Equilibrium</td>
<td>Ch 14 cont. Quiz 2</td>
<td>8/31 Mon: Drop w/o W</td>
</tr>
<tr>
<td>4</td>
<td>9/7-9/11</td>
<td>Holiday</td>
<td>Ch 14 cont.</td>
<td>Ch 14 cont. Quiz 3</td>
<td>9/7 Labor day holiday</td>
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<tr>
<td>5</td>
<td>9/14-9/18</td>
<td>Exp 3: Equilibrium Constant</td>
<td>Ch 15: Acids and Bases</td>
<td>Exam 1 (Ch 13 &amp; 14)</td>
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<tr>
<td>7</td>
<td>9/28-10/2</td>
<td>TBA</td>
<td>Ch 16: Ionic Equilibrium</td>
<td>Ch 16 cont.</td>
<td></td>
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<tr>
<td>8</td>
<td>10/5-10/9</td>
<td>Exp 5: Buffers</td>
<td>Ch 16 cont.</td>
<td>Ch 16 cont.</td>
<td>Fri flex day no classes</td>
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<tr>
<td>9</td>
<td>10/12-10/16</td>
<td>flex day</td>
<td>flex day</td>
<td>Ch 17: Thermodynamics</td>
<td>Monday and Tuesday flex days no classes</td>
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<tr>
<td>10</td>
<td>10/21-10/23</td>
<td>Exp 6: Titration of a Diprotic Acid</td>
<td>Exam 2 (Ch 15 &amp; 16)</td>
<td>Ch 17: cont.</td>
<td></td>
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<tr>
<td>11</td>
<td>10/26-10/30</td>
<td>Exp 8: Thermodynamics of Water</td>
<td>Ch 17 cont.</td>
<td>Ch 17 cont.</td>
<td></td>
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<tr>
<td>15</td>
<td>11/23-11/27</td>
<td>Exp 11: Electrolysis</td>
<td>Ch 19 cont.</td>
<td>holiday</td>
<td>Thurs-Fri holidays</td>
</tr>
<tr>
<td>16</td>
<td>11/30-12/4</td>
<td>*Exp 12: Qualitative Analysis</td>
<td>Exam 3 (Ch 17,18, 19)</td>
<td>Ch 24: Coordination Compounds</td>
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<tr>
<td>17</td>
<td>12/7-12/11</td>
<td>*Exp 12: Part 2, Check out</td>
<td>ACS Exam</td>
<td>Organic chemistry and polymers</td>
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<tr>
<td>18</td>
<td>12/14-12/18</td>
<td>Finals Week</td>
<td>Final Exam</td>
<td>Tuesday December 15, 9:45 a.m.-11:45 a.m. the final is cumulative Please don’t ask for an different final exam time</td>
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This schedule is subject to change. Changes will be announced in class and posted to the website.

*This last experiment is not eligible to be dropped as your lowest lab score.
Policies and Procedures for Submitting Assignments

1) All assignments are due **before** the class period or lab starts on their due dates. If you need to miss class, I am happy to accept the assignments early. If you happen to arrive late, wait until after the class to turn in papers. Any assignment turned in late must have an NQA attached. Turn in late assignments after class is over. Do not disrupt the class by turning in late work.

**NQA’s:** No Questions Asked coupon. You may turn in an assignment with one coupon, one meeting day late. Good for HW or labs. One meeting day is usually one week for labs. Finish the assignment, turn in with the coupon stapled to the front directly to instructor. For MC homework, the due date is extended by 48-72 hours.

**LATE ASSIGNMENTS WILL NOT BE ACCEPTED WITHOUT AN NQA.**

2) Write your name legibly in the upper right-hand corner of each page, and **staple** them together.

3) Please don’t crowd your work. Use lots of paper so that I can easily follow all of your hard work.

4) Label each question/problem clearly, and if you promise to circle your final answers in a calculation, I will promise to find them. Always include proper units on all measured quantities and ratios. Just doing this simple item will surely boost your understanding and your score.

Example of neat work:

\[
\frac{5.00\text{ mL}}{1000\text{ mL}} \times \frac{1\text{ L}}{1\text{ L}} \times \frac{0.105\text{ g}}{163.1\text{ g}} = 3.22 \times 10^{-6}\text{ mol CuSO}_4
\]

5) Neatness counts! If I have to struggle to read your writing, you may not receive full credit.

6) Work must be shown for full credit. You must have your units present. For written answers, use complete and concise sentences to state your point, and don’t use non-chemical abbreviations.

7) Study groups are encouraged, but remember that all work submitted must be your work and your work only. Any violations of this will be regarded as cheating and may result in failing grades for cheaters and cheatees.

8) Students are often concerned that they do all of their homework, but don’t do well on exams. I find that these students often do all of their work with the aid of either a study group, tutor or answer key. It is essential that you complete some problems on your own, without any help, so that you can gauge your own learning. When solving problems, make sure you solve them for understanding, not just for finishing.

9) Do more than you think you should.

10) Post questions to Piazza or come see me if you need help!
No Questions Asked Coupons (NQA)

Staple coupon to front of assignment. Two coupons per student per semester.
I keep track, so don’t bother making more. Give the NQA and assignment directly to instructor. Do not put it in a stack with other papers or it could easily get misplaced.
You must turn in the missed assignment one class period after it is due, along with the coupon.
Not accepted for Prelab assignments.
Can be used for Mastering Chemistry assignments to get due date reset to 48 hours past original. Can be used for labs, due 1 week after original due date. Any other assignments are due one class period later.

NQA Coupon 2

This coupon entitles you to turn in one assignment up to one meeting day late without penalties. May be used for homework and lab reports. Turn in with assignment.

Print name ________________________________
Assignment ___________________________ lab: _________
Sign here ________________________________
Spring 2015

NQA Coupon 1

This coupon entitles you to turn in one assignment up to one meeting day late without penalties. May be used for homework and lab reports. Turn in with assignment.

Print name ________________________________
Assignment ___________________________ lab: _________
Sign here ________________________________
Spring 2015