Instructor: Dr. Peter A. Doucette  
Office: Chem 122  
email: pdoucette@elcamino.edu  

**Course Description:**

This course details the chemistry of elements and their compounds in periodic groupings, transition metal complexes, chemical equilibrium, chemical thermodynamics, kinetics, atomic and molecular structure, aqueous solutions, net ionic equations, oxidation-reduction equations, electrochemistry and nuclear processes. In the laboratory, qualitative analysis of common metallic and nonmetallic ions will be performed, as well as additional experiments on selected lecture topics. **Course Prerequisites: Chemistry 1A with a minimum grade of C.**

**Required Materials:**

- **Textbook:** Petrucci, Harwood, Herring, and Madura; *General Chemistry: Principles and Modern Applications; 10th ed.*, ©2011 Pearson Canada Inc., Toronto, Ontario
- **Online homework:** subscription to *Mastering General Chemistry* online homework system
- **Lab Manual:** *Catalyst, the Prentice Hall Custom Laboratory Program for Chemistry, Chemistry 1B, El Camino College*, Pearson Custom Publishing
- **Lab Notebook:** Laboratory research notebook: quad-ruled, 100 numbered duplicate pages
- **Scientific Calculator** (logarithms and exponents - no graphing calculators are permitted on exams or quizzes)
- **Safety Goggles** (Instructor Approved)

**Grading:**

Total course point distribution

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Midterms</td>
<td>(200 points each) 600</td>
</tr>
<tr>
<td>Laboratory work</td>
<td>(adjusted to 150 points total) 150</td>
</tr>
<tr>
<td>Quizzes</td>
<td>(adjusted to 25 points total) 25</td>
</tr>
<tr>
<td>Online assignments</td>
<td>(adjusted to 25 points total) 25</td>
</tr>
<tr>
<td>Final Exam</td>
<td>(250 points) 250</td>
</tr>
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Total Possible: 1050

Letter grades are given based on the percentage of total points*.

- **A** 100 - 89%
- **B** 88 - 78%
- **C** 77 - 65%
- **D** 64 - 55%
- **F** 54 - 0%

*Passing work in the laboratory portion of the course (55% or more of possible lab points) is required to pass the course.
Dropping the course:
Students who drop the course by the published Last day to drop with a “W” date will receive a W. After this a letter grade must be assigned. It is your responsibility to officially drop the course. Failure to do so could result in a grade of F. As part of dropping a chemistry class, you should see a stockroom technician and check out of your lab drawer.

Drop dates:
- Thursday, June 23: Last day to drop with a full refund
- Tuesday, July 5: Last day to drop without notation on permanent record
- Thursday, July 28: Last day to drop with a “W”

Course website:
Course material will be available at the following website: www.elcamino.edu/faculty/pdoucette/chem1b.html. You are encouraged to print out lecture notes and other material and bring them to class. Printing notes on the printer in CHEM 108 is not allowed. To print documents, first save them on your hard drive - do not print from the web!

e-mail policy:
I will be in contact with the class via email throughout the semester and I will use your El Camino email address. I know it is not the email address of choice for many of you, but please use it - at least for this semester. Please check this account before coming to class each day. If you don't know how to access your El Camino email account, please see me.

Mastering Chemistry online assignments:
I will be assigning problem sets using the online homework system, Mastering Chemistry. These assignments will be included as part of your final grade. You must have an account and a course ID to be able to log on to the course. Instructions are attached to this syllabus and available on the course website. Assignments will be available for about a two week window depending on the particular assignment. You should make every effort to finish all problems before the assignment’s due date.

Room 108 policies:
I will open room 108 as often as I can, including office hours, so you can work on your MasteringChemistry assignments. This is a classroom, not an open computer room, so no one is permitted in the room without permission. You should not prop the door open, or let people in who knock on the door. Also, printing in this room should be limited to material that I specifically ask you to print. Please keep the room neat and clean by not eating in the room, logging off the computer when you are done, throwing away any trash you see, and pushing in your chair.

Quizzes and Exams:
Quizzes: When time permits, I will give quizzes to prepare you for the exams. Most quizzes will be graded.

Exams: Exams will be given on scheduled days in room 162 (lab room). The format of the exams depends on the content of the material being tested, but is usually made up of multiple choice, true/false and free-response questions.

Rules, expectations and tips for success:
1. General:
   - Attend class regularly and be on time. Excessive absences and/or lateness may result in a lower grade or being dropped from the class.
   - Respectful behavior is expected at all times. Excessive talking and other disruptive behavior such as being late, will not be tolerated. Additionally, please refrain from using language or behaving in a manner that might be hurtful to a particular person or group.
   - You are not permitted to attend the lab or lecture of a section you are not enrolled in without prior permission from the professor.
• Always bring needed course materials to class and lab. Please bring your calculator to every class meeting.

• I encourage you to participate in the classroom discussion. Don't be afraid to speak up! If you have a question, please ask. If you don't understand something, most likely there are others in the class who don't get it either.

• There will be no makeup exams, quizzes or laboratories. If you have a valid reason for missing an exam, quiz or lab, contact me in person or by email prior to the class meeting. See me as soon as possible to discuss your situation.

• Cheating of any form will not be tolerated.

2. Laboratory:

• You are expected to be familiar with the laboratory safety rules and to follow them at all times while working in the laboratory. If you are unsure about any aspect of laboratory safety you should see me before beginning any work in the laboratory. Failure to follow safety rules in the laboratory will result in dismissal from the lab. Safety is everyone's responsibility and is a top priority of the chemistry department.

• You must always wear approved safety goggles in the laboratory while an experiment is going on even after you are finished with your lab. You will be asked to leave lab for repeated infractions of this rule. Shoes must be stable (no heels) and securely fastened to your feet.

• You should read and fully understand all labs BEFORE coming into the lab. If you wait until right before the lab class to read the lab, you will not understand the lab and it will be obvious that you did not prepare. This is also a safety concern and you may be asked to leave if you are unprepared for the experiment. If there is a pre-lab exercise for the lab it is due before you begin the lab.

• Safety concerns require that you be present in class for the prelab discussion. If you come late to a laboratory class, please sit through the remainder of the discussion and then see me before you start lab work. Don't rush in and start working, because you may have missed something very important!

• Everyone makes mistakes. If you make a mistake during an experiment, or even suspect you made a mistake, please see me immediately as to how to approach the situation. A small, easily fixable error at the beginning of an experiment can have drastic effects on your results. It's better to be safe and double check with me before proceeding.

• Everyone has accidents. Please report any accidents or mishaps to me immediately. Especially if they are serious (e.g. you are bleeding); but even if you think they are very minor. I will not get angry, so please don't be afraid to report accidents to me.

• Complete and turn in prelabs and laboratory notebooks/reports independently, regardless of whether or not the lab work was done with partners. Never turn in a paper with more than one person's name on it.

• Unless announced otherwise, laboratory notebooks/reports are due at the beginning of the class one week after the experiment is completed. I will let you know if they are due earlier or later either during lab, lecture or by email. It is your responsibility to keep track of due dates. Late work will be penalized. Being late or absent is not an excuse for late work.

• Laboratory grades will depend on prelabs, laboratory notebooks/reports, results, laboratory techniques, attendance, and following all directions and requirements.

3. Study tips:

• Read through the material in the textbook prior to the lecture on the material. This will allow you to better understand the lecture material and save you study time later.

• Spend at least 12 hours per week studying in an environment where you can focus on chemistry. Study every day rather than cramming to learn (when you should be reviewing) the material before a quiz or exam.

• Study while the lecture material is fresh in your mind. Don't wait until Sunday to study something from Thursday's lecture. By then, the material is much harder to learn. Review your notes as soon as possible after class.
• Write down questions you have about the material and find out the answers to all of them. Figuring out the answer for yourself is the most gratifying and valuable way to get the answers, but of course you can always come ask me!

• Do the assigned problems. Review the chapter material, lecture notes and textbook to solve problems. Working problems is an essential part of the course and you should make this one of your primary goals. You should do all of the problems I assign and **you should avoid looking at the answer key until you have figured out the problem on your own.** You will be given a lot of problems and the more you work on them, the better you will get.

• You should solve problems by writing them out in an organized fashion without skipping steps and rushing through to get to the answer faster. Many mistakes are made by doing this!

• At a later time, repeat problems you did incorrectly. Do this until you are comfortable with them and can do them quickly (as on a quiz or exam).

• Repeat all of the problems we do in class and make sure you are comfortable with them. Don’t just look over a problem and say "Yep, I got it" - actually re-do the problem.

• Try and teach the material to someone (or something). If you can teach it, then you know it. Of course, check that everything you are teaching is correct!

• Success is a matter of preparation and repetition. The material will often require a great deal of time to learn. Use all your learning resources including texts, instructor, other students and tutors, if necessary. The course material will build on itself, so do not let any gaps develop in your knowledge. Catching up is nearly impossible once you fall behind.

**Course Objectives:**

Successful students are expected to gain an understanding of, and appreciation for, the physical and chemical interactions of matter. This objective will be met through individual, class, and laboratory study. Opportunities for the development of the factual and theoretical knowledge, skills, and intellectual tools required for a foundation in chemistry will be provided. Problem solving and laboratory skills are emphasized including the ability to work safely, efficiently, and accurately in both independent and supervised situations. Upon successful completion of this course, students will obtain a chemistry background comparable to that obtained at a CSU or UC campus.

**Assessment:**

Student success will be assessed via exams, lab reports, instructor observations, and student learning outcomes (SLO's). Two SLO's are listed below:

**Chemistry Program level Student Learning Outcome:**

Students will practice safe laboratory procedures by putting their goggles on at the beginning of a chemistry lab experiment involving burners or chemicals, and by keeping their goggles in place during the entire course of the experiment. Students will not remove their goggles until the students are leaving or until the instructor has said that it is safe to do so (whichever comes first).

**Chemistry 1B Course level Student Learning Outcome:**

On a written exercise, given the names of chemical compounds, students will be able to write the correct reactant formulas, states of matter (when required), identify reaction type, predict the formulas of products, and balance the chemical equation.
Students with Disabilities, including Learning Disabilities:

Students with disabilities, including learning disabilities, who believe they may need accommodations in this class are encouraged to contact the Special Resource Center on campus as soon as possible to better ensure such accommodations are implemented in a timely fashion. If you suspect, or are unsure if, you have a learning disability you are strongly encouraged to contact the Special Resource Center on campus as soon as possible for testing, to better ensure any needed accommodations are implemented in a timely fashion. If you have a documented or suspected disability and wish to discuss academic accommodations, please contact me privately to discuss your specific needs.

Please visit [http://www.elcamino.edu/faculty/agrant/syllinfo.html](http://www.elcamino.edu/faculty/agrant/syllinfo.html) for additional information regarding ECC policies, chemistry course descriptions, prerequisites, and student learning outcomes.
Dear Student:
In this course you will be using MasteringChemistry™, an online tutorial and homework program that accompanies your textbook.

**What You Need:**

- A valid email address
- A student access code (Comes in the Student Access Kit that may have been packaged with your new textbook or is available separately in your school’s bookstore. Otherwise, you can purchase access online at [www.masteringchemistry.com](http://www.masteringchemistry.com).)
- The ZIP code for your school: 90506
- A Course ID: CHEM1BDOUCETTE

**Register**

- Go to [www.masteringchemistry.com](http://www.masteringchemistry.com) and click New Students under Register.
- To register using the Student Access Code inside the MasteringChemistry Student Access Kit, select Yes, I have an access code. Click Continue.

OR

**Purchase access online:** Select No, I need to purchase access online now. Select your textbook and whether you want to include access to the eBook (if available), and click Continue. Follow the on-screen instructions to purchase access using a credit card. The purchase path includes registration, but the process may differ slightly from the steps printed here.

- License Agreement and Privacy Policy: Click I Accept to indicate that you have read and agree to the license agreement and privacy policy.
- Select the appropriate option under “Do you have a Pearson Education account?” and supply the requested information. Upon completion, the Confirmation & Summary page confirms your registration. This information will also be emailed to you for your records. You can either click Log In Now or return to [www.masteringchemistry.com](http://www.masteringchemistry.com) later.

**Log In**

- Go to [www.masteringchemistry.com](http://www.masteringchemistry.com).
- Enter your Login Name and Password and click Log In.

**Enroll in Your Instructor’s Course and/or Access the Self-Study Area**

Upon first login, you'll be prompted to do one or more of the following:

- Enter your instructor’s MasteringChemistry Course ID.
- Select your text, if available, and Go to Study Area for access to self-study material.
- Enter a Student ID. Your instructor may request that you enter a special Student ID for this course. If so, be sure to enter this information EXACTLY as instructed.

Click Save and OK.

Congratulations! You have completed registration and have enrolled in your instructor’s MasteringChemistry course. To access your course from now on, simply go to [www.masteringchemistry.com](http://www.masteringchemistry.com), enter your Login Name and Password, and click Log In. If your instructor has created assignments, you can access them by clicking on the Assignments button. Otherwise, click on Study Area to access self-study material.

**Support**

Access Customer Support at [www.masteringchemistry.com/support](http://www.masteringchemistry.com/support), where you will find system requirements, answers to frequently asked questions, and customer support contact information.