CHEMISTRY 1B  Sections 72038 and 70892  Fall 2012

Description:  This course is the second semester college level course in general chemistry. Topics that are covered are chemical kinetics, phase equilibria, equilibria in gases and solutions, acids and bases, solubility and complex ions, thermodynamics, electrochemistry, a continuation of qualitative and quantitative analyses, and an overview of nuclear chemistry, organic chemistry, and coordination chemistry and ligand field theory. Laboratory activities address chemical kinetics, equilibria, thermodynamics, spontaneous oxidation-reduction reactions and electrolysis, selective precipitation, titrations, and exposure to ultraviolet, infrared, and nuclear magnetic resonance spectroscopy. A list of course objectives and student learning outcomes can be found using the following link: http://sunny.moorparkcollege.edu/~chemistry/Docs/1B.pdf

Prerequisites: Chem M01A and MATH M05 or equivalent

Instructor:  Vincent Crisostomo  Office PS 127
vcrisostomo@vcccd.edu
(805) 378-1400 ext. 1729

Course
Lecture:  Sections 72038 and 70892  Mon and Wed 2:00-4:00 pm PS-110

Meetings:
Lab:  Section 72038  Mon 10:00-12:50pm PS-104
Lab:  Section 70892  Wed 10:00-12:50pm PS-104

Office Hours:
Mon 1:00-2:00 pm, Mon 4:00-5:00 pm, Tues 7:00-8:00 am, Wed 1:15-1:45 pm, Wed 4:00-4:30 pm and Thurs 1:00-2:00 pm
I may also hold extra office hours that will be announced as they approach. I am also willing to meet with you at other times so please feel free to set-up an appointment with me when I can help you. I also understand that sometimes physically coming in my office for help might not work for some students. I offer alternative modes of communications so you can remotely attend my office hours to seek help. During my regular office hours, I may also be available through my desk phone (805) 378-1400 ext 1729 and skype (ID: vcrisostomo.moorpark).

Supplies:
(b) MasteringChemistry for Tro 2nd edition; (c) Chem 1B Lab Manual, Dept of Chemistry, Moorpark College; (d) Non-graphing and Non-programmable Scientific Calculator (use of cellphones is not allowed during exams or quizzes).

Other Contacts:
Department Chair: Dr. Rob Keil, (805) 378-1400 ext 1765, rkeil@vcccd.edu
Dean: Dr. Lisa Miller, (805) 378-1400 ext 1572, lisamiller@vcccd.edu

ACCESS:  If you have a hidden or visible disability, you are encouraged to contact ACCESS at (805) 378-1461. Their office is on the ground floor of the LMC Building. They will help you determine what assistance is available to you.

TLC:  Students are encouraged to use The Learning Center, Match Center and Writing Center to support their academic efforts. They are located in the third floor of the Library Learning Resources building.
Class Rules: You may not use your computer/laptop nor your mobile phones during lecture as this can be disruptive to others. Chronically coming in late is also unacceptable.

Online Resource: Desire2Learn www.d2l.vcccd.edu – Syllabus, Lecture Handouts, Announcements, etc; www.masteringchemistry.com – accessing homework and/or quizzes. The instructions for signing up in Mastering Chemistry is given on the last page of this syllabus. You will need this course ID once you are ready to register: MCCRISOSTOMO79934

Exams: There will be three midterm exams and one final exam. Make up exams are given only for documented medical reasons (from the Student Health Service or your physician). All requests for make-up exams must be cleared with your instructor before the scheduled exam time if possible. Contact your instructor ASAP (vcrisostomo@vcccd.edu or (805) 378-1400 ext 1729 – leave a message) if you must miss an exam. The final exam has a multiple choice format. The final exam may also be used to replace your lowest midterm exam IF your lowest midterm score is 50% or better. Exam grades will NOT BE CURVED.

Email: You must regularly check your email for updates for important announcements. I will only use your vcccd.edu email account to communicate with you. If you use a different email, you can forward your incoming messages in your vcccd.edu account to “other or regular” email account. Ask your professor on how to do this.

Academic Honesty: Cheating and plagiarism are not acceptable. If suspected of cheating or plagiarism you may earn a zero for the assignment involved and the matter will be reported to the office of the Dean of Student Life office for possible disciplinary consequences.

Homework And Quizzes: Homework will be done through mastering chemistry (www.masteringchemistry.com). Quizzes maybe done through mastering chemistry or given as in-class paper type ones. Your instructor will announce in class and/or through email when an on-line homework or an on-line quiz is available. You will need an access code to log into mastering chemistry. Note that homework and quizzes count as 20% of your grade. Also, questions on exams and/or paper quizzes may be similar to the on-line homework problems. So, YOU REALLY NEED TO REGISTER FOR MASTERING CHEMISTRY AND DO ALL THE ASSIGNMENTS IN THERE. If you bought a textbook that did not come with a mastering chemistry access code, you will need to separately buy access to mastering chemistry. The bookstore sells it as a stand-alone access (without the textbook) or you may buy it directly from www.masteringchemistry.com.

Laboratory: The laboratory part of this course is very important in that it provides the essential link between principles and applications. Eye protection is mandatory in lab; you may buy your own or use the communal goggles available in lab. Only students with valid verifiable documented emergencies will be allowed to make-up labs. Arrangements to make-up labs must be done quickly and will only be possible if the lab is available in another class. Missing three labs or not writing a complete formal report is unacceptable and will drop your final class grade by one letter (an A for the class will become a B). Come prepared. Read the assigned lab before coming to class. Start working on advanced study assignment (ASA) before coming to lab.
Grading: Midterm Exams (3) 45%
Homework 13%
Quizzes 7%
Final 15%
Laboratory 20%

NOTE: The following grading scale will be used: A (90% and above); B (80% - 89%); C (70% - 79%); D (60% - 69%); F (below 60%). There will be no extra credit assignment/s.

Important Dates:

August 16 - 22  Late registration & program adjustment: No add authorization needed if class is open & there is no waitlist.
August 23 – 29  Late registration & program adjustment. Add authorization numbers now required.
August 29  Last day to drop with full refund or credit (All Students/Full semester only)
August 31  Last day to drop a semester-length class without a "W"
September 20  Last day to apply for pass/no pass for a semester-length class
November 8  Graduation & Certificate Petition Deadline
November 16  Last day to drop a semester-length class with a "W"

LECTURE AND EXAM SCHEDULE

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<th>Chapter</th>
<th>Topic</th>
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<td>Chemical Kinetics</td>
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<tr>
<td>14</td>
<td>Chemical equilibrium</td>
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<tr>
<td>15</td>
<td>Acids and Bases</td>
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<tr>
<td>Exam I</td>
<td><strong>Wednesday September 26</strong></td>
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<tr>
<td>16</td>
<td>Aqueous Ionic Equilibria</td>
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<td>17</td>
<td>Free Energy and Thermodynamics</td>
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<td>Exam II</td>
<td><strong>Monday October 29</strong></td>
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<td>18</td>
<td>Electrochemistry</td>
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<td>24</td>
<td>Transition Elements and Coordination Chemistry</td>
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<tr>
<td>Exam III</td>
<td><strong>Monday November 26</strong></td>
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<tr>
<td>19</td>
<td>Radioactivity and Nuclear Chemistry</td>
</tr>
<tr>
<td>20</td>
<td>Organic Chemistry</td>
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<tr>
<td>Final Exam</td>
<td><strong>Monday December 17, 8:00-10:00am</strong> Room: PS 110</td>
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Lab Schedule
Come prepared. Read the assigned lab before coming to class. Start working on advanced study assignment (ASA) before coming to lab.

<table>
<thead>
<tr>
<th>Monday</th>
<th>Wednesday</th>
<th>Lab</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>71169</td>
<td>72038</td>
<td>8/20</td>
<td>Check in, Safety/Orientation, Statistics worksheet <em>(For Wednesday Section - this will be covered on 9/5).</em></td>
</tr>
</tbody>
</table>
| 8/27    | 8/29       | Ex. 4 | Chemical Kinetics: Iodination of Acetone  
|         |            |       | *Write a formal Method/Materials section*                                               |
| 9/3-NO  | 9/5 – we have lab!!  | 9/3 Monday Section – NO LAB  
| LAB     |            |       | 9/5 Wednesday Section - Statistics Worksheet.                                           |
| 9/10    | 9/12       | Ex 6  | Colorimetric Determination of Co^{2+} and Graphing in Excel  
|         |            |       | *Beware of plagiarizing the lab manual - that's cheating. Also, write a formal Results/Calculations section.* |
| 9/17    | 9/19       | Ex 7  | Determin. of Equilibrium Constant for the formation of FeSCN^{3-}                      |
| 9/24    | 9/26       | Ex 9  | pH Measurements and Determination of the Equivalent Mass and Ka of an Unknown Weak  
|         |            |       | *Write a formal Discussion/Conclusion section for Ex 9*                               |
| 10/1    | 10/3       | Ex 8  | Determination of Solubility Product: PbI_{2}                                           
|         |            |       | *Write a formal Abstract section*                                                     |
| 10/8    | 10/10      | Ex 1  | Calorimetry: Heat of Solution                                                           |
|         |            | Ex 2  | Hess’ Law: Heat of Formation MgO                                                       |
| 10/15   | 10/17      | Ex 3  | Bomb Calorimeters: Heat of Combustion.                                                 
|         |            |       | *Write a Complete Formal Report*                                                       |
| 10/22   | 10/24      | Ex 10 | Qualitative Analysis: Group I Cations                                                 |
|         |            | Ex 12 | Qualitative Analysis of Common Anions                                                  |
| 10/29   | 10/31      | Ex 11 | Qualitative Analysis: Main Group & Transition Metal Cations                           |
| 11/5    | 11/7       | Ex 13 | Electrochemical Cells                                                                 |
| 11/12   |            |       | Campus closed on Monday Nov 12  
|         |            |       | **BUT THE WEDNESDAY SECTION HAS LAB ON NOV 14**  
|         |            |       | **SEE NEXT LINE BELOW.**                                                               |
| 11/19   | 11/14      | Ex 14 | Determination of Equivalent Mass by Electrolysis                                       |
| 11/26   | 11/21      | Ex 15 | Synthesis and Characterization of Aspirin Lab                                          |
| 12/3    | 11/28      | Ex 16 | Introduction to IR and NMR Spectroscopy and Check out                                 |
| 12/10   | 12/12 – NO LAB | 12/10 – All are invited. Last time for questions before Final Exam                    |
SOME ADVICE ON HOW TO SUCCEED IN GENERAL CHEMISTRY:

My goal is that everyone in this course performs to the best of his or her ability. However, you should be aware that the primary responsibility for your performance is YOURS. “Chemistry is not a spectator sport.” You need to be an active participant by attending all lectures and labs, taking notes, reading the applicable textbook chapters, working all homework problems in a timely fashion, and asking questions. A considerable amount of effort is made to provide you with the opportunity for individual attention, guidance and assistance. It is your responsibility to take advantage of these opportunities. Practical tips and suggested study habits are given below. These helpful tips have been tried and tested; many successful general chemistry students have applied these habits and largely credit these for their success.

1. **Ask questions** if you do not understand the direction or main points in lecture. The odds are good that what you don’t understand wasn’t clear to at least half the other students, either. Thoughtful discussion in class of errors or original ideas is encouraged.

2. **Practice** working chemistry problems EVERY DAY. The only way to become familiar and comfortable with the concepts, language, and methods used in chemistry is to practice. Chemistry is similar to learning a foreign language. You cannot become fluent unless you practice. A good method is to work 2-3 chemistry homework problems or suggested problems each day.

3. **Read ahead** before each lecture to gain a preliminary understanding of material coming up in the lecture; use the lecture to solidify your understanding, to clear up the things you were uncertain about, and to help you outline the most important things to know. Practice the material as it comes up in the lectures, using all the problems and exercises you need for thorough understanding.

4. It is often useful to work with other people, and there is no question that discussion is an excellent way to clarify material. However, if you work a problem with someone else, or if you just look at someone else’s answer, don’t fool yourself into thinking that you understand the subject or will be able to solve the next problem. My very strong advice in this context is the following: For every problem you work with someone else, work another similar problem on your own. Work problems with the goal of thoroughly understanding what is involved, not just to get an answer.

5. Numerical answers will be given to some of the problems. These are provided to let you know that you have solved the problem correctly. Avoid the temptation to start with the answer and see how you might work the problem to get that answer. Such a process is useless in terms of acquiring knowledge, and at times that matter (such as on exams and in real life) the answers will not be given.

6. The major cause of difficulty for many college students is the failure to budget time. Quality time is of the essence, long hours spinning your wheels is a very poor investment. Please allow us to put you on track by early attendance at office hours.

7. Do not cram for examinations. It is very difficult to cram for a chemistry exam and do well. In order to succeed in chemistry you must be adept in solving problems. One night of cramming will not make you a skilled problem solver. Only weeks of dedicated practice will allow you to achieve your goal.

**DISCLAIMER:** Anything on this syllabus is subject to change at your instructor’s discretion. Note that this syllabus is only for Chem 1B Sections 72038 and 70892.
1. **Register for MasteringChemistry**

These instructions are accurate at time of printing. Your experience may vary slightly.

Go to [www.masteringchemistry.com](http://www.masteringchemistry.com) and click Students under Register.

- To register using the Student Access located inside the MasteringChemistry Student Access Kit, click **Yes, I have an access code**.
- If you do not have an access code, choose “No, I need to purchase access online.” Choose the correct textbook (for Chem 1A: Chemistry A Molecular Approach, Tro, 2nd edition, ISBN 0-321-65178-2)

**License Agreement and Privacy Policy**

- Click I Accept to indicate that you have read and agree to both the license agreement and privacy policy.

**Do you have a Pearson Education account?**

- **Yes** - Enter your established Login Name and Password, even if your access to another Pearson Education website has expired. If you provide this, you may be asked to create a more secure password later.
- **No** - You will be asked to specify a Login Name and Password, and then to confirm your password by retying it.
- **Not Sure** - Enter the email address associated with your Pearson Education student account and click Search.

**Access Code**

Locate your access code from the textbook package you bought or through some other means. Type your six–part student access code, one part in each box. Don’t type the dashes. _Once you register for this site, you will not need this access code any longer._

**Personal Information and Security Information**

- Enter your first and last name, as well as a valid email address that you check regularly. _Your registration confirmation will be sent to the email address you provide._
- Enter the requested information to help identify your school location.
- Select a security question and enter the answer. _This question is used in the event that you contact us and your identity must be confirmed._

Click Next (only once!) to submit your registration for processing, which takes just a few moments.

**Confirmation & Summary**

A confirmation page informs you of the site(s) you have access to and that you will be receiving a confirmation email. _The confirmation email contains your login name and password for your reference._ Your subscription to MasteringChemistry is good for 24 months from the time you first register.

2. **Log in to MasteringChemistry**

Log in to MasteringChemistry as follows:

- _If you are continuing from the Confirmation & Summary page (from last step in previous section):_ Click Log In Now.
- _If you have left the Confirmation & Summary page, you can log in later:_ Go to [www.masteringchemistry.com](http://www.masteringchemistry.com), enter your login name and password, and then click Log In.

3. **Enroll in your instructor’s MasteringChemistry course**

If your instructor informs you that you will be using MasteringChemistry for assignments, you need to log in to MasteringChemistry and enter your instructor specified Course ID and (optional) Student ID. Doing so enrolls you in your instructor’s MasteringChemistry course so that you can view class assignments. (_If you don’t have the Course ID information yet: You can enroll later by logging in and clicking Join Course._)

**Join Course**

- Enter your instructor–provided Course ID. _The Course ID field is not case-sensitive, so you can enter either lowercase or uppercase characters._ Make sure you type in the exact Course ID the professor gave you so that you enroll in the correct online course. If you get an error message, please confirm with your instructor that he or she has enabled student enrollment for this course. **Course ID:** MCCRISOSTOMO79934 Click Save and OK to view your MasteringChemistry course home page, welcoming you to the online course. The next time you log in, you will go directly to your home page for the course.
- **To view your instructor’s assignments:** Click Assignment List on the left.
- **To view self-study resources:** Click Study Area on the left.