## **Valencia College West Science Department**

## **Online - General Chemistry with Qualitative Analysis II**

**Professor**

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**Course**

Name: General Chemistry with Qualitative Analysis II

Description: Continuation of CHM 1045C / CHM 1045H dealing mainly with equilibrium theory, thermodynamics, chemical kinetics and electrochemistry. Laboratory illustrates principles of ionic equilibria within framework of qualitative analysis

Prerequisites: CHM 1045C / CHM 1045H with a grade of C or better.

Co-requisites: None

**Educational Materials**

Text: Chemistry: The Molecular Nature of Matter and Change 9th Edition W/ 2yr Access Code Connect. By Martin Silberberg and Patricia Amateis. ISBN13: 9781266115462

Optional Openstax: <https://openstax.org/details/books/chemistry-2e>

Optional: Chemistry A Molecular Approach, Custom Ed. for Valencia College, Vol 2 (based on the 3rd edition of the book with same title by Nivaldo J. Tro): ISBN: ISBN without MyLab/Mastering: 126939648X

Other: Scientific Calculator, ability to access internet, lecture notebook (loose leaf type, 2-3” inch), PowerPoint Slides

**Assessment Process**

Hour Exams (3) 39% A = >89.5

## Pop-Quizzes (7) 12% B = 79.5-89.4

Cumulative Quiz 5% C = 69.5-79.4

Final Exam 13% D = 59.5-69.4

Laboratories 23% F = 0-59.4

Homework 8%

**Attendance**

Regular class participation are the most important factors that promote success in college. Being an online course, attendance is determined by weekly participation in assignments. Student absences which exceed **ten percent** of the total amount of class meeting times including labs may lead to a withdrawal from the course without prior notice. I will be trying to organize live online sessions with the class to go over material and answer questions using **Zoom**.

**Available Resources**

Copies of the PowerPoint slides will be made available online. Pre-recorded lectures are planned to be made available per chapter. Weekly meetings for chapter review and questions will be available during the week. Online tutoring should be available throughout the semester by the school. Know that Valencia does offer Microsoft 365, which has all the common Microsoft software for free through your Atlas account. Also useful is Microsoft Lens, which allows you to scan pages into pdf. files.

**Policies**

Make-Up: There will be NO make-up quizzes, exams, or late homework without proper reasoning. Please communicate with me as early as possible so that any issues can be resolved in a timely manner.

**Cheating**: This is a more difficult variable to control in an online setting. Since all work is essentially take-home, use of outside material is allowed. This however must then be balanced with strictly timed exams.

**Copyright Policy:** Any and all material that is released from this course is to not be redistributed to others outside of our class section without my permission.  Those who do so may be subject to, among other processes, the Student Code of Conduct and/or academic penalties. This is strictly prohibited, and any evidence of misconduct can result in an “F” in the course.  Even if the course has ended, if evidence of misconduct was produced later, a change of grade may be submitted by me to the institution.

**Online Proctoring:** Online assessments will need the browser extension Honorlock to complete. Examinations and quizzes are open note but not from the internet. You are permitted to use any of your physical notes.When starting an assignment, the prompt for Honorlock needs to come up. If Honorlock is down and does not appear, taking the assessment without this application working properly will not be counted as credit. Please contact me ASAP if Honorlock is down if you need to reschedule your time to take something.

**Exams:** Exams will consist of two portions. There will be a multiple-choice section which is done through canvas, this is followed by a short answer portion. Both will be timed. Late submissions may suffer penalties with each additional minute.

**Final Exam**: The final examination in this course is MANDATORY and cumulative.  Any student not completing the exam will receive a grade of F for the course. The format for the Final is like that of an exam.

**Extra Credit**: This is optional depending on if instructor deems necessary.

**Withdrawal**: Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals), a student who withdraws from class before the established deadline for a particular term will receive a grade of “W.”  A student is not permitted to withdraw after the withdrawal deadline.  I do not withdraw students after the withdrawal deadline.

**Students with Disabilities**: Students with disabilities who qualify for academic accommodations must provide a letter from the Office of Students with Disabilities (OSD) and discuss specific needs with the instructor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities.

**Academic Honesty**: Plagiarism is defined as claiming as your own a paper, report, article, or speech which in whole or in part was prepared by someone other than yourself. Cheating on an exam or copying someone else’s laboratory report is also a violation of this policy. A violation of this policy can result in failure of an assignment, the entire course, or your current status as an active student. Each student is expected to be informed and compliant with the college policy on academic honesty as stated in the Student Handbook.

**Expected Student Conduct**: Valencia College is dedicated not only to the advancement of knowledge and learning but is concerned with the development of responsible personal and social conduct. By enrolling at Valencia College, a student assumes the responsibility for becoming familiar with and abiding the general rules of conduct. The primary responsibility for managing the classroom environment rests with the faculty. Students who engage in any prohibited or unlawful acts that result in disruption of a class may be directed by the faculty to leave the class. Violation of any classroom or Valencia’s rules may lead to disciplinary action up to and including expulsion from Valencia. Disciplinary action could include being withdrawn from class, disciplinary warning, probation, suspension, expulsion, or other appropriate and authorized actions. You will find the Student Code of Conduct in the current Valencia Student Handbook.

**College**: A full description of all college policies can be found in the college catalog at <http://www.valenciacollege.edu/catalog/>; Policy manual at <http://www.valenciacollege.edu/generalcounsel/>; and the Student Handbook at <http://valenciacollege.edu/studentdev/campusinformationservices.cfm>

Valencia Student Core Competencies: Valencia faculties have defined four interrelated competencies (Think, Value, Communicate, and Act) that prepare students to succeed in the world community. These competencies are outlined in the college catalog. In this course, through lecture and discussion, group work, and other learning activities, you will further develop your mastery of those competencies.

**Computer/Equipment Use**: Use of computers in the Business, IT, and Public Service classrooms at Valencia College is restricted to those activities designated by the instructor to enhance the class materials. Any other use is strictly forbidden. Inappropriate use includes, but is not limited to:

* Use of computer to send Email or access Internet sites not specifically assigned in class.
* Use of computer for job, internship, or other activities not assigned in class.
* Modifying any hardware or software system configuration or setting.
* Activities not in accordance with the Valencia Student Code of Conduct.

Use of computers in the departmental open lab is limited to those activities involved with preparing homework or coursework in this department and is subject to the same restriction as listed above.

Computer use is remotely monitored; any student using computers inappropriately may be subject to dismissal from class or banishment from the lab. Subsequent offense may be sent to the campus administration for further disciplinary action.

**Student Assistance Program**: Valencia College is interested in making sure all our students have a rewarding and successful college experience.  To that purpose, Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work.  BayCare Behavioral Health Student Assistance Program (SAP) services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. Free face-to-face counseling is also available.

**Additional Helpful resources:**

**Enrollment services:**

* Call: 407-582-1507
* Email: [enrollment@valenciacollege.edu](mailto:enrollment@valenciacollege.edu)
* Hours
  + Mon-Thurs: 8 AM - 8 PM
  + Fri: 8 AM - 5 PM
  + Sat and Sun: - 10 AM - 3 PM

**Academic Advising:**

* Call: 407-582-1507
* Email: [advising@valenciacollege.edu](mailto:advising@valenciacollege.edu)
* Link to “chat” [https://valenciacollege.edu/students/advising-counseling/](https://nam01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fvalenciacollege.edu%2Fstudents%2Fadvising-counseling%2F&data=02%7C01%7Cstang%40valenciacollege.edu%7C0e9ecba7b6b34d70bb8c08d7ea21b23f%7C0e8866953d1741a88544135b0a92a47c%7C1%7C0%7C637235302769636738&sdata=V4iqV8DtYpyANFcw9uFQkTXZCu46PQrtDN7%2Fe9qQoMo%3D&reserved=0)
* Hours
  + Mon-Fri: 7 AM – 10 PM
  + Sat and Sun: - 10 AM - 10 PM

**Virtual Answer Center:**

·       M-F 7a-10p

·       Sat/Sun 10a-10p

·       [Zoom Link to Virtual Answer Center](https://nam01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fvalenciacollege.zoom.us%2Fj%2F114067187%3Fstatus%3Dsuccess&data=02%7C01%7Cstang%40valenciacollege.edu%7C0e9ecba7b6b34d70bb8c08d7ea21b23f%7C0e8866953d1741a88544135b0a92a47c%7C1%7C0%7C637235302769636738&sdata=c8Bsrd6CJxvZDFG6DlpIg3lu4CN6xFnqOA8VW%2By4K8w%3D&reserved=0)

·       [Website](https://nam01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fvalenciacollege.edu%2Fstudents%2Fanswer-center%2F&data=02%7C01%7Cstang%40valenciacollege.edu%7C0e9ecba7b6b34d70bb8c08d7ea21b23f%7C0e8866953d1741a88544135b0a92a47c%7C1%7C0%7C637235302769646739&sdata=cBlNJeyzfWNNuIkZykrTvAPtk5HbBBjVX7CEedtrF%2Fg%3D&reserved=0) for Virtual Answer Center

**Counseling Services:**

·       M-Th 8a-8p

·       Friday 8a-5p

·       Sat/Sun 10a-3p

**Financial Aid:**

Contact [FinAidOffice@valenciacollege.edu](mailto:FinAidOffice@valenciacollege.edu) for their financial aid questions, as well as for potential assistance with financial support

**Learning Outcomes**

**Students should become proficient with chemistry concepts as well as skills to complete common chemistry problems. Topics which will be taught are listed but not limited;**

1. **Chemical Kinetics**
2. **Equilibrium**
3. **Thermodynamics**
4. **Acid and Bases**
5. **Electrochemistry**

**Important Dates**

Drop/Refund deadline Aug 31, 2020

Withdrawal deadline to receive a “W” Oct 30, 2020

Final Exam on Dec 7th – 11th

**Tentative Schedule of Classes**

|  |  |  |
| --- | --- | --- |
| Week # | Date (Week of) | Activity |
| 1 | 8/24 | Chapter 12: Intermolecular Forces |
| 2 | 8/31 | Chapter 13: The Properties of Mixtures |
| 3 | 9/7 | Review |
| 4 | 9/14 | **Test 1** |
| 5 | 9/21 | Chapter 16: Kinetics |
| 6 | 9/28 | Chapter 17: Equilibrium |
| 7 | 10/5 | Review |
| 8 | 10/12 | **Test 2** |
| 9 | 10/19 | Chapter 18: Acid-Base Equilibria |
| 10 | 10/26 | Chapter 19: Ionic Equilibria in Aqueous Soln. |
| 11 | 11/2 | Review |
| 12 | 11/9 | **Test 3** |
| 13 | 11/16 | Chapter 20: Thermodynamics |
| 14 | 11/23 | Chapter 21: Electrochemistry |
| 15 | 11/30 | Review |
| 16 | 12/7 | **Final Exam** |

**Disclaimer Statement:**This outline may be altered, at the instructor’s discretion, during the course of the term. It is the responsibility of the student to make any adjustments as announced.

**CHM 1046L**, **General Chemistry with Qualitative Analysis II Lab**

Labs will be performed using a virtual lab software called LearnSmart by McGraw-Hill. A link to this page can be found in your canvas page as one of your tabs. Registration should be free for this summer by the company, but you will need to use the Registration code given here. There are also several labs which are not using the virtual lab software as well. Instructions will be given per assignment on canvas.

Each week may have 1 to 2 lab activities due. Please use the schedule below to have a general idea of when each should be due. Labs will all be available from since the beginning of the course if you feel it possible to do them early.

Will need to acquire an access code from Mcgraw-Hill.

**Tentative Schedule of Labs**

|  |  |  |
| --- | --- | --- |
| **Week #** | **Week starting on** | **Laboratory Schedule** |
| 1 | 8/24 | Lab Safety Module |
| 2 | 8/31 | **Lab Skills\*** |
| 3 | 9/7 | Exp.1 Evap. and IM Attractions |
| 4 | 9/14 | Colligative\* |
| 5 | 9/21 | Kinetics\* conc & Kinetics\* temp |
| 6 | 9/28 | Exp. 5 A Rate Law & Act. E Corrections to Prelab:**4c**: 5.11; **7**: x-axis on graph: 1/T(K) x 10-3 |
| 7 | 10/5 | Equilibrium\* Calibration curve |
| 8 | 10/12 | Equilibrium\* Determine Kc |
| 9 | 10/19 | Buffer\* Observing a Buffer |
| 10 | 10/26 | Buffer\* Buffer Capacity |
| 11 | 11/2 | Acid/Base: Equilibrium\* |
| 12 | 11/9 | Exp. 10 Solubility Prod. Constant |
| 13 | 11/16 | Exp. 11 Thermodynamics. Dissolution of Borax |
| 14 | 11/23 | **Thanksgiving week (No Lab)** |
| 15 | 11/30 | Electrochemistry\* |
| 16 | 12/7 | No lab. Final exam week. |

**\*Starred labs mean those which are done in LearnSmart**

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