## **Valencia College West Science Department**

## **CHM 1045C General Chemistry with Qualitative Analysis I - Face-to-Face**

##### See starting page 5 for more info on labs.

**Professor**

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Office Hours: Check for Current schedule

**Course**

Name: General Chemistry with Qualitative Analysis I

Description: CHM1045 presents a study of the basic principles of chemistry including chemical reactivity, atomic structure, chemical bonding, molecular geometry, periodicity, stoichiometry, and kinetic-molecular treatment of gases. The course consists of two parts: a laboratory and the class. While the class helps the students learn these main principles, the laboratory is essential in illustrating the principles discussed in the classroom.

Prerequisites: CHM 1025C or one year of high school chemistry with a grade of C or better; and MAC 1102 or MAC 1105 or two years of high school algebra or an appropriate score on an approved mathematics assessment.

Co-requisites: None

**Educational Materials**

Text: Chemistry A Molecular Approach, Custom Ed. for Valencia College, Vol 1 (based on the 4th edition of the book with same title by Nivaldo J. Tro): ISBN: 1-323-87320-1

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

**Assessment Process**

Hour Exams (3) 45% A = >89.5

## Pop-Quizzes (6) 12% B = 79.5-89.4

Final Exam 20% C = 69.5-79.4

Laboratories 23% D = 59.5-69.4

F = 0-59.4

**Attendance**

Regular attendance and class participation are the most important factors that promote success in college. It is wisest to attend class and be prepared for each scheduled lecture. Read each chapter before its scheduled lecture, and then come to class with appropriate questions. 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. Students are responsible for contacting the instructor if they cannot attend the class to attempt to have the absence excused. Extra credit may be given for attendance records; this does not include excused absences and is explained more in the extra credit section.

**Available Resources**

Copies of the PowerPoint slides will be made available online. These are meant as supplemental resources to facilitate multiple exposures to the material and to improve learning, not as a substitute to attending class.

**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**: Don’t do it. Do not test me. If caught, on a quiz or test the assignment grade will result in a zero. Repeated offences will then result in a failing course grade. The student will then further be sent to Dr. Bob Gessner the Dean of Science. If caught a second time the student would then receive an F for the course as well as be referred to the Dean of Students for further action.

**Final Exam**: The final examination in this course is MANDATORY.  Any student not completing the exam will receive a grade of F for the course. The exam will include a cumulative section.

**Extra Credit**: This is optional depending on if instructor deems necessary. Depending on attendance records a total of up to 1.0% extra credit points can be given at the end of the semester. Any absences for whatever reason will be calculated in giving these points. Other opportunities include survey points which will be mentioned later in the semester.

**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.

**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. **Significant figures**
2. **Stoichiometry**
3. **Physical and chemical characteristics**
4. **Atomic structure and quantum theory**
5. **Periodicity**
6. **Chemical bonding**
7. **Gas behavior**
8. **Fundamental nature of light**
9. **Molecular geometry**

**Important Dates**

Drop/Refund deadline ­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Withdrawal deadline to receive a “W” \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Final Exam on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Tentative Schedule of Classes (Fall semester Example of W Lectures)**

|  |  |
| --- | --- |
| Date | Activity |
| 8/29 | 1 & 2 |
| 9/5 | 2 & 3 |
| 9/12 | 3 |
| 9/19 | Test 1 |
| 9/26 | 3 & 4 |
| 10/3 | 4 & 5 |
| 10/10 | Test 2 |
| 10/17 | 5 & 6 |
| 10/24 | 6 & 7 |
| 10/31 | 7 & 8 |
| 11/7 | **Test 3** |
| 11/14 | 8 & 9 |
| 11/21 | **Thanksgiving (No Class)** |
| 11/28 | 9 & 10 |
| 12/5 | **Test 4** |
| 12/10 | **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 1045L**, **General Chemistry with Qualitative Analysis I Lab**

##### Building AHS 304

**Educational Materials**

Text: In House Lab Manual, Composition notebook.

Other: Scientific Calculator

**Attendance**

There will be NO make-up laboratories. Be punctual, as there will be a pre-lab discussion. If the student misses the entire pre-lab discussion, the student will not be allowed to perform the experiment that day. Students will start with (10) lab points which can be reduced with each tardiness, misconduct, incorrect lab technique, etc…

**Lab Attire**

When attending lab you must wear closed toe shoes and have lower body covered completely. If you do not you will be asked to leave and will receive a zero for the lab. Lab coats are also mandatory to perform experiments.

**Lab Assignments**

Pre-Lab Assignments (10 points each exp.): The pre-lab consists of questions which can be found near the end of each experiments procedure. This should be turned in by the start of each lab. Each experiment has one prelab.

Lab Reports and Post Labs (10 points each exp.): Lab reports will consist of an organized copy of the lab data with calculations. A final conclusion based off the lab experiment will be required along with any post lab questions. One report for each experiment. These are always due one week after the end of an experiment.

Lab Practical (35 points): A custom lab practicum will be delivered based on knowledge of lab equipment and techniques. More details will be given at a later date.

**Tentative Schedule of Labs**

|  |  |
| --- | --- |
| Date | Activity |
| 8/27 | Safety |
| 9/3 | **Labor day (No Class)** |
| 9/10 | Exp 1: Mass, Volume, and Density Week 1 |
| 9/17 | Exp 1: Mass, Volume, and Density Week 2 |
| 9/24 | Exp 3: Electrolytes and Nonelectrolytes |
| 10/1 | Exp 4: Limiting Reactant |
| 10/8 | Exp 5: Observing and Classifying Reactions |
| 10/15 | Exp 6A: Amount of Active Ingredient in Aspirin, Week 1 |
| 10/22 | Exp 6A: Amount of Active Ingredient in Aspirin, Week 2 |
| 10/29 | Exp 7: Analysis of a Gaseous Product |
| 11/5 | Exp 8: Calorimetry |
| 11/12 | Exp 10: Dye Concentration Using UV-Vis |
| 11/19 | Thanksgiving (No Lab) |
| 11/26 | Exp 11: Molecular Modeling |
| 12/3 | Custom Lab Practical |
| 12/10 | Final Exam |

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