

Valencia College
Fall 2022 CHM 1046C_15618
General Chemistry with Qualitative Analysis II

*This course covers lectures and laboratory sessions.

*This course will be taught in mixed mode for the semester of Fall 2022.

*Lecture will be delivered online via Canvas; Lab session will be delivered on site at West Campus. See page 10 and 11 for more info on labs.

Professor

Name: Dr. Maoying”Alice” Song
E-mail: msong@valenciacollege.edu
Office: AHS-307 or Virtual
Zoom Room ID: 779 321 5359
Office Hours: Drop in (virtual)
Mon 12-2 pm via Zoom
Appointment for 1:1 meeting with Prof. Song per request
Wed 12-1pm via Calendly
Thu 12-1pm via Calendly

Course

Name: General Chemistry with Qualitative Analysis II

CRN 15618 (Term 202310)

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

Textbook:

- ◆ **[Required]** Chemistry 2e on OpenStax: <https://openstax.org/details/books/chemistry-2e>
A free PDF copy is accessible to be downloaded
A paid Print copy is available to be ordered through Amazon (optional, if you prefer to have a hard copy, you have the option to pay to get it)
or
- ◆ **[Optional]** Chemistry: The Molecular Nature of Matter and Change 9th Edition W/ 2yr Access Code Connect. By Martin Silberberg and Patricia Amateis. ISBN13: 9781266115462 (eBook will be available when you get an access code from McGraw-Hill)

Lab:

- ◆ **[Required]** CHM 1046 Laboratory Manual, Lake Nona-West Campus, by J. A. Beran
- ◆ **[Required]** Composition lab notebook, Scientific calculator.
- ◆ **[Required]** Long sleeve lab coat, closed toe shoes.

Computer and Internet required:

- ◆ A reliable computer with access to internet is required for this course.

Valencia College is lending out laptops and Hot Spots for students who need it on a First Come – First Serve basis.

Link for Student Laptop Checkouts: <https://cdn.valenciacollege.edu/apps/laptop-checkout/index.php>

Students can also use the following email laptops@valenciacollege.edu to request a Valencia laptop.

Webcam required:

- ◆ LOGITECH C270 Webcam, ISBN 10598252, recommended
- ◆ Built-in camera on your computer (laptop or desktop), acceptable

Other:

- ◆ Scientific calculator (must have for quizzes, assignments and lab work)
- ◆ Access to Canvas for lecture materials and lab quizzes or assignments.

Assessment Process

◆ Three exams (3 x 100 pts)	300 pts	30.00%
◆ 1 Comprehensive Final Exam	200 pts	20.00%
◆ Homework and quizzes	200 pts	20.00%
◆ Laboratory	300 pts	30.00%
		Total = 1000 pts

Final Grade: A = 90.00-100.00%; B = 80.00-89.99%; C = 70.00-79.99%; D = 60.00-69.99%; F = < 60.00%

(Note, Extra credits may add to the final grades for attendance and other qualified academic activities)

Assessment for this course is based on your overall accumulated points, *There will be NO CURVE for any test (lecture assignments, quizzes, tests or lab assignments) or overall accumulated score.*

Attendance

Regular attendance and class participation are the most important factors that promote success in college. Attendance for online lecture session will be counted as the completion of assignments by the due date. If the student miss or submit late for one assignment, the attendance will be counted as absence or late for the day assignment is due. Read each chapter during the week as its module is delivered on Canvas, view lecture resources and complete corresponding assignments on time. Students are responsible for contacting the instructor if they cannot complete their assignment on time 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.

Students will be dropped as a no-show **after the Drop deadline (Aug 29, 2022) and during the No Show period** if they do not complete the first week assignment or have issue with their tuition payment.

Student should not expect that just logging into the course on Canvas will count as attendance.

Students taking online or mixed mode courses at Valencia must have a current Florida address as their primary address in the Valencia system.

Lab attendance will be documented as your presence in lab on campus during lab meeting time. If you arrive more than 5 minutes after lab start time, it is considered as tardy. If you don't come to the lab at all, your attendance for that lab is absent. Professor will have introduction and demo at the beginning of the lab meeting, if you miss it, you are not allowed to carry out lab experiment on that day.

Available Course Resources

Course Resources from Professor: Copies of the PowerPoint slides of lecture notes will be made available online. Pre-recorded lecture videos are planned to be made available per chapter. **Zoom** recording for course orientation will be available in the first week of the semester. Study guide with chapter review and questions will be available during the week for the exam.

Valencia's Online Tutoring Service: To get started, read [General Guide](#) for online tutoring, then click on the link below to self-enroll in the tutoring courses in Canvas. This is where students will access the links to live tutoring (via Zoom), as well as the schedule of tutors, times, and services. <https://libguides.valenciacollege.edu/distancetutoring>

Microsoft Office Resources: 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.

Proctored Exam Requirement

This course utilizes Honorlock, an online exam proctoring service, to promote academic integrity during online testing. You do not need to create an account, download software, or schedule an appointment in advance. Honorlock is available 24/7. After you verify your identity and scan your

room, you can begin your exam. Honorlock will record you via webcam, as well as record your screen activity. Honorlock's system also includes a process that can detect inappropriate search-engine use, while protecting the privacy of your personal information. The recorded information will be subject to the protection of the College's policy on Student Records.

To take an online exam, you will need:

- A laptop or desktop computer with a microphone (not a tablet or phone)
- A webcam
- Reliable Internet connection
- Photo identification in the form of a Valencia-issued student ID card or government-issued ID card (i.e. driver's license, passport)
- [Google Chrome](#)

Honorlock support is available 24/7/365. Support access is built into Honorlock in real-time.

If you encounter any issues during an exam, you can contact support by live chat within the Honorlock window in Canvas, by phone (855-828-4004), and/or by email at support@honorlock.com. For answers to common questions on online proctoring, visit the [Student FAQ Link](#) or [Honorlock's Student Information](#) page.

Health and Safety Protocols

- **Vaccines** are strongly recommended for everyone who is eligible to receive one.
 - More information on vaccines can be found [here](#).
 - Inform yourself about vaccine safety with this excellent [libguide](#) created by Valencia librarians.
- **Masks** are optional indoors on Valencia campuses. Valencia has ordered tens of thousands of masks which will be available in classrooms, building entrances, and other easily accessible locations. We are confident that when asked, most individuals will wear a mask to keep others healthy – and ask that you model the way by wearing a mask indoors.
- **Cleaning and Sanitization** protocols are robust and in place. The facilities team has installed over 2,000 hand sanitizer dispensers and continues to [implement cleaning protocols](#) to keep our facilities clean. More information about air quality and ventilation can be found [here](#).
- **COVID illness reporting** If you are not feeling well, have been in close contact with someone who is COVID positive, or have a positive COVID diagnosis, **do not come to the campus** and immediately contact your professor.

Policies

Course Communication: Students can communicate with professor via Zoom live session offered by the instructor, through the contact information and office hours on page 1 of the syllabus.

Valencia College is committed to providing each student a quality educational experience. Professors have set high standards of instruction for themselves and for students. If a student has a problem in a class, the first step is to talk to their instructor. If the student is still dissatisfied, they may talk with the academic dean of the division for their class. We will work together to resolve any issues that arise.

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

Cheating: 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 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 100 extra credit points can be given at the end of the semester. Any absences for whatever reason will be calculated in giving these points. Students who complete Student Feedback on Instruction (SFI) survey by the closing date and inform professor of their completion will receive 10 bonus points to their final grade. Students have opportunity to earn bonus points through each exam, details will be provided with exams.

Withdrawal: Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals), A student who withdraws from class before the **withdrawal deadline of Oct. 28, 2022** will receive a grade of “W.” A faculty member is permitted to withdraw a student from the faculty member's class up to the beginning of the final exam period, for violation of the faculty member's attendance policy, as published in the faculty member's syllabus. A student is not permitted to withdraw from this class after the withdrawal deadline; if you remain in the class after the withdrawal deadline, you can only receive a grade of A, B, C, D, F or I. An I grade will only be assigned under extraordinary circumstances that occur near the end of the semester. If you receive an I, the work missed must be made up during the following semester, at which time you will get an A, B,C,D or F. Failure to make up the work during the following semester will result in you getting a grade of F in the course. Any student who withdraws from this class during a third or subsequent attempt in this course will be assigned a grade of “F.”

I will not withdraw any student for any reason; it is the responsibility of the student to withdraw themselves before the withdrawal deadline and to be aware of the date of the withdrawal deadline and the influence on their financial aid or education cost with withdrawal.

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.

Students Lecture Recording: Students may attempt to record classroom lectures, but may not record class discussions, labs, clinicals, or student speeches or activities. Recorders may not record other students in a way that personally identifies them and cannot block other students from seeing the professor or otherwise disrupt the class. Students cannot share such recordings with anyone without written permission from their professor, dean or other authorities at Valencia.

College Resources: A full description of all college policies can be found in the [College Catalog](#), [Policy Manual](#) and the [Student Handbook](#).

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.

Students must use a computer with reliable internet access for online courses because excuses or failure to complete assessments due to computer error will not be permitted.

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 College Resources

Learning Support Services:

- Valencia provides students with academic support through distance tutoring, face to face tutoring at the campuses, writing consultations, library services, and resources.
- Tutoring is offered in most academic disciplines including math, science, foreign languages, English for academic purposes (EAP), computer programming and writing assistance for any course.
- Assistance with library research can be accessed online through Atlas or the tutoring [LibGuide](#).
- Brainfuse is our new 24/7 online tutoring and learning hub, which is available to all of Valencia's students. This service is best used as a back-up to Valencia's Distance Tutoring service, not as a replacement. [Brainfuse](#) is accessible through Canvas.
- [Smartinking](#) is an online on-demand student support site.
- Valencia College offers a variety of [SkillShops](#): short seminars covering a variety of topics which deal with student success, goals and purpose.

Enrollment services:

- Call: 407-582-1507
- Email: 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
- Link to "chat" <https://valenciacollege.edu/students/advising-counseling/>

- 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](#)
- [Website](#) for Virtual Answer Center

Counseling Services:

- M-Th 8am-8pm
- Friday 8am-5pm
- Sat/Sun 10am-3pm

Financial Aid:

Contact 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: August 29, 2022

Labor Day: September 05, 2022 No classes

Withdrawal deadline to receive a “W” is October 28, 2022

Veteran’s Day: November 11, 2022, college closed

Thanksgiving Holiday: November 23-27, 2022, college closed

Final Exam: the week of December 05-11, 2022

Tentative Schedule of Classes

Week	Date(week of)	Activity
1	Aug 22 - Aug 28	Course Orientation
2	Aug 29 - Sep 4	Chapter 10: Liquids and Solids (Intermolecular Forces)
3	Sep 5 - Sep 11	Chapter 11: Solutions and Colloids
4	Sep 12 - Sep 18	Exam 1 CH 10-11 Chapter Review/Study Guide
5	Sep 19 - Sep 25	Chapter 12: Kinetics
6	Sep 26 - Oct 2	Chapter 13: Fundamental Equilibrium Concepts
7	Oct 3 - Oct 9	Exam 2 CH 12-13 Chapter Review/Study Guide
8	Oct 10 - Oct 16	Chapter 14: Acid-Base Equilibria
9	Oct 17 - Oct 23	Chapter 15: Equilibria of Other Reaction Classes
10	Oct 24 - Oct 30	Chapter Review/Study Guide
11	Oct 31 - Nov 6	Exam 3 CH 14-15
12	Nov 7 - Nov 13	Chapter 16: Thermodynamics
13	Nov 14 - Nov 22	Chapter 17: Electrochemistry
14	Nov 23 - Nov 27	No class, Thanksgiving week
15	Nov 28 – Dec 4	Review and Study Guide for Final
16	Dec 5 - Dec 11	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 1046 Lab, General Chemistry with Qualitative Analysis II
R 5:30pm – 8:15 pm West Campus AHS-309
(Address, 1800 S Kirkman Rd, Orlando, FL 32811)

Educational Materials

- ◆ [Required] CHM 1046 Laboratory Manual, Lake Nona-West Campus, by J. A. Beran
- ◆ [Required] Composition lab notebook, scientific calculator.
- ◆ [Required] Long sleeve lab coat, closed toe shoes, long pants.

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.

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, lab practical and lab assignment will be counted as 18 points totally for each experiment.

Pre-Lab Assignments (5 points each exp.): The pre-lab quizzes for each experiment will be available on Canvas, usually due on the day before the lab meeting.

Lab Procedure and Data (5 points each exp.): Each student is required to have at least a composition notebook for laboratory experiments. Purpose of the notebook is to mainly write down a more concise version of the experimental procedure as well as a place to write necessary preliminary information and measured lab data. This should be written in **pen**. Pictures, tables, etc. are expected to be written here. Lab notebooks are checked during each experiment. Every lab day will have a notebook check. More on the format will be discussed on the first lab day.

Lab Reports and Post Labs (8 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 on Sunday of the lab week.

Lab Safety Quiz will be counted as 14 points.

Lab Practical Exam will be counted as 70 points.

Tentative Schedule of Labs

Week	Date(week of)	Activity
1	Aug 22 - 28	Lab Orientation and Safety
2	Aug 29 - Sep 4	Dry Lab 4 AND Exp. 37: Qual: Common Anions
3	Sep 5 - 11	Experiment Handout 1 Intermolecular Forces
4	Sep 12 - 18	Exp. 14: Molar Mass of a Solid AND Experiment Handout 2**
5	Sep 19 - 25	Exp.23: Factors Affecting Reaction Rates
6	Sep 26 - Oct 2	Exp. 24 Rate Law and Activation Energy
7	Oct 3 - 9	Exp.34: An Equilibrium Constant AND Tutorial Handout 1 Creating a Linear Graph on Excel**
8	Oct 10 - 16	Exp. 16: LeChatelier's Principle; Buffers
9	Oct 17 - 23	Exp. 6: Acids, Bases and Salts (Review Appendix B and Appendix E)
10	Oct 24 - 30	Exp. 18: Potentiometric Analysis AND Experiment Handout 3**
11	Oct 31 - Nov 6	Exp. 22: Molar Solubility, Common-Ion Effect AND Experiment Handout 4**
12	Nov 7 - 13	Exp. 26: Thermodynamics of the Dissolution of Borax
13	Nov 14 - 22	Experiment Handout Experiment 5: Electrolysis, the Faraday K, and Av.'s Number**
14	Nov 23 - 27	<i>No Labs: Thanksgiving Holiday</i>
15	Nov 28 - Dec 4	Lab Practical (Experiment Handout 6).
16	Dec 5 - 11	<i>No lab. FINAL EXAMS</i>

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