

Valencia College West Science Department
Spring 2022 CHM 1046C_24271
General Chemistry with Qualitative Analysis II

*This course covers lectures and laboratory sessions. See page 9 for more info on labs.

*This course will be taught online for the semester of Spring 2022.

Professor

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Office: Virtual
Zoom Room ID: 779 321 5359
Office Phone: (407)582-7382
Office Hours: Drop in
Mon 12-2 pm via [Zoom](#)
Appointment for 1:1 meeting with Prof. Song per request
Wed 12-1pm via [Calendly](#)
Thu 12-2pm via [Calendly](#)
Fri 12-1pm via [Calendly](#)

Course

Name: General Chemistry with Qualitative Analysis II
CRN 24271 (Term 202220)
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:

- ◆ 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)
or
- ◆ 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)

Lab:

- ◆ Labs will be performed using a virtual lab by McGraw-Hill.
- ◆ Will need to acquire an access code from McGraw-Hill.

Other:

- ◆ Scientific calculator (must have for quizzes, assignments and lab work)
- ◆ Access to internet and webcam (either integrated in your computer or a separate camera connected to your computer).
- ◆ Access to lecture slides and additional materials.

Assessment Process

◆ Three exams (3 x 100 pts)	300 pts	33.33%
◆ 1 Comprehensive Final Exam	200 pts	22.22%
◆ Homework and quizzes	200 pts	22.22%
◆ Laboratory	200 pts	22.22%
	Total = 900 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 course 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 (Jan. 18, 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 courses at Valencia must have a current Florida address as their primary address in the Valencia system.

Available Course Resources

Course Resources from Professor: Copies of the PowerPoint slides will be made available online. Pre-recorded lecture videos are planned to be made available per chapter. **Zoom** live sessions for course orientation will be available in the first week of the semester. **Zoom** meetings for 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

LockDown Browser Requirement

This course requires the use of LockDown Browser for online exams. Watch this video to get a basic understanding of LockDown Browser:

<https://www.respondus.com/products/lockdown-browser/student-movie.shtml> (Links to an external site.)

Download Instructions

Download and install LockDown Browser from this link:

<https://download.respondus.com/lockdown/download.php?id=544314337> (Links to an external site.)

Once Installed

- Start LockDown Browser
- Log in to Canvas
- Navigate to the quiz

Note: You won't be able to access a quiz that requires LockDown Browser with a standard web browser. If this is tried, an error message will indicate that the test requires the use of LockDown Browser. Simply start LockDown Browser and navigate back to the exam to continue.

Health and Safety Protocols

- **Vaccines** are strongly recommended for everyone who is eligible to receive one. Valencia is partnering with the state and local health departments to provide over 70 on-campus vaccine clinics between now and the end of September. The clinics

are open to anyone (students, families, community members) and provide the vaccine at no charge.

- More information on vaccines can be found [here](#).
- Inform yourself about vaccine safety with this excellent [libguide](#) created by Valencia librarians.
- **Masks** are expected 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 the COVID case management team at COVIDillness@valenciacollege.edu for support.

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 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 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 attend optional Zoom lecture for >80% will receive 10 bonus points to their final grade. 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 Mar. 25, 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

Martin Luther King Day: January 17, 2022 No classes

Drop/Refund Deadline: January 18, 2022

Learning Day: February 11, 2022 No classes

Spring Break: March 07-13, 2022 No classes

Withdrawal deadline to receive a "W" is March 25, 2022

Final Exam: the week of April 25-May 01, 2022

Tentative Schedule of Classes

Week	Date(week of)	Activity
1	Jan 10	Course Orientation
2	Jan 17	Chapter 12: Intermolecular Forces
3	Jan 24	Chapter 13: The Properties of Mixtures
4	Jan 31	Exam 1 CH 12-13 Chapter Review/Study Guide
5	Feb 07	Chapter 16: Kinetics
6	Feb 14	Chapter 17: Equilibrium
7	Feb 21	Exam 2 CH 16-17 Chapter Review/Study Guide
8	Feb 28	Chapter 18: Acid-Base Equilibria
9	Mar 07	No class, Spring break
10	Mar 14	Chapter 19: Ionic Equilibria in Aqueous Soln.
11	Mar 21	Chapter Review/Study Guide
12	Mar 28	Exam 3 CH 18-19
13	Apr 04	Chapter 20: Thermodynamics
14	Apr 11	Chapter 21: Electrochemistry
15	Apr 18	Review and Study Guide for Final
16	Apr 25	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

Labs will be performed using a virtual lab software by McGraw-Hill. A link to McGraw Hill connect page can be found among navigation tabs in the course shell for CHM 1046C-202220. Registration should be free with McGraw Hill with a given registration code. There are also several labs which are not using the virtual lab software as well. Instructions will be given per assignment on Canvas.

There are ten lab experiments to be carried out for this course. Each week may have one lab activity due. Some labs can be completed in two weeks. Please review the following tentative schedule of labs to plan ahead.

Students taking this course will need to acquire an access code from McGraw-Hill to get access to virtual labs.

Pre-lab, virtual lab practical and lab assignment will be counted as 20 points totally for each experiment.

Tentative Schedule of Labs

Week	Date(week of)	Exp #	Experiment Title
1	Jan 10	0	Lab Safety Module
2	Jan 17	1	Evap. and Intermolecular Attractions
3	Jan 24	2	Colligative*
4	Jan 31	3	Kinetics* conc
5	Feb 07	--	Kinetics* temp
6	Feb 14	4	A Rate Law & Activation Energy
7	Feb 21	--	A Rate Law & Activation Energy
8	Feb 28	5	Equilibrium*
9	Mar 07	--	No Lab, Spring break
10	Mar 14	6	Buffer* Observing a Buffer
11	Mar 21	--	Buffer* Buffer Capacity
12	Mar 28	7	Acid Base Titration *
13	Apr 04	8	Solubility* Qualitative Analysis
14	Apr 11	9	Thermodynamics, Dissolution of Borax
15	Apr 18	10	Electrochemistry*
16	Apr 25	--	No lab, Final Exam week.

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LETTER FROM THE DEAN

Expectations of a Valencia College Science Student

Welcome to the Science Division of Valencia College's West Campus; we are enthused to have this opportunity to assist you in achieving your educational goals. Higher education is a privilege and an opportunity; it is your responsibility to realize that you are in control of those behaviors and actions that can enable success in this course.

From your professors, **you can expect** the following:

1. They will be prompt, courteous and respectful.
2. They will provide a professional learning environment throughout the entire scheduled instructional period.
3. They will provide an up-to-date syllabus; when changes need to be made, they will announce changes in a manner that is conveyed to all students in their class.
4. They will provide you with a course that is of necessary rigor to prepare you for the career you have chosen; because the class you are taking transfers to a four year college or university, it will be taught with the same academic expectations. The bonus of starting your education at Valencia, when compared to attending a four year college, is you will be able to get more personal attention with small class sizes and you will be able to save money; the classes are not easier.
5. They will offer time outside of class to discuss your questions.
6. They will be available to discuss your class concerns in private, outside of class time; you should try to resolve your class concerns with your professor before you try to voice your concerns with administrators.
7. They will respond to emails within 2 business days.
8. They will expect from you what they have expected from the many students who passed their classes in the past.

In return, this is **what your professor will expect from you:**

1. You will be prompt, courteous and respectful.

Prompt means you come to class on time, ready to work, with all assignments completed before you enter class or lab. It means that you have studied, that all conversations, texting and diversions come to a stop and that you are ready to contribute to a positive learning environment from the beginning of the class or lab.

Courtesy means you are polite in your attitude and behavior towards your professor and classmates.

Respectfulness means that you regard everyone's classroom experience as valuable to them, that you accept your professor's expertise and experience to create relevant course objectives and that you treat college and personal property with care.

2. You will read your syllabus; your syllabus is a contract between your professor and you. Be aware of deadlines to complete assignments on time and know your professor's

attendance policy. You will need to attend class for the full length of time allotted to your science class and lab.

3. You will be aware of Valencia College policies and procedures found in the college catalog; ignorance of policies and procedures doesn't mean they don't apply.
4. You will be serious about learning; it is your responsibility to be an active participant in your own learning. You will need to devote sufficient time to learn the material presented by your professor; for most students, this means you will need to spend at least two hours studying for every hour of instruction. Learning is an action verb; you will need to do more than sit through class and reread your notes to be successful. To succeed in higher level classes, you must retain the information, concepts and skills you will learn; this can only happen if you work at learning to make the course content a part of your long term memory. Do not cram!!
5. You will be encouraged to produce your own study guides. Most college professors do not provide study guides, but they can give you tips that will help you produce your own study guides to gain a better understanding of the course content.
6. You will be expected to participate fully in classroom activities. The work you produce must be your own; cheating in any form is not tolerated and your professor will have specific consequences, in their syllabus, which will be enforced should cheating occur.
7. You will be expected to contribute to a positive learning environment. Avoid classmates who speak negatively, or who have a negative outlook, about your class or your professor. Instead, get to know your professor during office hours; you will learn much more with a positive attitude.
8. You will be held to a high standard of maturity and responsibility. Disruptive behaviors will not be tolerated in the classroom or lab. First time disruptions will be handled by your professor and may include a request that you leave the class or lab. Very serious or repeated disruptions will be reported, to the Dean of Science and the Dean of Students, with specific consequences that can include your permanent removal from the class.

Disruptions include:

- Being noisy when arriving late to class or leaving early.
- Carrying on private conversations while the professor is talking.
- Disrespectful language, tone and mannerisms.
- Sleeping or attempting to sleep in class.
- Repeatedly asking unnecessary or irrelevant questions.

My wish is that you get the best learning value from the science classes that you are taking. With everyone abiding by the expectations in this letter, your science classes at Valencia should be the next step in achieving your academic dreams.

Dr. Robert Gessner

West Campus Dean of Science

Valencia College

LETTER FROM THE DEAN

Expectations of Academic Integrity

Welcome to the Science Division of Valencia College's West Campus; we are enthused to have this opportunity to assist you in achieving your educational goals. In working to provide you with the best learning experience at Valencia College, my expectation is that each of our faculty and students maintain the highest ethical academic standards.

From your professors, you can expect the following:

1. They will be on time to class and available during their scheduled office hours.
2. They will return graded tests, labs and other assignments when promised and within a reasonable period of time.
3. They will answer emails and phone calls within 48 business hours.
4. They will properly cite their references and resources, where applicable.

From you, we expect the following:

1. You will take your exams without referring to any books, notes, electronic devices or classmates unless you are specifically instructed that a test is open-book or collaborative.
2. You will not tell other students about test questions or answers before or during their exam and you will protect the exam from being seen by others.
3. You will avoid even the appearance of cheating by not looking in the direction of other exams, by not wearing clothing/hats/visors that hide your eyes, by keeping your belongings, other than pens, pencils and erasers away from your desktop, by going to the restroom before the exam and by asking your professor for permission and supervision if you need to retrieve another pen, pencil or eraser from your backpack or purse.
4. You will not allow anyone else to be the author of any part of your essays, lab reports or other written assignments and you will not include any materials from any sources (books, journals, other students, the internet, etc.) unless you give credit to those sources.

It is my hope that you will think about why it is important that we each show academic integrity and how cheating and plagiarism affect all of us, including those guilty of these academic crimes. Some students think that it only hurts their grade if they get caught cheating or plagiarizing, but cheaters typically lie not only to others, but to themselves. Eventually, cheaters pay a price.

- Those who cheat typically fail licensure exams, since they don't really know the material. Without a professional license, they won't be able to get employment. Would you want to be treated by a doctor who cheated in order to pass an exam that covered his or her knowledge of your disease? Also, if they falsify a patient's medical records, can you guess what can happen to them?
- Research scientists who falsify data are typically discredited and their reputations can be permanently ruined.
- Although you may think your professors have no clue when a student is cheating, usually your classmates do and some will inform your professor.
- Cheating becomes habitual. See what happens when employees cheat their employer.
- Students who let others cheat off them are not doing anyone a favor. If you are in a highly competitive field, you may ultimately be aiding your competition.

- Guess what a professor says to a student seeking a letter of recommendation when they know the student cheated or plagiarized.
- Finally, what happens to a person's self-esteem and to their reputation when they act unethically by cheating or plagiarizing?

Use the following as your guide: *“Each student is required to follow Valencia policy regarding academic honesty. All work submitted by students is expected to be the result of the student’s individual thoughts, research, and self-expression unless the assignment specifically states ‘group project.’ To get the most out of each of your classes, it is best to learn how to study for long term comprehension, not just to memorize facts. Study so you can teach others what you are learning. My motto is, “if you can’t teach what you are learning to others, you don’t really know the material.” Academic dishonesty, in the forms of cheating and plagiarism, will not be tolerated and for most of our science professors will result in a student getting a zero on a test or assignment for the first offense and then an F for the course if a student is caught cheating or plagiarizing again; at that point the Dean of Students will also be notified. Don’t throw away your dreams and your reputation by showing a lack of academic integrity. We wish you the best and want you to succeed and be proud of your accomplishments at Valencia.*

Dr. Robert Gessner

Valencia College West Campus Dean of Science