Course Syllabus

CHM1046C General Chemistry II CRN31321

Course Location

This course is offered completely online. It consists of modules to complete and assignments on Canvas. There is a virtualized laboratory component and an online "lecture" component. There will be recommended Zoom meetings to cover some of the theory (a recording will be provided for those unable to attend). The student is responsible of self-pacing and a considerable amount of self-learning will be required.

Course 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.

Course Prerequisites

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

Professor's Contact Information

Dr. Diego J. Díaz

The best way to contact me is via the Canvas Inbox tool. I will respond within one business day and often sooner! **Please note that as we all try to manage work/school and life working from home I may not be able to answer "last minute" emails sent during non-working ours.**

Other contact methods: ddiazlopez@valenciacollege.edu/407-582-1718 (The phone number is my office at Valencia's West Campus, the student must leave a voicemail for me to retrieve).

Shared Office Hours via Zoom: M, R 10:30AM - 12:00PM (I plan to answer any questions from students and will cover some of the most challenging topics in the sessions in order to moderate the discussion. The topic to be discussed will be sent on the email invite. The sessions are not a formal lecture and the students are responsible to study the material on

their own.). These sessions will be recorded and the recording provided to students unable to attend or that want to revisit. No session will be recorded if there are no attendees or if there is a single attendee as it turns into an individual meeting.

Individual Office Hours via email/Canvas Inbox or by Zoom (student request individual meeting/appointment) M, R: 9:00AM - 10:30AM, T: 11:00AM - 12:30PM, F: 8:00AM-12:00PM

* As we navigate these times of uncertainty, please email to schedule the Zoom individual meetings (make an appointment with me). If a student can't make the scheduled times, then a I will do my best to arrange an alternate time. Due to COVID and safe-distancing protocols there will be no in-person office hours.

Required Texts and Materials

- Chemistry 2e. (ISBN-10: 1-947172-61-1), OpenStax (Open Educational Resource book – "free" available at: https://openstax.org/details/books/chemistry-2e (Links to an external site.)). A printed version can be purchased from Amazon or the bookstore (ISBN-10: 1-947172-62-X or ISBN-13: 978-1-947172-62-3) if desired (not required to purchase printed book).
- Chemistry 1046 Lab Manual Valencia College 22' - Beran ISBN 9781119838777 (Custom manual based on the 10th edition of J.A. Beran's Laboratory Manual for Principles of General Chemistry)
- Access to Valencia's Science Department Laboratory site for info on techniques and resources: http://science.valenciacollege.edu/chemistry/chemistry-labs.htmlLinks to an external site.
- Scientific calculator for the class and exam work
- **Access to a computer with reliable internet access and access to Canvas is required.** ***Note: An "upgrade" to Safari during the Summer 2020 term introduced some issues with graphics in Canvas not displaying properly, especially graphics in quizzes and exams. Use of Safari is not encouraged by me at this point and it is the student's responsibility for any issues from using Safari.*** It is expected that the student is competent in the use of computers and technology for an online course. The instructor is not able to provide computer or tech support for the class. Some of the laboratories will require a computer (as some labs are Flash-based a tablet or phone will not be compatible). **Smartphones or tables may have issues with the proper display of Canvas pages, a computer is required.**
- A webcam is required in order to access Honorlock's remote exam proctoring (A webcam can be purchased from the bookstore if your computer/laptop does not already has one).

- Word Processing software and the ability to create PDF documents for assignment submission (apps such as CamScanner, Adobe Scan or Microsoft Office Lens allow to create PDFs from a cellphone camera). No images (JPG, PNG, TIFF, etc) will be accepted as submissions. *Valencia students have free access to Microsoft Office 365.*

Evaluation and Assessment Guidelines

Three exams (100 points each)	300 pts	37.50%
Final Exam	200 pts	25.00%
Homework Assignments*	150 pts	18.75%
Laboratory**	150 pts	18.75%
	Total	800 pts

* There is a total of 12 Hwk. The lowest two scores will be dropped. Homework assignments are due on Fridays at 11:59PM.

** There will be in excess of ten reports and only the ten highest scores will be counted (the lowest scores will be dropped). Labs are due on Wednesdays at 11:59PM.

There will be three partial exams and a comprehensive final exam (part new material, part old material). All exams are timed. Partial exams are 90 minutes long (1.5 hrs) + 15 bonus minutes in case there are any tech issues (105 minutes total time), and the final is 150 minutes (2.5 hrs).

Final Grade: A = 800 – 720 pts; B = 719 – 640; C = 639 – 560; D = 559 – 480; F = 479 – 0

Proctored Exam Requirement

This course will utilize Honorlock, an online exam proctoring service, to promote academic integrity during online testing (exams only). Thestudent does not need to create an account, download software, or schedule an appointment in advance. However, the student must install the Honorlock's extension to Chrome. Instructions are provided on the modules and on the Valencia's Online proctoring pageLinks to an external site.. 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 (Links to an external site.) downloaded (required browser)
- Honorlock Chrome Extension (Links to an external site.) downloaded

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 FAQLinks to an external site. page or Honorlock's student information website (Links to an external site.).

Important Dates

- Drop/Refund Deadline (11:59 p.m.) May 16, 2022
- Memorial Day Holiday: May 30th, 2022
- Independence Day Holiday: July 4th, 2022
- Withdrawal Deadline - "W" Grade (11:59 p.m.) July 1, 2022
- Day and Evening Classes End: August 2, 2022
- Exams: June 3, June 24, July 15, and Final Exam on August 1st.

General Policies

There is **no curve** in the class. The grades are final and are non-negotiable. **It is the student's responsibility to submit all required work by the due date.** The instructor will not reopen assignments or change the due date for tardy work. Early submission is encouraged. There are no re-takes for missed homework or lab assignments. The professor is not responsible for technical issues (i.e. loss of internet connection). **No exams are dropped or replaced from the final grade**. There are no "extra-credit" assignments nor special assignments for any individual student. Every student has the same opportunities to earn the grade. The grade is a reflection of the mastery of the course learning outcomes. **There are no exam re-takes nor substitutions**. There will be no make-up exams unless a valid, documented excuse conforming to Valencia's student code is provided and approved by the professor (discuss any issues with the professor before the exam's due date/time). A makeup exam is a new exam of similar contents and format (no questions are repeated). Please read all instructions well. Failure to follow instructions will result in points deduction (up to receiving no credit for the work). **The Final Exam is an essential component of the course and it is mandatory**. Failure to take the final exam will result

in failing the course. Due to the time constrains there is no makeup for the final. *An "I" (incomplete) grade will only be assigned under extraordinary circumstances that occur near the end of the semester. Removal of the incomplete will be according to Valencia's policies.* Attendance and participation on the course activities are required and it are the student's ultimate responsibility. Attendance is determined by participation on class activities and the submission of required work. The laboratory component is a required part of the course. **Failure to submit multiple laboratories (more than three) may result in failing the course.**

Student Conduct

By enrolling at Valencia College, a student assumes the responsibility for becoming familiar with and abiding the general rules of conduct. It is expected that students also follow proper netiquette rules: https://coursedesign.colostate.edu/obj/corerulesnet.html (Links to an external site.)

Academic Integrity

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. All forms of academic dishonesty (cheating, plagiarism, forgery, misuse) are prohibited as stated in the Student Code of Conduct and will be disciplined or penalized accordingly. Students caught cheating or plagiarizing other's work will be given a failing grade (zero) on the work for a first offense. Student's caught cheating will also be reported to the Dean's office. Any repeated offense will result in an F grade for the course. Please refer to the Dean's letter on Academic Integrity for extra information.

You will find the Student Code of Conduct in the current Valencia Student Handbook: http://valenciacollege.edu/pdf/studenthandbook.pdfLinks to an external site. or http://valenciacollege.edu/generalcounsel/policy/documents/Volume8/8-03-Student-Code-of-Conduct.pdfLinks to an external site..

Withdrawal Policy

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. **The instructor will not withdraw a student for non-attendance or any other reason.** Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of "F."

Disability Access Statement

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.

Student Support Resources

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/ (Links to an external site.)
- Hours
    - Mon-Fri: 7 AM – 10 PM
    - Sat and Sun: - 10 AM - 10 PM

Virtual Answer Center:

Counseling Services:

Financial Aid:

> Contact FinAidOffice@valenciacollege.edu for their financial aid questions, as well as for potential assistance with financial support

Technical Support

Help with technical support and online access are available on this page: https://catalog.valenciacollege.edu/distancelearning/Links to an external site.. The Atlas and Online Help Desks will provide assistance over the phone or via live chat to troubleshoot technical problems. You can reach the Atlas Help Desk at 407-299-5444 between 8:00 a.m. - 6:00 p.m. Monday through Thursday and 9:00 a.m. - 5:00 p.m. Friday (9:00 a.m. - 12:00 p.m. Friday during the summer). You can reach the Online Help Desk at 407-299-5600 24 hours a day 7 days a week. The college offers a free training class about the Canvas learning management system here: https://valenciacollege.edu/students/learning-

support/online/index.phpLinks to an external site.. **The professor is in no position to offer computer/technical support.** The student is responsible to seek support via the proper channels.

Covered Units (Textbook Reference)

Unit	Chapter	Unit
1	10.1 – 10.4	Intermolecular Forces
2	*10.5 – 10.6*	*The Solid State (Optional – not covered in class)*
3	11.1 – 11.3, 11.5	Solutions and Colloids
4	11.4	Colligative Properties
5	12.1 – 12.3	Kinetics and Rate Laws
6	12.4 – 12.5	Integrated Rate Laws and Collision Theory
7	12.6 – 12.7	Reaction Mechanisms and Catalysis
8	13.1 – 13.2, 13.4	Principles of Chemical Equilibrium
9	13.3 – 13.4	Le Chatelier, ICE
10	14.1 – 14.3	Acids and Bases
11	14.4 – 14.7	Polyprotic Acids, Buffers, Titrations, Salts
12	15.1	Solubility Equilibria and Precipitation
13	15.2 – 15.3	Complexes – Lewis Acids and Bases, Complex Formation
14	16.1 – 16.3	Laws of Thermodynamics, Entropy
15	16.4	Free Energy
16	17.1 – 17.3	Electrochemistry Basics
17	17.3 – 17.7	Galvanic Cells, Cell Potentials, Electrolysis

Class Schedule

All assignments due on Friday at midnight. Plan accordingly

Due Date	Assignment	Units (Topics)
May 13	Hwk 1	Unit 1

May 20	Hwk 2	Unit 3
May 27	Hwk 3	Unit 4
Jun 3	Hwk 4, **Exam 1**	Unit 5 **(Exam 1 Units 1 - 5)**
Jun 10	Hwk 5	Units 6,7
Jun 17	Hwk 6	Unit 8
Jun 24	Hwk 7, **Exam 2**	Unit 9 **(Exam 2 Units 6 - 9)**
Jul 1	Hwk 8	Unit 10
Jul 8	Hwk 9	Unit 11
Jul 15	Hwk 10, **Exam 3**	Units 12, 13 **(Exam 3 Units 10 - 13)**
Jul 22	Hwk 11	Units 14, 15
Jul 29	Hwk 12	Units 16, 17
Aug 1	**Final Exam**	**Units 14-17 + Cumulative**

Lab Schedule

All laboratory assignments due on Wednesday at midnight. The laboratory report will consist of the data, unique answers to the assigned questions and the calculations required for the experiment. Some laboratory reports will also require the student to create a graph and submitting the graph. Missing components will incur in point deductions.

Week	Date	Report Due	Experiment
1	May 11	May 18	Lab Orientation and Safety (Canvas module)
2	May 18	May 25	Experiment Handout 1: Evaporation and Intermolecular Forces
3	May 25	Jun 1	Exp. 14: Molar Mass of a Solid AND Experiment Handout 2
4	Jun 1	Jun 8	Exp.23: Factors Affecting Reaction Rates
5	Jun 8	Jun 15	Exp. 24 Rate Law and Activation Energy
6	Jun 15	Jun 22	Exp.34: An Equilibrium Constant

7	Jun 22	Jun 29	Exp. 16: LeChatelier's Principle; Buffers
8	Jun 29	Jul 6	Exp. 6: Acids, Bases and Salts (Review Appendix B and Appendix E)
9	Jul 6	Jul 13	Exp. 18: Potentiometric Analysis AND Experiment Handout 3
10	Jul 13	Jul 20	Exp. 22: Molar Solubility, Common-Ion
11	Jul 20	Jul 27	Exp. 26: Thermodynamics of the Dissolution of Borax
12	Jul 27	Jul 27*	Experiment Handout 5: Electrolysis, the Faraday K,and Av.'s Number

** The Jul 27 experiment report will be turned in on the same date due to the fact that the course will not physically meet after the date.*

Disclaimer

This document may be altered, at the instructor's discretion, during the duration of the course. It is the responsibility of the student to make any adjustments as announced.