

Basic Course Information

Semester:	Summer 2020	Instructor Name:	Dr. Omar Alshykhly
Course Title & #:	Chemistry 200 General Inorganic Chemistry II (Chem 202)	Email:	Omar.alshykhly@imperial.edu
CRN #:	30232	Webpage (optional):	
Classroom:	Online: zoom/canvas/chem101 app	Office #:	410
Class Dates:	06/22/20 to 07/30/20	Office Hours:	MWTR 12 pm – 1 pm (Online, zoom)
Class Days:	12 am – 12 am	Office Phone #:	6298
Class Times:	MTWR	Emergency Contact:	Department Secretary (760) 355-6155
Units:	5.0		

Course Description

This course includes a detailed study of chemical reaction rates, the equilibrium condition as it applies to acids and bases as well as solubility, thermodynamics and the properties of spontaneous reactions, electrochemistry, chemistry of the transition elements, and nuclear processes. A survey of topics in organic chemistry and biochemistry is also included. This is the second course of the chemistry series. (C-ID CHEM 120S) (CSU, UC)

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to: Solve chemical problems using modern atomic theory. (ILO2, ILO4). Perform chemical experiments in a scientific manner using proper techniques, data analysis, and safety equipment. (ILO2, ILO3, ILO4).

Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. demonstrate knowledge of bonding as related to atomic orbital, valence bond and molecular orbital theory, what a sigma and pi bond are, how to determine a bonding versus anti bonding orbital, what is paramagnetism, and the theory of bonding in metallic bonds.
2. Demonstrate knowledge of Organic Chemistry, learn the difference between addition and elimination reactions, Markovnikov's Rule, the difference between Functional Groups Elimination and how to make polymers.
3. Relate the general concepts of thermodynamics, describe the difference between the 1st law, 2nd law, and 3rd law's, how to determine entropy changes, calculate maximum useful work, and free energy.

4. Manipulate various Chemical Kinetics equations, understand the effects of concentration, temperature and catalysts in the rate of a chemical equation, write rate expressions, use related rates to find rate constants, calculate using Arrhenius Equation, and determine how to write rate expressions from elementary reaction steps.
5. Relate general concepts of oxidation-reduction reactions, balancing ox-red reactions, how to construct galvanic and electrolytic cells, how to use the Nernst equation, calculate spontaneity of reactions, and learn corrosion processes as well as how to prevent corrosion.
6. Write nuclear reactions, learn what natural and artificial radioactivity, how to write rate of decay, formulas, and the difference between fission and fusion.
7. Manipulate various intermolecular forces equations, how to apply concepts of gases, liquids, and solids, as they apply to phase changes and phase diagrams, different crystalline solids and unit cell calculations.
8. Demonstrate knowledge of a survey of elements including Main Group and Transition metals, industrial preparation of common molecules such as Nitric acid using Ostwald process, chlorine, sodium, magnesium, and copper, and iron, what is ozone chemistry, what coordination chemistry is, identify common ligands, how to name coordination compounds, draw isomers, and how Crystal Field Theory applies to colors.

Textbooks & Other Resources or Links

1. There are two sites to get our textbook free:

a. (Preferred) <https://chem.libretexts.org>

- For the textbook: click on (in above link) < Bookshelves/General Chemistry/Book: Chemistry (OpenSTAX)>
- Exercises: click on (in above link) <Homework Exercises/Exercises: General Chemistry/Exercises: OpenStax>

b. Chemistry. Paul Flowers, Klaus Theopold, Richard Langley. 3rd ed. Openstax (2016)

Textbook: Chemistry. Paul Flowers, Klaus Theopold, Richard Langley. *3rd ed. Openstax* (2016)

<https://openstax.org/details/books/chemistry>

2. Lab Manuals: There is no lab manual required. We will use Labster to do some experiments virtually, and some other experiments will be deliver through canvas.

5. Non programmable calculator: a highly recommended calculator is the Texas Instruments TI36X Solar Scientific Calculator (not the “Pro”) or the TI-30Xa.

6. Registration with chem 101 website to do your homework, quizzes, and exams online (29\$) – requires credit card.

<https://app.101edu.co/>

Course Requirements and Instructional Methods

Homework Online Homework using chem 101 software is due on Sunday night at 11:59 pm after we finish discussing the chapter in class. The goal is to give you enough practice to enable you to be successful on the examinations.

Homework problems are found online at

<https://app.101edu.co/>

You have 2 attempts per question to answer correctly. There will be no penalty for correctly answering on the first, or second attempt. After the due date, the homework assignment cannot be worked on but can be viewed. More instructions how to use the chem 101 for online homework you will find at the chem 101 app.

Also, there's online tutoring with a live person in **Net Tutor** (embedded inside Blackboard or Canvas).

- **Lecture Exams:** We will have 5 midterm exams online. **No make-up exam.**
- **Laboratory:** Some experiments are required to be prepared and done through Labster (virtually) and some other experiments will be dry lab (filing data, calculation, answering questions), I will let you know more about these labs during the semester. **No make-up lab.**
- **Quizzes:** After each chapter you will have a quiz online on chem101 app. **No make-up quiz.**
- **Lab final exam:** At the end of the semester we will have an exam for the lab experiments online.
- **Practice for exam:** for each exam there will be a practice for exam, it will be graded and it will help you to prepare well for the exam. **No make-up for the practice exam.**
- **Final Exam:** The Final Exam is comprehensive, and it will be online. There are **no make-ups** because the date and time of the Final is the last day of class.

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

Get Started

Please click the Modules link on canvas and then click on the first page of Module 0 (Orientation). Keeping clicking "Next" until you have finished the modules.

How to contact your Instructor:

- Email me any time at: omar.alshykhly@imperial.edu
- I will respond to your email within 24 hours at any day during the week
- Use Pronto on canvas to chat with me
- Attend the office hours through zoom
- You may need help from the [IVC library \(Links to an external site.\)](#) for technical support

How I Will Contact You

I will be an active participant in this course. You can expect that I will reach out to you many times each week, via the following methods:

- **Announcements:** I typically post an announcement at the beginning of the week, and towards the middle of the week. Keep an eye out for this important information!
- **Canvas Inbox messages:** I will occasionally reach out via the Inbox to check in with you, and nudge you if you have missed an assignment.
- **Discussions:** I will post a few times within each discussion.

- **Grading Feedback:** I will provide grades via your Canvas gradebook, within 1 week of the due date.
- **Videos and other stuffs:** I will post on canvas a lecture video, PowerPoint slides, practice examples and more each week for each chapter.

Course Grading Based on Course Objectives

- **Study Hints:** Chemistry is a very demanding course. Depending on your background, you will need to spend 1-4 hours outside of lab to get your work done. Missing a lecture usually means your grade falls by $\frac{1}{2}$ grade.
- **Do not fall behind so:**
 - Go to office hours
 - Get a tutor
 - Form study groups
- **No Gifts, cards, or food. All will be refused. Spend your time and effort studying.**
- **Don't try to cram! It doesn't work.**
- **Keep up!!**

Homework	10%
Lab final exam	10%
Midterm exams	30%
Lab Experiments	20%
Quizzes	10%
Practice for exam	5%
Lecture final exam	15%
Total	100%

Your final grade will be assigned based on following manner:

90% – 100%	A
80% - 89%	B
70% - 79%	C
60% - 69%	D
Below 59%	F

Attendance

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See General Catalog for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.

Classroom Etiquette

- **Add/Drop:** it is the responsibility of the student to take the necessary steps to add and/or drop the class by the college deadlines.
- **Late Submissions** Any late work (homework assignment, project, lab report, quizzes, exams) will not be accepted after the due date. If you have an urgent issue or an emergency talk with me in advance to extend the due date for you.

Online Netiquette

What is netiquette? Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online. • Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others' opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language, (10) use appropriate emoticons (emotional icons) to help convey meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

Academic Honesty

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to "cite a source" correctly, you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the [General Catalog](#) for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

Additional Student Services

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

- **CANVAS LMS.** Canvas is Imperial Valley College's main Learning Management System. To log onto Canvas, use this link: [Canvas Student Login](#). The [Canvas Student Guides Site](#) provides a variety of support available to students 24 hours per day. Additionally, a 24/7 Canvas Support Hotline is available for students to use: 877-893-9853.
- **Learning Services.** There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your [Campus Map](#) for the [Math Lab](#); [Reading, Writing & Language Labs](#); and the [Study Skills Center](#).
- **Library Services.** There is more to our library than just books. You have access to tutors in the [Study Skills Center](#), study rooms for small groups, and online access to a wealth of resources.

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the [Disabled Student Programs and Services](#) (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313. Please contact them if you feel you need to be evaluated for educational accommodations.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee.

- **Student Health Center.** A Student Health Nurse is available on campus. In addition, Pioneers Memorial Healthcare District provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC [Student Health Center](#) at 760-355-6128 in Room 1536 for more information.
- **Mental Health Counseling Services.** Short-term individual, couples, family and group counseling services are available for currently enrolled students. Services are provided in a confidential, supportive, and culturally sensitive environment. Please contact the IVC Mental Health Counseling Services at 760-355-6310 or in the building 1536 for appointments or more information..

Veteran's Center

The mission of the [IVC Military and Veteran Success Center](#) is to provide a holistic approach to serving military/veteran students on three key areas: 1) Academics, 2) Health and Wellness, and 3) Camaraderie; to serve as a central hub that connects military/veteran students, as well as their families, to campus and community resources. Their goal is to ensure a seamless transition from military to civilian life. The Center is located in Building 600 (Office 624), telephone 760-355-6141.

Extended Opportunity Program and Services (EOPS)

The Extended Opportunity Program and Services (EOPS) offers services such as priority registration, personal/academic counseling, tutoring, book vouchers, and community referrals to qualifying low-income students. EOPS is composed of a group of professionals ready to assist you with the resolution of both academic and personal issues. Our staff is set up to understand the problems of our culturally diverse population and strives to meet student needs that are as diverse as our student population.

Also under the umbrella of EOPS our CARE (Cooperative Agency Resources for Education) Program for single parents is specifically designed to provide support services and assist with the resolution of issues that are particular to this population. Students that are single parents receiving TANF/Cash Aid assistance may qualify for our CARE program, for additional information on CARE please contact Lourdes Mercado, 760-355- 6448, lourdes.mercado@imperial.edu.

EOPS provides additional support and services that may identify with one of the following experiences:

- Current and former foster youth students that were in the foster care system at any point in their lives
- Students experiencing homelessness
- Formerly incarcerated students

To apply for EOPS and for additional information on EOPS services, please contact Alexis Ayala, 760-355-5713, alexis.ayala@imperial.edu.

Student Equity Program

- The Student Equity Program strives to improve Imperial Valley College's success outcomes, particularly for students who have been historically underrepresented and underserved. The college identifies strategies to monitor and address equity issues, making efforts to mitigate any disproportionate impact on student success and achievement. Our institutional data provides insight surrounding student populations who historically, are not fully represented. Student Equity addresses disparities and/or disproportionate impact in student success across disaggregated student equity groups including gender, ethnicity, disability status, financial need, Veterans, foster youth, homelessness, and formerly incarcerated students. The Student Equity Program provides direct supportive services to empower students experiencing insecurities related to food, housing, transportation, textbooks, and shower access. We recognize that students who struggle meeting their basic needs are also at an academic and economic disadvantage, creating barriers to academic success and wellness. We strive to remove barriers that affect IVC students' access to education, degree and certificate completion, successful completion of developmental math and English courses, and the ability to transfer to a university. Contact: 760.355.5736 or 760.355.5733 Building 100.

- The Student Equity Program also houses IVC's Homeless Liaison, who provides direct services, campus, and community referrals to students experiencing homelessness as defined by the McKinney-Vento Act. Contact: 760.355.5736 Building 100.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC [General Catalog](#).

Information Literacy

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC [Library Department](#) provides numerous [Information Literacy Tutorials](#) to assist students in this endeavor.

Anticipated Class Schedule/Calendar

WK	DATE	Lecture	Lab1	Homework, quizzes, Exams
1	6-22	Syllabus & Ch. 7 review and ch. 8	Introduction to Lab, Labster, Lab Safety	HW ch. 7&8, Quiz ch. 7&8, Practice exam 1, and Exam 1 (ch. 7&8)
2	6-29	Ch. 10 and ch. 11	Lab Experiments (2 to 3 lab experiments)	HW ch. 10&11, Quiz ch. 10&11, Practice exam 2, and Exam 2 (ch. 10&11)
3	7-6	Ch.12 and Ch. 16	Lab Experiments (2 to 3 lab experiments)	HW ch. 12&16, Quiz ch. 12&16, Practice exam 3, and Exam 3 (ch. 12&16)
4	7-13	Ch. 17 and Ch. 18	Lab Experiments (2 to 3 lab experiments)	HW ch. 17&18, Quiz ch. 17&18, Practice exam 4, and Exam 4 (ch. 17&18)
5	7-20	Ch. 19 and 21	Lab Experiments (2 to 3 lab experiments)	HW ch. 19&21, Quiz ch. 19&21, Practice exam 5, and Exam 5 (ch. 19&21)
6	7-27	Ch. 20	Lab Experiments (2 to 3 lab experiments)	HW ch. 20, Quiz ch. 20, Lecture Final exam

				(comprehensive) and Lab final exam
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*****Tentative, subject to change without prior notice*****

SUMMER INTERSESSION 2020
IMPORTANT DATES AND DEADLINES

NOTE: The deadlines below are for full-term classes. Deadlines for short-term classes vary with the length of the class. Most deadlines are mandated in the CA Code of Regulations and are a percentage of the length of the class.

Beginning October 1	New and former IVC students may file admission application for Winter/Spring 2020 and/or Summer/Fall 2020.
May 18	Priority registration begins.
May 25	Holiday – Memorial Day. College closed. No classes.
June 1	Concurrent Enrollment Packets Due.
June 12	Deadline to apply to receive degree or certificate at end of Summer Intersession. Completed petition must be received in Admissions & Records Office by this date. Students must meet with a Counselor and have an evaluation completed and petition signed before this date.
June 21	Residency determination date for Summer Intersession
June 22	Classes begin for Summer Intersession. Beginning on the first day each class meets, add authorization code from instructor required to register for that <u>Summer class</u> , filled or open.

June 22 - 24	Late Registration for Summer Intersession. <u>Beginning on the first day each class meets, add authorization code from instructor required to register for that Winter class, filled or open.</u>
June 24	Deadline to register for Summer Intersession full-term courses.
June 24	Deadline to select P/NP grading option for Summer Intersession courses with that option (see section on <i>Change Grading Options</i>). Does not pertain to Non-credit Program courses.

June 29	Deadline to drop Summer Intersession full-term classes without owing fees and/or be eligible for refund.
June 29	Ticketing for parking violations in student spaces on main campus begins. <u>Note:</u> tickets are issued for reserved (faculty/staff), disabled, metered, 15-minute, and no-parking spaces year around.
June 30	Census
July 2	Holiday – Independence day observed. College closed. No classes.

****July 21**** **Deadline to drop Summer Intersession courses.**

July 30	Summer Intersession final exams; last day of Summer Intersession.
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