IMPERIAL VALLEY COLLEGE

Thank you for choosing IVC! We are so happy to join you in your educational journey.

Basic Course Information

Semester:	**Fall 2024**	Instructor Name:	**Dr. Omar Alshykhly**
Course Title & #:	**Chemistry 82 Fundamentals of Chemistry**	Email:	**Omar.alshykhly@imperial.edu**
CRN #:	**11231**	Webpage (optional):	
Classroom:	**2715**	Office #:	**2773**
Class Dates:	**8/12/2024 – 12/07/2024**	Office Hours:	**TBA**
Class Days:	**TR**	Office Phone #:	**(760) 355-6298**
Class Times:	6:00 pm – 9:10 pm	Emergency Contact:	**Department Secretary (760) 355-6155**
Units:	4	Class Format/Modality:	Face to Face

Course Description

A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem-solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. (Nontransferable, AA/AS degree only)

Course Prerequisite(s) and/or Corequisite(s)

Prerequisite: None

Student Learning Outcomes

Course Objectives

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

1. Demonstrate the ability to perform dimensional analysis calculations as they relate to problems involving percent composition and density.
2. Demonstrate a knowledge of basic atomic theory.
3. Write chemical formulas, and name inorganic and organic compounds.
4. Solve chemical equations and stoichiometry as they apply to the mole concept, molarity, normality and acid-base titrations.
5. Identify the basic types of chemical reactions including precipitation, neutralization, equilibrium, thermodynamics, and oxidation-reduction.
6. Relate the general concepts of atomic structure to a study of ionic and covalent bonding including complex ions.
7. Mathematically solve various gas laws to relate the behavior of gasses.
8. Describe the general properties of liquids and solids including intermolecular attractions and phase changes.
9. Relate the general properties of solutions and employ knowledge of concentration to explain colligative properties.

10. Demonstrate knowledge of computer-assisted methods of data acquisition, analysis and presentation.

Textbooks & Other Resources or Links

1. **For online, hybrid and face to face classes**, you don't need to buy the book. We will use an OER book (available online for free), this is the book that we will use:

Textbook

1. Karen Timberlake. 2017. *Chemistry : An Introduction to General, Organic, and Biological*. 13 Pearson. ISBN: 978-0-13-442135-3.

2. Or Use this OER free online textbook:
Basics of General, Organic, and Biological Chemistry (Ball et al.)
Basics of General, Organic, and Biological Chemistry (Ball et al.) - Chemistry LibreTexts

Lab Manual

Will be delivered by instructor

2. Lab coat and Safety goggles: you need to purchase them from chem or stem club
3. Non programmable calculator: a highly recommended calculator is the Texas Instruments TI36X Solar Scientific Calculator (not the "Pro") or the TI-30Xa.

Course Requirements and Instructional Methods

Our lecture, and labs will be face to face (both will be on campus). For all classes, we will use ADAPT platform for doing the online assignments Homework. The midterm exams and final exam will be in-person.

- **Homework and quizzes**: Online Homework for each chapter will be using ADAPT software, and the due date will be find either on canvas or on the ADAPT. More information about this will be delivered on the first day of the class. The goal is to give you enough practice to enable you to be successful on the examinations. You will have 2 attempts per question to answer it correctly. There will be no penalty for correctly answering on the first, or second attempt. After the due date, the homework assignment can be worked and submitted late for a 30% deduction. More instructions how to REGISTER AND USE the ADAPT online homework WILL BE DISCUSSED ON THE FIRST DAY.

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

• **Lecture Exams**: we will have 4 midterm exams face to face (in-person) on class. I will drop the lowest midterm exam. **No make-up exam.**

• **Laboratory**: you will do all experiments on the lab, and you will follow the lab's procedure to do these experiments. **No make-up lab.**

• **Final Exam**: The Final Exam is comprehensive and in-person (You will be tested in all chapters). There are **no make-ups** because the date and time of the Final is the last day of class.

• **Extra credit**: Depending on the whole class performance, I will decide if you all need extra credit or not, and don't expect too many extra credit, just few extra credit will be added on the final grades.

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.

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 ½ 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 ADAPT	10%
Lab final exam	10%
Midterm exams	40%
Lab Report	20%
Canvas practice & Quizzes	10%
Lecture final exam	10%
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

Academic Honesty (Artificial Intelligence -AI)

IVC values critical thinking and communication skills and considers academic integrity essential to learning. Using AI tools as a replacement for your own thinking, writing, or quantitative reasoning goes against both our mission and academic honesty policy and will be considered academic dishonesty, or plagiarism unless you have been instructed to do so by your instructor. In case of any uncertainty regarding the ethical use of AI tools, students are encouraged to reach out to their instructors for clarification.

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Course Policies

- A student who fails to attend the first meeting of a face to face or hybrid class or does not complete the first mandatory activity of an online class will be dropped by the instructor. 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.

What does it mean to "attend" an online class?

Attendance is critical to student success and for IVC to use federal aid funds. Acceptable indications of attendance are:

- Student submission of an academic assignment
- Student submission of an exam
- Student participation in an instructor-led Zoom conference
- Documented student interaction with class postings, such as an interactive tutorial or computer-assisted instruction via modules
- A posting by the student showing the student's participation in an assignment created by the instructor
- A posting by the student in a discussion forum showing the student's participation in an online discussion about academic matters
- An email from the student or other documentation showing that the student has initiated contact with a faculty member to ask a question about an academic subject studied in the course.

Logging onto Canvas alone is NOT adequate to demonstrate academic attendance by the student.

Other Course Information

- **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.

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit http://www.imperial.edu/studentresources or click the heart icon in Canvas.

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Anticipated Class Schedule/Calendar

Week	DATE	Lecture 6 pm Tuesday	Lab experiment 6 pm Thursday	Homework, and quizzes practice assignments
1	8/12	Syllabus, Unit 1 measurement	Introduction to Lab, Lab Safety, Check in	Homework, and quizzes practice assignments on canvas. Check the due date on Canvas
2	8/19	Unit 1	Measurement Lab & lab techniques	
3	8/26	Unit 2 Atomic structure	Unit 2 cont.	Homework, and quizzes practice assignments on canvas. Check the due date on Canvas
4	9/02	Unit 3 Nomenclature	**Exam 1 Unit 1 & 2**	
5	9/09	Unit 3 cont.	Nomenclature lab	Homework, and quizzes practice assignments on canvas. Check the due date on Canvas
6	9/16	Unit 4 chemical reaction and calculation	Exam 2 Unit 3	
7	9/23	Unit 4 cont.	Chemical reaction lab	
8	9/30	Unit 4 cont.	Unit 4 cont.	
9	10/7	Unit 5 aqueous solutions and acid bases reactions	Limiting reactant lab	Homework, and quizzes practice assignments on canvas. Check the due date on Canvas
10	10/14	Unit 5 cont.	Exam 3 Unit 4	
11	10/21	**Solutions and dilution lab**	Titration lab	
12	10/28	Unit 6 Gases, solid, liquids (quick review)	Exam 4 Unit 5	
13	11/04	Water tests project lab 1	Water tests project lab 2	

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14	11/11	Water tests project lab 3	Water tests project lab 4	
15	11/18	Water tests project lab 5	**Water test project presentation**	
16	11/25	Thanksgiving break	**No classes**	
17	12/2	Final exam	Final exam	

*****Subject to change without prior notice*****

FALL SEMESTER 2024
IMPORTANT DATES AND DEADLINES
NOTE: The deadlines below are for full-term classes. Deadlines for short-term and non-credit classes vary by the class.
July 1 Priority registration begins Students may register up to 19 units at their assigned time.
July 15 Open Registration
July 16 Registration begins for students concurrently enrolled in grades K-12
August 11 Residency determination date.
August 12 Semester begins. Beginning on the first day each class meets, add authorization codes from the instructor are required to register for that class, filled or open.
August 12 – Late Registration. Beginning on first day each class meets, add authorization
August 24 code from instructor required to register for that class, filled or open.
August 25 Last day to drop and receive a refund for full-term classes and not receive a "W".
August 26 Census
August 26 Ticketing for parking violations in student spaces on main campus begins.
Note: Tickets are issued for reserved (Faculty/Staff), disabled, time limit parking and no-parking spaces year around.
September 2 Holiday – Labor day. No classes.
September 6 Financial Aid Freeze Date – Units enrolled as of this date will be used to determine enrollment status for financial aid payment.
October 17 Return to Title IV Drop Date – Complete withdrawal before this date will require financial aid eligibility recalculation and funds may be owed.
** November 2** Deadline to drop full-term classes.
November 11 Holiday – Veterans Day. No classes.
November 25 – 26 No classes (Campus Open)
November 27 – 29 Holiday – Thanksgiving. No classes.
December 6 Deadline to submit Petition for Graduation for degree to be awarded for Fall 2023. Completed petition must be received in Admissions & Records Office by this date. Students must meet with a Counselor to petition by this date.
December 2 – 6 Final Exams.

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December 9 – 13 No classes (Campus open)
December 16 – January 1 Winter Recess (Campus closed)