



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

Basic Course Information

Semester:	Spring 2024	Instructor Name:	Dr. Omar Alshykhly
Course Title & #:	Chemistry 230 Analytical Chemistry	Email:	Omar.alshykhly@imperial.edu
CRN #:	21107	Webpage (optional):	
Classroom:	Room 2715	Office #:	410
Class Dates:	2/12/24- 06/07/24	Office Hours:	MW 12:30 – 1:30 pm at (zoom) MTWR 07:30 – 8:00 am (Room 2715)
Class Days:	TR	Office Phone #:	(760) 355-6298
Class Times:	8:00 am to 12:50 pm	Emergency Contact:	Department Secretary (760) 355-6155
Units:	5.0		

Course Description

This is a course in chemical quantitative analysis. It is the study of the common techniques and theory of gravimetric and volumetric methods based on equilibria, oxidation-reduction and acid-base theory, spectrophotometry, chromatography and electroanalytical chemistry. Students will investigate experimental techniques pertinent to electroanalytical and spectrophotometric analytical methods. This course is for students who are interested in pursuing a career as a laboratory technician or who are majoring in chemistry, biochemistry, biology, bioengineering, forensics, pre-pharmacy, molecular biology, microbiology, Medical laboratory technology, and clinical laboratory science, and for those who want to gain practical analytical laboratory techniques. PREREQUISITES: CHEM 202 - with a grade of "C" or better.

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Solve chemical problems using modern atomic theory.
2. Perform chemical experiments in a scientific manner, using proper techniques, analysis, and safety equipment.

Course Objectives

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



1. Learn about the field of analytical chemistry and the unique perspectives that analytical chemists bring to the study of chemistry.
2. Understand the difference between accuracy and precision and the figures of merit used to quantify them (relative error and relative standard deviation).
3. Learn the vocabulary of analytical chemistry and the analytical techniques classification.
4. Evaluate analytical data (measurements, results, and errors).
5. Develop a greater understanding of relevant chemical equilibria, and apply this knowledge in solving different types of equilibrium-based problems.
6. Learn how to collect samples and how to prepare them for analysis.
7. Demonstrate knowledge of the analytical process used in gravimetric and titrimetric methods both in theoretical and practical contexts.
8. Demonstrate knowledge of the analytical process used in spectroscopic and electrochemical methods both in theoretical and practical contexts.
9. Demonstrate knowledge of the analytical process used in chromatographic and electrophoretic methods both in theoretical and practical contexts.
10. Demonstrate knowledge of the analytical process used in kinetic methods.
11. Learn how to develop a standard method, including optimizing the procedure, verifying precision and accuracy as acceptable, and validating the method for general use.

Textbooks & Other Resources or Links

1. Daniel C. Harris; Charles A. Lucy. 2020. Quantitative Chemical Analysis. 10th Macmillan. ISBN: 9781319384807.
This book should be purchased with the online homework and Adaptive Study plan (Achieve) through Macmillan. (More details about how to buy this package will be provided by the instructor on the first day of class).
2. The lab manual will be delivered by the instructor, it will be OER free experiments. No need to buy a lab manual. More details will be provided on the first day.
3. Non programmable calculator: a highly recommended calculator is the Texas Instruments TI36X Solar Scientific Calculator (not the "Pro") or the TI-30Xa.
4. Registration with Macmillan to buy the E-book and do your homework, quizzes, requires credit card. More details will be provided on the first day.

Course Requirements and Instructional Methods

We will use both our class meeting (face to face) and canvas materials for lecture part, we will use Macmillan for doing the online assignments. Our lab meeting will be face to face also.



- **Homework and Quizzes:** Homework and quizzes will be done using All the due date will be on canvas. The goal is to give you enough practice to enable you to be successful on the examinations. More instructions how to use Macmillan online assignments will be discussed during the semester.

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

- **Lecture Exams:** We will have 3 midterm exams. **No make-up exam.**

- **Laboratory: No make-up lab.**

Lab is where you get to apply all of the laws and theories that you have been learning about in lecture. Your laboratory work must be done and completed during your regularly scheduled time (Meet on each Tuesday and Thursday after the lecture) and the reports must be turned in to pass the course. The laboratory portion of the grade will depend on experimental technique, lab etiquette, and the lab reports. Less than a 55% average on the labs will earn a grade of F in the course.

Safety is of utmost importance in the laboratory. In addition to wearing Z87-rated safety glasses/goggles, you must be covered at least from shoulders to knees (no bare shoulders/midriffs). The new recommendation is that you be covered all the way down to the ankles. You must wear closed-toe shoes.

Before coming to lab:

0. Read the lab experiment that you will be doing (i.e. background and procedures).

What questions do you have? Is there anything that is not clear? Make sure you ask your instructor during the pre-lab lecture.

1. Write a brief summary of the experimental procedures in your own words. Be clear and thorough, but do not copy the procedure from the lab manual. You want to understand what you will be doing before you do it. Think about lab safety; it is the single most important aspect of working in a laboratory! We will discuss safety and proper laboratory techniques extensively.

2. Prepare your lab note book with the background, purpose of experiment and procedure before coming to the lab, and come to lab dressed appropriately (i.e. wear closed toed shoes, dress in clothing that covers you from the shoulders to the knees, tie back loose hair, etc.).

To ensure a safe working environment, all students need to be familiar with the experiment.

During lab:

3. Safety is one of the most important parts of working in a laboratory. Always wear eye protection. To avoid ingesting chemicals never eat, drink, or chew gum while in the laboratory. We will cover proper technique when handling glassware, chemicals, etc.

4. Record your data (i.e. observations and numerical values) directly on the laboratory note book.

5. At the end of the period, clean up your work area (i.e. bench top, chemical hood) and the common areas, turn off gas, lock your locker. Did you wipe down your bench including the walls and ceiling of the chemical hood? Did you make sure the reagents are organized for the next period? What about the balances and sinks?

6. Your instructor will initial your completed data once your work area and the common areas are clean. Once the instructor has signed your lab pages you may leave lab for the day.

After lab:

8. Complete your calculations, graphs, all problems and questions given at the of the report sheets (i.e. post lab questions).

9. For labs Report, you will need to submit your complete lab report to get a full credit for it.



10. Lab reports are due one week after the period in which they are scheduled to be completed. Late reports will receive a penalty of 10% per week late to be fair to those who got the report turned in on time.

- **Lab exams:** Two lab exams will be given during the semester (TBD). **No make-up exams**
- **Final Exam:** The Final Exam is comprehensive (You will be tested in all chapters), **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.

What if I need to borrow technology or access to WIFI?

1. To request a loaner laptop, MYFI device, or other electronic device, please submit your request here: <https://imperial.edu/students/student-equity-and-achievement/>
2. If you'd like access the WIFI at the IVC campus, you can park in parking lots "I & J". Students must log into the IVC student WIFI by using their IVC email and password. The parking lots will be open Monday through Friday from 8:00 a.m. to 7:00 p.m.

Guidelines for using parking WIFI:

- Park in every other space (empty space BETWEEN vehicles)
- Must have facemask available
- For best reception park near buildings
- Only park at marked student spaces
- Only owners of a valid disabled placard may use disabled parking spaces
- Only members of the same household in each vehicle
- Occupants **MUST** remain in vehicles
- Restrooms and other on-campus services not available
- College campus safety will monitor the parking lot
- Student code of conduct and all other parking guidelines are in effect
- Please do not leave any trash behind
- No parking permit required**

If you have any questions about using parking WIFI, please call Student Affairs at 760- 355-6455.

Get Started



Please click the Modules link on canvas and then click on the home page on canvas. Keeping clicking "Next" until you have finished the modules. We will use the canvas to handle this class, and we will use chem101 app to the assignments.

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.
- **Announcements** on class during the lecture or lab if it was **face to face class or hybrid class.**

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 & quizzes	15%
Midterm exams	30%
Lab Report	30%



Lab exams	10%
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 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.

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.

How do I act differently if I have an on-ground class during COVID?

- **DO NOT COME TO CAMPUS OR ATTEND AN OFF-CAMPUS CLASS IF YOU FEEL SICK, HAVE A FEVER, OR HAVE A COUGH**
 - Email your instructor to explain why you are missing class.
 - [If you are sick with COVID-19 or think you might have COVID-19](#), provides CDC guidance.
 - If you have tested positive for COVID-19, you must self-quarantine for 14 days and then be without symptoms for at least 72 hours. Clearance is required prior to returning to any face-to-face interaction. It is recommended that you undergo a final COVID-19 test to confirm that you are no longer infected.
 - If you are exposed through direct contact with a person known to be COVID-19 positive, then you must submit negative COVID-19 test results prior to returning to any face-to-face interaction.
- **ARRIVE AT CAMPUS EARLY (at least 15 minutes early is advised).**
 - All people entering the IVC campus will need to pass a screening process, which will occur at the gates as your drive onto campus. You will need to take a short questionnaire and get your temperature taken (the screening is completely touchless and will take place while you remain in your car).
- **BRING A MASK TO CLASS (and always wear it).**
 - Be sure that your mask covers both your nose and mouth. If your mask is cloth, then wash it each day. If your mask is disposable, then use a new one each day.
- **GO DIRECTLY TO YOUR CLASSROOM.**
 - The IVC campus is mostly closed so you should not visit other areas or seek any face-to-face services. Services are available to students online and can be accessed through www.imperial.edu.
- **WASH YOUR HANDS FREQUENTLY (and use the provided sanitation supplies).**
 - Your classroom is equipped with cleaning supplies. Use them as needed.
- **BE SURE TO SOCIAL DISTANCE (stay at least 6 feet from other).**
 - The number of students in a classroom at any one time is very limited so you have plenty of space to spread and ensure that you stay at least 6 feet from others.
- **BRING YOUR OWN FOOD AND DRINKS.**
 - There is no food service currently offered on campus.

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 (!!!!)].

How am I expected to act in an online "classroom" (especially Zoom)?

Attending a virtual meeting can be a challenge when there are many students on one conference call. Participating in such meetings may count as class attendance, but disruptive behavior may also result in you not being admitted to future meetings. Follow the tips below for best results:

1) Be RESPECTFUL

- a. Your written, verbal, and non-verbal communications should be respectful and focused on the learning topics of the class.

2) Find a QUIET LOCATION & SILENCE YOUR PHONE (if zooming)

- a. People walking around and pets barking can be a distraction.

3) EAT AT A DIFFERENT TIME.

- a. Crunching food or chugging drinks is distracting for others.
- b. Synchronous zoom times are set in advance so reserve meals for outside class meetings.

4) ADJUST YOUR LIGHTING SO THAT OTHERS CAN SEE YOU

- a. It is hard to see you in dim lighting so find a location with light.
- b. If your back is to a bright window, you will be what is called "backlit" and not only is it hard on the eyes (glare) but you look like a silhouette.

5) POSITION THE CAMERA SO THAT YOUR FACE AND EYES ARE SHOWING

- a. If you are using the camera, show your face; it helps others see your non-verbal cues.
- b. You may be at home, but meeting in pajamas or shirtless is not appropriate so dress suitably. Comb your hair, clean your teeth, fix your clothes, etc. before your meeting time to show self-respect and respect for others.

6) Be READY TO LEARN AND PAY ATTENTION

- a. Catch up on other emails or other work later.
- b. If you are Zooming, silence your phone and put it away.
- c. If you are in a room with a TV – turn it off.

7) USE YOUR MUTE BUTTON WHEN IN LOUD PLACES OR FOR DISTRACTIONS

- a. Pets barking, children crying, sneezing, coughing, etc. can happen unexpectedly. It's best if you conference in a private space, but if you can't find a quiet place, when noises arise **MUTE** your laptop.

8) REMEMBER TO UNMUTE WHEN SPEAKING

- a. Follow your instructor's directions about using the "**raise hand**" icon or chat function to be recognized and to speak, but make sure you have unmuted your device.
- b. Do not speak when someone else is speaking.



9) REMAIN FOCUSED AND PARTICIPATE IN THE MEETING

- a. Especially when the camera is on YOU, we can all see your actions. Engage in the meeting. Look at the camera. Listen to instruction. Answer questions when asked.
- b. Do not use the Zoom meeting to meet with your peers or put on a “show” for them.

10) PAUSE YOUR VIDEO IF MOVING OR DOING SOMETHING DISTRACTING

- a. Emergencies happen. If you need to leave the room or get up and move about, stop your video.

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.

How do I show academic honesty and integrity in an online “classroom”?

- **KEEP YOUR PASSWORDS CONFIDENTIAL.**
 - You have a unique password to access online software like Canvas. Never allow someone else to log-in to your account.
- **COMPLETE YOUR OWN COURSEWORK.**
 - When you register for an online class and log-in to Canvas, you do so with the understanding that you will produce your own work, take your own exams, and will do so without the assistance of others (unless directed by the instructor).

Examples of Academic Dishonesty that can occur in an online environment:

- Copying from others on a quiz, test, examination, or assignment;



- Allowing someone else to copy your answers on a quiz, test, exam, or assignment;
- Having someone else take an exam or quiz for you;
- Conferring with others during a test or quiz (if the instructor didn't explicitly say it was a group project, then he/she expects you to do the work without conferring with others);
- Buying or using a term paper or research paper from an internet source or other company or taking any work of another, even with permission, and presenting the work as your own;
- Excessive revising or editing by others that substantially alters your final work;
- Sharing information that allows other students an advantage on an exam (such as telling a peer what to expect on a make-up exam or prepping a student for a test in another section of the same class);
- Taking and using the words, work, or ideas of others and presenting any of these as your own work is plagiarism. This applies to all work generated by another, whether it be oral, written, or artistic work. Plagiarism may either be deliberate or unintentional.

Additional Services for Students

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.

How do I access services now that we are mostly online?

- **CANVAS LMS.** Canvas is Imperial Valley College's 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.** In order to accommodate students and maximize student success during the COVID-19 Pandemic, all tutoring support is being provided through one Zoom link ([IVC online Tutoring](#)). When campus is open again, there are several learning labs to assist students. Whether you need support using computers, or you need a tutor, please consult your [Campus Map](#) for the [Math Lab](#); [Reading, Writing & Language Labs](#); and the [Study Skills Center](#).
- **Library Services.** Visit the Spencer Library's page on the IVC website for a wealth of valuable resources and online access to databases, e-books and more. Contact us so we can help you with instructional and research development skills (for those conducting research and writing academic papers). When campus re-opens, students also have access to tutoring services in the Study Skills Center as well as private study rooms for small study groups. There is more to our library than just books!
- **Career Services Center.** The Career Services Center is dedicated to serve all IVC students and Alumni. Services include Career Assessments, Resume and Cover Letter Assistance, Interview Preparation, Internship Opportunities and Job Placement.
- **Child Development Center.** The Preschool and Infant/Toddler Centers are on-campus demonstration lab programs that meet the educational, research, and service needs of the institution and community at large. The Preschool program (children three to five years of age) and the Infant/Toddler program



(newborn to three years of age) is in buildings 2200 and 2300. Service is available to families who meet the California Department of Education qualifications for enrollment. The centers are open during COVID from Monday-Friday 7:15-5:30. Breakfast, lunch and snack are provided through the California Adult and Child Food Program. Location: Buildings 2200 and 2300. Phone: (760) 355-6528 or (760) 355-6232. Application: <https://forms.imperial.edu/view.php?id=150958>

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. When campus is open, the DSP&S office is 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, but you must make an appointment. In addition, Pioneers Memorial Healthcare District provides basic health services for students, such as first aid and care for minor illnesses. Contact the IVC [Student Health Center](#) at 760-355-6128, or when campus reopens, visit 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 for appointments, or when campus reopens visit Room 1536, for 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 in three key areas: 1) Academics, 2) Health and Wellness, and 3) Camaraderie. The Center also serves as a central hub that connects military/veteran students, as well as their families, to campus and community resources. The goal is to ensure a seamless transition from military to civilian life. When campus reopens, the Center is 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, book grants, transportation assistance, individualized counseling, tutoring, and community referrals to eligible students. Our staff is available to assist and support students in navigating personal, psychological, academic, and/or career-related issues through empathy, cultural-competence, and a commitment to equity and social justice. Also under the umbrella of EOPS is the CARE (Cooperative Agency Resources for Education) Program, designed to serve single parents and assist with addressing 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 about the EOPS or CARE



Programs please contact our Program Office 760.335-6407 and/or visit our Program website www.imperial.edu/students/eops for eligibility criteria and application procedures. We look forward to serving you! - EOPS/CARE Staff

Student Equity Program

The Student Equity & Achievement 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. SEA addresses disparities and/or disproportionate impact in student success across disaggregated student equity groups including gender, ethnicity, disability status, financial need, LGBTQIA+, Veterans, foster youth, homelessness, and formerly incarcerated students. The SEA Program also houses IVC’s Homeless Liaison, Foster Youth Liaison, Formerly Incarcerated Liaison, and Military Affiliated Liaison, who provide direct services and referrals to students in need. SEA strives 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 enrollment, education, degree and certificate completion, and the ability to transfer to a university. SEA also provides outreach at local Imperial County high schools to ensure graduating seniors are successfully matriculated into the college and have a strong support system. Please visit us online for assistance at <https://imperial.edu/students/student-equity-and-achievement/> or call us at 760-355-6465 or when campus reopens, visit Building 401.

What if I cannot afford food, books, or need other help?

We have many resources that are available to you. Please tell us what you need by submitting your request(s) here: <https://imperial.edu/students/student-equity-and-achievement/>

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

Week	DATE	Lecture Tuesday	Lab Exp. Tuesday	Lecture Thursday	Lab Exp. Thursday
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1	2/12	Course Outline, Syllabus, and introduction	Safety, check in, Lab report and lab notebook	Ch00 The Analytical Process	Practice with using graph paper and Excell sheet.
TOOLS OF ANALYTICAL CHEMISTRY, UNIT-1					
2	2/19	Ch01: Chemical measurements	Using balance, common lab technique and strategy	Ch02: Tools of the Trade	Heating Crucible to a constant weight
3	2/26	Ch03: Experimental Error	Calibration of a Burette	Ch04: Statistics	Calibration of Flasks
4	3/4	Ch04: Statistics	Gravimetric Sulfate Determination: day 1	Ch05: Quality Assurance and Calibration Methods	Gravimetric Sulfate Determination: day 2
CHEMICAL EQUILBRIA, UNIT-2					
5	3/11	Ch06: Chemical Equilibrium	Iodometric Determination of Cu in Brass: day 1	Ch07: Let the Titration Begin	Exam 1 (Ch. 0,1,2,3,4, & 5)
6	3/18	Ch08: Activity and Systematic Treatment of Equilb	Iodometric Determination of Cu in Brass: day 2	Ch09: Monoprotic Acid-Base Equilibria	Lab Exam 1
7	3/25	Ch10: Polyprotic Acid-Base Equilibria	Determination of the Carbonate Content of a Soda-Ash Sample day 1	Ch11: Acid-Base Titration	Determination of the Carbonate Content of a Soda-Ash Sample day 2
8	4/1	Spring break	Spring break	Spring break	
9	4/8	Ch12: EDTA Titrations	Complexometric Calcium Determination	Ch14: Fundamentals of Electrochemistry	Determination of the Mn Content of Steel
ELECTROCHEMICAL METHODS, UNIT-3					
10	4/15	Ch15: Electrodes and Potentiometry	Catch up on material (No lab experiment)	Ch16: Redox Titration	Exam 2 (Ch. 6, 7, 8, 9, 10, 11, & 12)
11	4/22	Ch17: Electroanalytical Techniques	Colorimetric Fe Analysis Part 1	Ch17: Electroanalytical Techniques	Colorimetric Fe Analysis Part 2

SPECTROCHEMICAL METHODS, UNIT-4					
12	4/29	Ch18: Fundamentals of Spectrophotometry	DETERMINATION OF ASCORBIC ACID IN VITAMIN C TABLETS BY REDOX TITRATION	Ch19: Applications of Spectrophotometry	TBD
13	5/6	Ch20: Spectrophotometry	Determination of the Ka Value and Molar Mass of an Unknown Weak Acid	Ch21: Atomic Spectroscopy	Polyprotic Acids – Determining Ka's Using pH Titration Curves: day 1
14	5/13	Ch22: Mass Spectroscopy	Polyprotic Acids – Determining Ka's Using pH Titration Curves: day 2	Cath up materials	Exam 3 (14, 15, 16, 17, 18, 19, 20, 21, &22)
SEPARATION METHODS, UNIT-5					
15	5/20	Ch23: An Introduction to Analytical Separation	Electrochemistry Experiment (TBD)	Ch24: Gas Chromatography	DETERMINATION OF ALCOHOLS BY GAS CHROMATOGRAPHY
16	5/27	Ch25: High-Performance Liquid Chromatography	Lab exam 2	Open lecture	Open lab
17	6/3		Final exam	Final exam (all chapters)	

SPRING 2024 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 students may file an admission application for Winter/Spring 2024 and/or Summer/Fall 2024.
November 6	Priority registration begins
February 11	Residency determination date.
February 12	Spring classes begin.
February 12 - 24	Late Registration. Beginning on first day each class meets, add authorization code from instructor required to register for that class, filled or open.



February 16	Holiday – Lincoln’s Birthday. No classes.
February 19	Holiday – Washington’s Birthday. No classes.
February 24	Deadline to register for full-term courses. Deadline to drop full-term classes and be eligible for a Refund. Deadline to select P/NP grading option for courses with that option. Does not pertain to Non-credit Program courses.
February 25 *Sunday*	Deadline to drop without course appearing on transcript (without receiving a W). Note: Fees will be charged and no refunds given for courses dropped
February 26	Census – (For Short Term classes, please check your roster for Census date). 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.
March 9	Financial Aid Freeze Date - Complete withdrawal before this date will require financial aid eligibility recalculation and funds may be owed.
April 1 – 7	Spring Recess. No classes.
April 12 *Tentative*	Deadline to submit <i>Petition for Graduation</i> for degree to be awarded for Spring and Summer 2024 and participate in Commencement. Students must meet with a Counselor and have an evaluation completed before this date.
April 26	Return to Title IV Drop Date – Units enrolled as of this date will be used to determine enrollment status for financial aid payment
May 11 Saturday	Deadline to drop full-term classes. (Note: This deadline date is not for short-term classes.)
May 27	Holiday – Memorial Day. No classes.
June 3 - 7	Final Exams.
June 7	Deadline to apply to receive degree or certificate at end of Spring Intersession. and not participate in Commencement. 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 8	Commencement Ceremony