

Basic Course Information

Semester:	Fall 2016	Instructor Name:	Dr. Behrang Madani
Course Title & #:	Chemistry 200 Inorganic Chemistry I	Email:	beh_madani@hotmail.com
CRN #:	11058	Webpage (optional):	http://spaces.imperial.edu/behrang.madani/
Classroom:	Lec: 2731 Lab: 2716	Office #:	2773
Class Dates:	Aug 15 to Dec 9	Office Hours:	MTWTh 11:20 am-12:20 pm
Class Days:	MW (Lec & Lab)	Office Phone #:	(760) 355-6477
Class Times:	4:45-6:10 pm (Lec) 6:30-9:40 pm (Lab)	Office contact if student will be out or emergency	Department Secretary (760) 355-6155
Units:	5		

Course Description

Basic principles and calculations of chemistry with emphasis on stoichiometry and dimension analysis applied to various problem types. Fundamental principles and theory of atomic and molecular structure as related to bonding and molecular geometry. Study of kinetic molecular theory, the first law of thermodynamics, periodic relationships of the elements, physical states of matter, solution chemistry, and oxidation-reduction. The laboratory is closely related to lecture topics and includes methods of classical experimentation as well as certain instrumental analysis. (C-ID CHEM 110) (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:

1. Perform dimensional analysis calculations as they relate to problems involving percent composition and density. (ISLO2)
2. Write chemical formulas, and name inorganic compounds. (ISLO2)
3. Relate chemical equations and stoichiometry as they apply to the mole concept. (ISLO2)
4. Identify the basic types of chemical reactions including precipitation, neutralization, and oxidation-reduction. (ISLO4)
5. Knowledge of atomic structure and quantum mechanics and apply these concepts to the study of periodic properties of the elements. (ISLO4)

Course Objectives

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

1. Student will demonstrate ability to perform dimensional analysis calculations as they relate to problems involving percent composition and density.
2. Student will write chemical formulas, name inorganic compounds, and demonstrate a knowledge of basic atomic theory
3. Student will relate chemical equations and stoichiometry as they apply to the mole concept, molarity, and acid-base titrations. Student will derive formulas from percent composition.
4. Student will identify the basic types of chemical reactions including precipitation, neutralization, and oxidation-reduction.
5. Student will demonstrate knowledge of atomic structure and quantum mechanics and apply these concepts to the study of periodic properties of the elements.
6. Student will relate the general concepts of atomic structure to a study of ionic bonding.
7. Student will relate the general concepts of covalent bonding and molecular structure.

8. Student will demonstrate the first law of thermodynamics both in theoretical and practical contexts and apply the theory to the solution of Hess' Law.
9. Student will manipulate the various gas laws in both theory and practice to solve mathematical problems relating to the behavior of both ideal and non-ideal gases.
10. Student will describe the general properties of liquids and solids including intermolecular attractions and phase changes.
11. Student will relate the general properties of solutions and employ knowledge of concentration to explain colligative properties. Student will investigate the phenomenon of vapor pressure.
12. Student will demonstrate knowledge of computer-assisted methods of data acquisition, analysis and presentation.

Textbooks & Other Required Material

1. Textbook: *Chemical Principles: The Quest for Insight*. Peter Atkins, Loretta Jones. 7th ed. W. H. Freeman
2. Lab Manuals: *General Chemistry on the Laboratory*; Postma et al, 7th ed. 2009
3. Supplemental Lab Manual: *Chemistry 200 Laboratory Packet*; is purchased from the STEM/Chem club (\$15)
4. Safety goggles (\$5 - \$10; needed on second class day). The goggles must completely enclose the area around the eyes.
5. Non-programmable scientific calculator (\$15 - \$25): TI-30X IIB or TI-30X IIS are recommended. You will need to use logarithms, functions, exponents, scientific notation, etc. **Bring this to all lecture and lab meetings.**
6. Five (5) Scantron Sheets Form No. 882-E for exams and final.
7. Close-toed shoes for labs
8. Registration with www.saplinglearning.com for online HW (\$40) – requires credit card
9. iClicker Remote

Course Requirements and Instructional Methods

1. You have 5 exams including the final exam (see your course schedule). Some practice exams will be made available before each exam.
2. There are no make-up exams or lab classes.
3. Your lowest test grade, excluding the final test grade, will be dropped. If you are absent for a test, then the missed test will be test dropped.
4. Homework is due at the beginning of the class meeting following the day we finish discussing the chapter in lecture. The goal is to give you sufficient practice to enable you to be successful on the examinations. Homework problems are found online at

www.saplinglearning.com

No homework scores will be dropped. You have 3 attempts per question to answer correctly. There will be no penalty for correctly answering on the first, second, or third attempt. There is no penalty for viewing the hint. In order to grade your answer and find out if you answered correctly, you should press "CHECK ANSWER." If you wish to switch to another question without checking the answer for the current question, you can press "NEXT" or use the map at the top right corner of the question. After the due date, the homework assignment cannot be worked on but can be viewed.

5. Late homework, lab reports, projects, etc will not be accepted and you will have earned zero for that work.
6. iClicker remotes must be purchased or reused from a previous class. Students will register their iClicker remote during lecture near the beginning of the semester under the guidance of the professor. **iClicker questions are used in every lecture.** There is no make-up for iClicker questions.

Course Grading Based on Course Objectives

Homework & problem sets	15%
Laboratory experiments and Lab exam	23% + 5%
iClicker Questions	12%
Exams	30%
Final exam	15%

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.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.
- Absences during Lab Classes, or leaving during Lab Classes automatically result in a grade of zero (0) for the Lab Experiment.

Laboratory safety rules and grading

- 1) Lab reports will have a value of 25 points and each will be graded. Group reports will be turned in at the beginning of the next lab session after it was started. No late work is accepted – except for absences. Use a non-erasable ink to prepare your lab report.
- 2) Safety rules: At all times, of ANY experimentation, ALL students must wear safety goggles and enclosed shoes.
 - Failure to wear goggles over the eyes – 2 points deducted from your lab report for each infraction
 - Failure to wear enclosed shoes – you will be asked to leave (note that there are no lab make ups)
- 3) In addition to the department safety rules, we, your instructors, have some of our own.
 - **Do not leave a Bunsen burner lit and unattended.** Five points will be deducted from all partner's report.
 - **Do not wear tank tops or sleeveless tops.** You will be asked to leave. You may however, wear a lab coat to protect yourself.

Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.

Imperial Valley College Course Syllabus – Chemistry 200 (General Inorganic Chemistry I)

- Arriving late is disruptive for other students and will count as ½ hour absent for lecture and 1 hour absent for lab. This means every 3 lecture or 3 lab late equals 1 absence.
- Add/Drop: it is the responsibility of the student to take the necessary steps to add and/or drop the class by the university deadlines.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- Leaving during lecture or lab is considered an unexcused absence. If you have to leave anytime during class, other than established break times, you must inform your instructor.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the [General Catalog](#).
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

Academic Honesty

- 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.

- **Blackboard Support center**: The Blackboard Support Site provides a variety of support channels available to students 24 hours per day. <http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543>
- **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 Learning Services (library).
- **Library Services**: There is more to our library than just books. You have access to tutors in the learning 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 and El Centro Regional Center provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC Student Health Center at 760-355-6310 in Room 2109 for more information.
- **Mental Health Counseling Services.** Short-term individual, couples, family, and group therapy are provided to currently enrolled students. Contact the IVC Mental Health Counseling Services at 760-355-6196 in Room 2109 for more information.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

Information Literacy

Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at <http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/>

Important Dates

August 28	Deadline to drop without course appearing on transcript (without receiving W). Note: fees will be charged and no refunds given for courses dropped on this date.
September 5	Holiday – Labor Day. No Classes. (Campus Closed)
November 5	Deadline to drop full-term classes
November 11	Holiday – In Honor of Veterans' Day. No Classes. (Campus Closed)
November 21 – 26	Holiday – Thanksgiving. No Classes. (Campus Closed)
December 5 - 9	Last week of classes including final examinations.

Anticipated Class Schedule/Calendar

Wk	Date	Lecture (M-W)	Lab (Monday)	Lab (Wednesday)
1	Aug 15- Aug 17	Syllabus and Fundamental A	Safety and Check in, Problem set 1	M-1 Measurements
2	Aug 22 – Aug 24	Fundamentals B & C	Lab Measurements – Handout Problem Set 1	Lab Chemical reactions - Handout
3	Aug 29 – Aug 31	Fundamentals D & E	M-2 Mass & Volume, Problem set 2	M-A Nomenclature
4	Sep 5 – Sep 7	Mon: Holiday – No class Wed: Fundamental F	Holiday - Veterans' Day - No Class	Lecture Exam 1
5	Sep 12 – Sep 14	Fundamental G	IVC 5 Formula of a Hydrate Problem Set 3	M-7 Chemistry of Oxygen
6	Sep 19 – Sep 21	Chap. 1	M-18 Net Ionic Equations Problem Set 4	Lab Exam 1
7	Sep 26 – Sep 28	Chap. 2	M-34 Reduction Oxidation Problem set 5	Lecture Exam 2
8	Oct 3 – Oct 5	Chap. 3	M-34 Reduction Oxidation Problem Set 6	M-14 Heat Capacities of Metals
9	Oct 10 – Oct 12	Chap. 4	M-11 Standard Molar Volume Problem Set 7	M-B Lewis Structures
10	Oct 17 – Oct 19	Chap. 5	Lab Exam 2	Lecture Exam 3
11	Oct 24 – Oct 26	Chap. 8	IVC 4 Titration Problem Set 8 & 9	IVC 4 Titration
12	Oct 31 – Nov 2	Chap. 11	M-23 Equilibrium Problem Set 10	M-23 Equilibrium
13	Nov 7 – Nov 9	Chap. 12	IVC 4 Titration Problem Set 11	Lab pH of Commercial Products - Handout
14	Nov 14 – Nov 16	Chap. 12	Lab Exam 3	Lecture Exam 4
15	Nov 21 – Nov 23	Holiday – Thanksgiving - No Class		
16	Nov 28 – Nov 30	Chap. 13	IVC 9 Problem Set 12	IVC 10
17	Dec 5 – Dec 7	Review for final	Lab Final Exam (Mon; During Lecture Hrs)	Final Exam and Check out

Note: The course syllabus is intended to provide students with basic information concerning the course. The syllabus can be viewed as a “blueprint” for the course; **changes in the syllabus can be made and students will be informed** of any substantial changes concerning exams, grading or attendance policy and/or changes to reading or homework assignments.