
Basic Course Information

Semester:	Summer 2016	Instructor Name:	Jim Pendley
Course Title & #:	Chemistry 100	Email:	pendley@imperial.edu
CRN #:	30038	Webpage (optional):	
Classroom:	2716	Office #:	
Class Dates:	June ,20- July 28 , 2016	Office Hours:	
Class Days:	M-Thurs	Office Phone #:	
Class Times:	3:00 PM- 7:40 PM	Emergency Contact:	Div.Sec. 355-6201
Units:	4		

Course Description

Elementary principles of general inorganic chemistry with an introduction to organic and biochemistry.

Previous science background is recommended but not required. This course is designed for non-science majors and students who need only a one-semester general chemistry course, and also for students entering a paramedical and allied health fields, and industrial applications such as power plants. This course will satisfy the prerequisite for CHEM 100. (CSU)(UC credit limited. See a counselor.)

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. Calculate English and metric unit conversions and measurements using dimensional analysis. (ISLO4)
2. Write symbols for elements and know common ionic charges. (ISLO2)
3. Derive and write formulas and names for chemical compounds. (ISLO2)
4. Write and balance common chemical equations and identify reaction types. (ISLO4)

Course Objectives

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

1. Calculate English and metric unit conversions and measurements using dimensional analysis.
2. Write symbols for elements and know common ionic charges.
3. Derive and write formulas and names for chemical compounds.
4. Write and balance common chemical equations and identify reaction types.
5. Solve stoichiometric problems, including their solutions using dimensional analysis.
6. Describe atomic structure including isotopes, periodicity and molecular structure in terms of subatomic particles.
7. Identify types of energy and calculate specific heat; identify energy involved in change of state including heat of vaporization and predict behaviors in cooling curves; calculate caloric and nutritional values of various foods.

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8. Describe gas behavior and solve problems involving the various gas laws.
 9. Define and identify unsaturated, saturated, and supersaturated solutions differentiate between each type of solution.
 10. Calculate solution concentration of various types including dilutions.
 11. Differentiate between solution, suspension, and colloid and osmolarity, isotonic, hypotonic and hypertonic solutions.
 12. Define the three basic concepts (Arrhenius, Brønsted-Lowry and Lewis) of acids and bases and perform titration experiments and calculate pH.
 13. Describe nuclear processes and write nuclear equations using the subatomic particles involved and identify health factors and risks involved.
 14. Demonstrate a knowledge of hydrocarbons (saturated and unsaturated) and will describe their properties and reactions.
 15. Identify isomers and name hydrocarbon compounds.
 16. Identify certain carbohydrates; lipids, and protein structures as they relate to biochemistry.

Textbooks & Other Resources or Links

1. Nivaldo J. Tro (2015).
Introductory Chemistry Prentice Hall, ISBN -1269713876
2. Lab Manuals: **Chemistry 100 Laboratory Packet** is purchased from the Chemistry/STEM club
4. Safety Glasses or Goggles: must be acid and heat resistant. These must comply with:
 - a. Meet ANSI* Z87.1-2003 standards.
 - b. Polycarbonate lens
 - c. Wraparound protection offers a wide field of vision
5. Non programmable Calculator: a highly recommended calculator is the Texas Instruments TI36X Solar Scientific Calculator (not the "Pro") or the TI-30Xa.
6. Scrantons for your exams an 882-E, for 100 answers.
7. Additional Required Supplies: Closed toed shoes.

Course Requirements and Instructional Methods

Lecture Quizzes

: A short quiz on lecture material will periodically be given at the end of class. Quizzes are worth 10- 15 points each with no makeup quizzes allowed. Quizzes will not be given on lecture exam days.

Lab assignments will count 10 points each, graded at intervals.

Lecture Exams

: Under normal circumstances, there will be 4 exams, 60 -100 pts each. No make up exams. Exams will be graded and then returned as soon as possible. .Final Exam

:The Final Exam is comprehensive.

Final exam questions are in multiple-choice format. You must purchase a 882-E, 50 questions per side, Scranton for the Final Exam. There are no make-ups because the date and time of the Final is the last day of class.

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Lab Exam

: The lab exam will contain problems and/or explanation type questions based on the preceding laboratory experiments. There is one Lab exam which counts toward your course grade. See Course Schedule for Exam date. No Makeup Lab exams will be allowed. This Point Total is added

to your Lecture Score to obtain a total score that includes both the lecture and lab component of this class.

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You must

(1) remember your locker combination-after locker check-in, (2) bring goggle or eye safety glasses, (3) closed toed shoes to be in the lab; you are not furnished these. The first time is a 10 point penalty, second time doubled, third time you are dismissed from class with appropriate grade.

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

Letter grades will be assigned based upon the % of points earned: Grading scale, A: 90-100%; B: 80-89%, C: 70-79%, D: 60-69, F: <59 . All points are equal.

Attendance

[Required Information: The below information is the IVC attendance policy. Use this information in addition to any specific attendance policies you have for your course.]

- 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.

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- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

Classroom Etiquette

[Required Information: Describe your policies regarding classroom conduct. The below is suggested language and may be modified for your course.]

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

Online Netiquette

[Required Information for web-enhanced, hybrid and online courses: Describe your policies regarding netiquette. The below is suggested language and may be modified for your course.]

- 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

[Required language.]

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.

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- **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

[Suggested Language.]

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.

Disabled Student Programs and Services (DSPS)

[Required language.]

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

[Required language.]

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 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

[Required language.]

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

[Required language.]

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

*****Tentative, subject to change without prior notice*****

Go To NEXT PAGE for schedule.

WK	DATE	LECTURE	LABORATORY
1 M	06/20/16	Chp. 1	Procedures, Safety, and Equipment policy
T	06/21/16	Chp. 1	Lab 1: Calculations
W	06/22/16	Chp. 2.	Lab 1: Calculations
Tr	06/23/16	Chp. 3	Exam 1
2	06/27/16	Chp. 3 & 4	Lab 2 : Heat of Fusion
	06/28/16	Chp. 4	Lab 3 Nomenclature
	06/29/16	Chp. 5	" "
	06/30/16	Chp. 5, 6	Exam 2
3	07/04/16	HOLIDAY	
	07/05/16	Chp. 6, 7	Lab 4. Empirical Formulas
	07/06/16	Chp. 7, 8	Lab 5. Net Ionic Equations
	07/07/16	Chp. 8	Exam 3A
4	07/11/16	Chp 9	Lab 6 Molar volume
	07/12/16	Chp 9, 10	Lab 7 Lewis dot diagrams
	07/13/16	Chp 10	Lab 7 cont.
	07/14/16	Chp 11	Exam 3B
5	07/18/16	Chp. 11,12	Lab 8 : Equilibrium constant
	07/19/16	Chp. 12	Lab 9: Titration
	07/20/16	Chp. 13,14	" "
	07/21/16	Chp. 14	Lab Exam
6	07/25/16	Chp. 15, 16	Exam 4
	07/26/16	Chp. 17	Finish Lec material
	07/27/16	Lab Practical Exam	Lab cleanup, equipment , locker checkout
	07/28/16	Lecture Final Exam	