Basic Course Information

Semester	**Fall 2016**	Instructor Name	**Samuel David**
Course Title & #	**CHEM 100; Introduction to Chemistry**	Email	**sam.david@imperial.edu**
CRN #	**10898;10053**	Webpage (optional)	
Room	**2715;2716**	Office	**2772**
Class Dates	**8/15/2016-12/9/2016**	Office Hours	**MTWR: 5:10-6:10**
Class Days	**MWTR**	Office Phone #	**(760) 355-6298**
Class Times Units	**2:00-5:10pm** **4**	Office contact if student will be out or emergency	**Department Secretary (760) 355-6155**

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 200. (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.
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, Bronsted-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

Required Texts:

Hein, Pattison & Arena (2012) Introduction to general, organic & Biochemistry (10th Edition). Wiley ISNB : 978-0-470-59880-1

Tro, Nivaldo J. (2011). Introductory Chemistry (4th/e). Pearson Education . ISBN: 978-032172599

Timberlake, Karen C. (2008). Chemistry; An Introduction to Generai, Organic, and Biological Chemistry (10th/e). Prentice Hall. ISBN: -978-01360197

Course Requirements and Instructional Methods

This course includes both lecture and lab component. In order to pass the class you need to participate in both portions of the class which includes regular attendance and participation in both lecture and lab. In addition to all the exams you must take the final exam to receive a passing 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

Your grade is based on the cumulative points you get in both lecture and lab exams. You are expected to keep track of your progress during the course.
Grading scale:
A= 90% -100
B= 80-89%
C= 70-79%
D=60-69%
F= below 60%

There will be THREE exams (100 Points each)
Final Exam (100 Points) and ONE lab Exam (50 Points)
Points for quizzes will be discussed in the class.

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.

Classroom Etiquette

- 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.
- 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

Required Language

- 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 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 School 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 Help – Discretionary Section and Language

- Blackboard support center: http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543
- Learning Labs: There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the Math Lab, Reading & Writing Lab, and Study Skills Center (library). Please speak to the instructor about labs unique to your specific program.
- 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)

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, 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. We now also have a fulltime mental health counselor. For information see http://www.imperial.edu/students/student-health-center/. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

Student Rights and Responsibilities

Required Language: 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

Required Language: Imperial Valley College is dedicated to helping 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/

Anticipated Class Schedule / Calendar

The instructor will provide a tentative, provisional overview of the readings, assignments, tests, or other activities for the duration of the course.

1	08-15	Chapter 1	08-17	Course Intro; Chapter 1 / Locker Check-in
	08-16		08-18	
2	08-22	Chapter 2	08-24	Experiment 1: Measurements (p11)
	08-23		08-25	
3	08-29	Chapter 3	08-31	**NO LAB : Class Assignment**
	08-30		09-01	
4	09-05	Review Chapters 1-3	09-07	No Lab ; EXAM 1
	09-06		09-08	
5	09-12	Chapter 4	09-14	Experiment 2: Calorimetry and Specific Heat (p43)
	09-13		09-15	
6	09-19	Chapter 5	09-21	Experiment 3: Water in Hydrates (p61)
	09-20		09-22	
7	09-26	Chapter 6	09-28	Experiment 4 Double Displacement (p83)
	09-27		09-29	
8	10-03	Chapter 7	10-05	NO LAB; EXAM 2
	10-04		10-06	
9	10-10	Chapter 8	10-12	Experiment 5: Single Displacement (p89)
	10-11		10-13	
10	10-17	Chapter9,	10-19	NO LAB; Chapter 10
	10-18		10-20	
11	10-24	Chapter 11,12	10-26	NO LAB; Exam 3
	10-25		10-27	
12	10-31	Chapter 13	11-02	NO LAB; Class Assignment
	11-01		11-03	
13	11-07	Chapter 14,15,16	11-09	Experiment 6 : Neutralization- Titration I (p185)
	11-08		11-10	
14	11-14		11-16	Experiment 7 : Neutralization- Titration II (p193)
	11-15		11-17	
15	11-21	HOLIDAY	11-23	HOLIDAY
	11-22		11-24	
16	11-28		11-30	Review.
	11-29		12-01	
