Basic Course Information

Semester	**Fall 2016**	Instructor Name	**Dr. Alejandro Cozzani**
Course Title & #	**Physical Science 110**	Email	**alex.cozzani@imperial.edu**
CRN #	**10062**	Webpage (optional)	**Refer to Blackboard**
Room	**2731**	Office	**2767**
Class Dates	**August 15-December 09, 2016** **Deadline to drop class with W: November 05, 2016**	Office Hours	**Mondays through Thursday 7:00 to 7:30 AM.** **Mondays and Wednesdays 12:50 to 1:50 PM.**
Class Days	**Tuesdays and Thursdays**	Office Phone #	**760-355-5720**
Class Times Units	**11:20 AM - 12:45 AM** **3.0**	Office contact if student will be out or emergency	**Silvia Murray 760-355-6201 or Ofelia Duarte 760-355-6155**

Course Description

This course is designed to give an understanding of the fundamental principles of physics and chemistry as they relate to the structure and properties of matter and the principles of motion and energy, for the liberal studies student.

Student Learning Outcomes

1. Conceptualize the fundamental differences between mass and weight and between speed and velocity, using illustrative examples.
2. Through experimentation involving the use of levers, students will investigate and apply the principle of Conservation of Energy to simple machines.
3. Distinguish between series and parallel circuits, identifying their advantages and disadvantages.

Course Objectives

1. Describe the motion of objects based on position, displacement, velocity, speed, and acceleration.
2. Recognize that forces (pushes and pulls) such as gravity, magnetism and, friction act on objects and may change their motion if these forces are not in balance.
3. Recognize the differences between kinetic energy, potential energy, work, power, and their application to machines.
4. Know the difference between weights and masses and weights of objects using the Universal Law of Gravitation.
5. Know the difference between temperature and heat and know the laws of thermodynamics.
6. Describe the methods of heat transfer and know the phases of matter and how one phase is converted to another.
7. Recognize the differences between electrical forces, voltages, currents, resistance, series circuits, and parallel circuits.
8. Understand the origin of magnetic forces and their application in meters, motors, and generators.
9. Describe wave motion including longitudinal and transverse waves and applications to sound waves.
10. Understand the origin of light waves and the application of frequency to the electromagnetic spectrum and color.
11. Know the difference between reflection and refraction of light.
12. Understand the composition of the atom and the classification of atoms by the periodic table.
13. Understand atomic structure and identification of atoms using a spectroscope.
14. Understand properties of the nucleus including fission, fusion, and radioactive decay.
15. Recognize physical and chemical properties of elements and compounds.
16. Understand mixtures and determining means of classifying and separating them.
17. Understanding ionic, polar, covalent and metallic bonds.
18. Describe chemical reactions.
19. Understand the chemical properties of acids and bases.

Textbooks & Other Resources or Links

Textbook: Conceptual Physical Science (5thEdition) (ISBN 978-0321752932) with Mastering Physics OR Conceptual Physical Science (5thEdition) /A la Carte Edition (ISBN 978-0321804198).

Author: Hewitt, Paul G., John Suchocki, and Leslie A. Hewitt.

Course Requirements and Instructional Methods

1. **Special Project:**
   a. A written report and PowerPoint presentation will be assigned according to students' preferences and presentation dates will be according to the calendar of topics. The written report should be at least five pages long, size 12, double space, at least five bibliography sources, and about 20 slides.
   b. Grading rubric found in Blackboard.
   c. You may use your own computer or the one in the classroom.
   d. Both, PPT and report must be turned in (hard copy or electronically) on or before the presentation day.
   e. **IF YOU ARE ABSENT THE DAY YOU ARE ASSIGNED TO PRESENT, YOUR GRADE IS ZERO (0), NO EXCEPTIONS!**

2. **Homework:** The purpose of homework is to provide the student with sufficient practice to master all topics studied in class and to do well on tests. Homework is done online at www.masteringphysics.com.
   Course ID: MPCOZZANI37369. Please refer to webpage for deadlines (12/03/16).
   ✓ You need to complete at least an overall 80% to get full credit, otherwise your earned percentage will be converted to points (i.e. 80%=100 points, 72%=72 points).
3. **Study Groups**: It is up most important that students review the material to do well on exams. Students are encouraged to form study groups and to meet regularly to keep up with assignments and to study for test/mid-term/final exam and to attend tutoring sessions. It is recommended to invest at least two hours for every hour spent in class (Around 6 hours per week).
4. **Exams**: All exams are multiple-choice and include questions and problems. Students will not be allowed to make up an exam or final exam unless they have a powerful reason to miss a test (e.g. hospitalization, jury duty, etc. and bring the corresponding paperwork as evidence). It is students 'responsibility to notify the instructor via e-mail or by phone to make arrangements.
5. Notes/formulas: During exams, students can use the table of equations and periodic table provided in Blackboard. (No other notes).

Course Grading Based on Course Objectives

The student's grade will depend on the following areas (not on total points):

➢ Special Project (Oral/Written)	20%
➢ Homework	20%
➢ Exam # 1 (Chapters 1-4)	15%
➢ Mid-term (Chapters 6-11)	20%
➢ Final Exam (Chapters 12-18)	25%
➢ **Total**	**100%**

All grades are calculated by using the standard scale of:

A = 100-90% ***B = 89-80%*** ***C = 79-70%*** D = 69-60% F = 59% and below

Blackboard displays two grades: the weighted and the total. Your grade is the weighted one, so please keep it in mind.

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.
- Calculators: scientific calculators can be used during class time and exams. NO phones or tablets as a substitute for calculators during exams.
- Table of equations/Periodic Table: Are allowed during tests. Please refer to Blackboard to print them out.
- 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.

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 (!!!!)].

Academic Honesty

- Plagiarism is to take and present 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 correctly 'cite a source', 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, or assisting others in using materials, which 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 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) use of a commercial term paper service.

Additional Help

- 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 Learning Services (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 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 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. 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

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/

Anticipated Class Schedule / Calendar

The calendar is tentative and it may be modified according to students 'needs.

WEEK #	CORE CONTENT	READING	ASSIGMENT DUE/ EXAM
1-August 15	Syllabus / Introduction Patterns of Motion and Equilibrium	___ Chapter 1	
2-August 22	Patterns of Motion and Equilibrium Newton's Laws of Motion	Chapter 1 Chapter 2	
3-August 29	Newton's Laws of Motion Momentum and Energy	Chapter 2 Chapter 3	
4-September 05	Newton's Law of Universal Gravitation Thermal Energy and Thermodynamics	Chapter 4 Chapter 6	
5- September 12	Heat Transfer and Change of Phase	Chapter 7	***Exam # 1*** ***Chapters 1-4***
6- September 19	Static and Current Electricity	Chapter 8	

7- September 26	Magnetism and Electromagnetism	Chapter 9	***Presentations***
8-October 03	Waves and Sound Light Waves/Properties of Light	Chapter 10 Chapter 11	***Presentations***
9- October 10	Review for Mid-term Mid-term		***Mid-term*** ***Chapters 6-11***
10- October 17	Atoms and the Periodic Table	Chapter 12	***Presentations***
11- October 24	Atomic Models	Chapter 12	***Presentations***
12-October 31	The Atomic Nucleus Elements of Chemistry	Chapter 13 Chapter 14	***Presentations***
13- November 07	Mixtures How Atoms Bond	Chapter16 Chapter 15	***Presentations***
14- November 14	Chemical Reactions Acids and Bases	Chapter 17 Chapter 18	***Presentations***
November 21	***Thanksgiving Break***		***No Class***
15-November 28	Review for Final Exam		***Presentations***
16-December 05	**Day 1: Final Exam** **Day 2: Review exam and answer questions**		***Final Exam*** ***Chapters 12-18***