IMPERIAL VALLEY COLLEGE

COURSE SYLLABUS – PHYSICAL SCIENCE 110 – FALL 2022

Basic Course Information

Semester:	**Fall 2022**	Instructor Name:	**Dr. Alejandro Cozzani**
Course Title & #:	**Physical Science 110**	Email:	**alex.cozzani@imperial.edu**
CRN #:	**10039**	Webpage (optional):	**Refer to Canvas**
Classroom:	**2731**	Office #:	**2767**
Class Dates:	**August 15-December 10, 2022 Last Day to Add: 08/27/22 Drop Deadline with W: 11/05/22**	Office Hours:	**Monday-Wednesday 10:45-11:15 AM and 3:15-3:45 PM Tuesday-Thursday 10:00-11:00 AM (online) or by appointment**
Class Days:	**M-W**	Office Phone #:	**760-355-5720**
Class Times:	**11:20 AM-12:45 PM**	Emergency Contact:	**Silvia Murray 760-355-6201**
Units:	3.0	Class Format:	F2F

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.

Course Prerequisite(s) and/or Corequisite(s)

None

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 (6thEdition) with Mastering Physics OR Conceptual Physical Science (6thEdition) /A la Carte Edition. Pearson. Hewitt, Paul G., John Suchocki, and Leslie A. Hewitt.

Course Requirements and Instructional Methods

1. 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 https://mlm.pearson.com/northamerica/
   - Course ID: cozzani92640. Please refer to webpage for deadlines. 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).

2. **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).
3. **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.
4. **Notes/formulas**: During exams, students can use the table of equations and periodic table provided in Blackboard. (No other notes).
5. **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.

6. **Lecture**: You need to read the chapters or modules because there are assignments aligned to your readings (you can use any textbook of your choice).

7. **Online Discussions**: As part of the course requirements, you need to answer the online discussions found in Canvas, under the "Discussions" tab.

8. **Online Quizzes**: At the end of each chapter or module, you will take a quiz to check your knowledge. Please refer to specific instructions under the "Quizzes" tab in Canvas.
9. **Tests or Exams:** They may be T/F, multiple choice, open-ended, and free response questions (Done in class).
10. **Final Exam:** They may be T/F, multiple choice, open-ended, and free response questions (Done in class).
11. Students will not be allowed to make up any exam or assignment unless they have a powerful reason (e.g., hospitalization) and send the corresponding paperwork as evidence; it is students 'responsibility to notify the instructor via e-mail to make arrangements.

Course Grading Based on Course Objectives

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

➢ Discussion/Quizzes/Simulations	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

- All grades are displayed in Canvas.

Course Policies

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 absence 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 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

- 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

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

- 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.

Other Course Information

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.

- CANVAS LMS. Canvas is Imperial Valley College's main 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. 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 the Study Skills Center.
- 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.
- 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.
- 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.

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit http://www.imperial.edu/studentresources or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

*****Subject to change without prior notice based on students' needs*****

WEEK OF	ACTIVITY, ASSIGNMENT, TOPIC	READING	ASSIGMENT DUE

1-August 15	Syllabus / HW/Canvas Module 0: Meet and Greet MODULE 1: Patterns of Motion and Equilibrium	Read Content Module 0 Read Content Module 1 (Chapter 1 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
2- August 22	MODULE 2: Newton's Laws of Motion	Read Content Module 2 (Chapter 2 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
3 – August 29	MODULE 3: Momentum and Energy	Read Content Module 3 (Chapter 3 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
4- September 05 ***Holiday*** ***Monday 9/05/22***	MODULE 4: Gravity, projectiles, and Satellites	Read Content Module 4 (Chapter 4 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
5- September 12	**Exam # 1 (Modules 2-3-4)** MODULE 5: Thermal Energy and Thermodynamics	Read Content Module 5 (Chapter 6 from textbook)	**Done in Class** *Refer to Canvas and Mastering Physics for due dates*
6- September 19	MODULE 6: Heat Transfer and Change of Phase	Read Content Module 6 (Chapter 7 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
7- September 26	MODULE 7: Static and Current Electricity	Read Content Module 7 (Chapter 8 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
8- October 03	MODULE 8: Magnetism and Electromagnetism	Read Content Module 8 (Chapter 9 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
9- October 10	MODULE 9: Waves and Sound/ Light	Read Content Module 9 (Chapters 10 and 11 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
10-October 17	**Mid-term (Modules 1-9)**	_____	**Done in Class**

11- October 24	MODULE 10: Atoms and the Periodic Table/	Read Content Module 10 (Chapter 12 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
12- October 31	MODULE 11: The Atomic Nucleus and Radioactivity	Read Content Module 11 (Chapter 13 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
13- November 07	MODULE 12: Elements of Chemistry & How Chemicals React	Read Content Module 12 (Chapters 14 and 17 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
14-November 14	MODULE 13: How Atoms Bond and Molecules Attract & Mixtures	Read Content Module 13 (Chapters 15 and 16 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
November 21	***Thanksgiving Break***	***No Class***	
15- November 28	MODULE 14: Two Classes of Chemical reactions	Read Content Module 14 (Chapter 18 from textbook)	*Refer to Canvas and Mastering Physics for due dates*
16-December 05	**Final Exam *(All Modules)***		**Done in Canvas**

Mastering Physics - Student Registration Instructions

To register for Physical Science 110 CRN 10039 Fall 2022:

Go to https://mlm.pearson.com/enrollment/cozzani92640

1. Sign in with your Pearson student account or create your account.
2. Select any available access option, if asked.
    a. Enter a prepaid access code that came with your textbook or from the bookstore.
    b. Buy instant access using a credit card or PayPal.
    c. Select Get temporary access without payment for 14 days.
3. Select Go to my course.
4. Select Physical Science 110 CRN 10039 Fall 2022 from My Courses.

If you contact Pearson Support, give them the course ID: **cozzani92640**.

To sign in later:

1. Go to https://mlm.pearson.com
2. Sign in with the same Pearson account you used before.
3. Select Physical Science 110 200 CRN 10039 Fall 2022 from My Courses.