

Basic Course Information

Summer 2019	Instructor Name	Dr. Alejandro Cozzani
Physics 202	Email	alex.cozzani@imperial.edu
30220	Webpage (optional)	Refer to Canvas
2731	Office	2767
June 17—July 25, 2019 Last day to add: June 19, 2019 Deadline to drop with W: July 16, 2019	Office Hours	None
Monday, Tuesday, Wednesday, and Thursday	Office Phone #	760-355-5720
12:30-2:10 and 2:20 to 5:35 PM	Office contact if student will be out or	Silvia Murray 760-355-6201 or Ofelia Duarte 760-355-6155
	Physics 202 30220 2731 June 17—July 25, 2019 Last day to add: June 19, 2019 Deadline to drop with W: July 16, 2019 Monday, Tuesday, Wednesday, and Thursday	Physics 202Email30220Webpage (optional)2731OfficeJune 17—July 25, 2019Office HoursLast day to add: June 19, 2019Office HoursDeadline to drop with W: July 16, 2019Office Phone #Monday, Tuesday, Wednesday, and ThursdayOffice contact if student will be out or

Course Description

This course is designed to give an understanding of the fundamental principles of physics in the areas of electricity, magnetism, atomic, and nuclear physics.

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

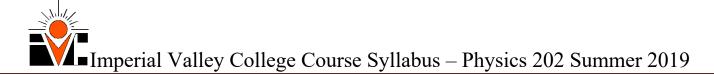
PHYS 200 or equivalent with a grade of "C" or better and MATH 194 with a grade of "C" or better or concurrent enrollment in MATH 194.

Student Learning Outcomes

- 1. Solve problems involving Coulomb's law, Gauss's law, and electric fields. (ILO 1, ILO 2).
- 2. Solve problems involving capacitors, resistors, and electric current. (ILO 1, ILO 2).
- 3. Solve problems involving magnetic fields in and near conductors, the motion of charged particles in a magnetic field, and Faraday's and Lenz's Laws. (ILO 1, ILO 2).

Course Objectives

- 1. The student will solve problems involving electric charges, electric field lines and the motion of a charged particle in a uniform electric field.
- 2. The student will solve problems involving Gauss' Law.
- 3. The student will solve problems involving electrical potential, potential energy due to point charges and continuous charge distributions.
- 4. The student will solve problems involving capacitors.
- 5. The student will solve problems involving current, resistance, electrical energy and power.
- 6. The student will solve problems involving EMF, resistor combinations, Kirchoff's Law, and RC circuits.
- 7. The student will solve problems involving magnetic fields in and near conductors, and the motion of charged particles in a magnetic field.
- 8. The student will solve problems involving the magnetic field of various sources.
- 9. Student will solve problems involving Faraday's and Lenz's Laws, and induced EMFs.
- 10. The student will solve problems involving inductance for RL, LC, and RLC circuits.
- 11. The student will solve problems involving resistors, inductors, and capacitors in an AC circuit.
- 12. The student will solve problems involving electromagnetic waves.
- 13. The student will solve problems involving molecular bonds, the energy spectra of molecules, and semiconductors.
- 14. The student will solve problems involving nuclear binding energy, radioactivity, and the decay process.



15. The student will solve problems involving collisions between nuclear particles, fission, fusion, and elementary particles.

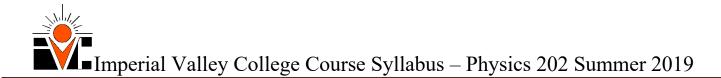
Textbooks & Other Resources or Links

1. Textbooks (either one):

- a. Fundamental of Physics, 10th edition, Chapters 21-32, 41-43, ISBN: 978-1-118-23072-5 (Wiley).
 i. Halliday/Resnick/Walker.
- b. Physics for Scientists and Engineers, 4th edition, Chapters 21-31,40-42, ISBN: 978-13-149508-1 (Pearson).
 - i. Giancoli, Douglas C.
- c. University Physics, Volumes II and III (Openstax.org).
 - i. William Moebs, Samuel J. Ling, and Jeff Sanny.

Course Requirements and Instructional Methods

- 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 <u>www.masteringphysics.com</u>. Course ID: MPCOZZANI7248591. 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).
 - It is extremely important that you use the same first and last name as in the IVC roster otherwise you may not get credit for HW. Also, you cannot use someone's else account to do the HW. No exceptions!
 - As part of the HW section, we will have review questions/problems at the beginning/end of the class that need to be turned in for a grade (it counts as <u>class participation</u>). If you are absent or late, you will miss the points and unfortunately, there are no makeups.
- 2. <u>Out of Class Assignments</u>: 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 <u>and</u> two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.
- **3.** Lab Reports: These reports must be typed, double-space, font Times New Roman or similar, size 12, and the graphs must be done with Excel or any graphing program (i.e. TI InterActive). Reports are due a week after the experiments have been performed (If the experiment was done on September 03, it is due on September 10). No corrections will be allowed. No exceptions and no late submissions!
 - a. You are required to answer the questions and graphs for each lab; however -if you are absent- you must submit an individual full report as shown in Canvas (no exceptions).
- 4. Lecture: It is highly recommended to read the chapters in advance.
- 5. Tests or Exams: They may be T/F, multiple choice or combination of T/F and/or multiple choice and free response questions. No makeup exams!
- 6. Lab Tests: Students will be tested on laboratory experiments. These will be based on the data collected and the analysis questions on the experiments. You may be asked the exact same questions or similar to those found on the lab manual and some theoretical questions related to those labs. No makeup exams!
- **7.** The laboratory environment contains a variety of chemical and physical hazards. It is vital to understand those potential hazards and their safeguards in order to prevent accidents and injuries.
 - a. In order to work in a laboratory in the Science Department at Imperial Valley College, the student must understand and agree to abide by the laboratory safety rules set forth. Please log into Webstar with your credentials and find <u>Sports Survey and Safety Policy</u>.



- **b.** Read the guidelines and answer <u>yes</u> to all the questions and click "<u>submit</u>." Failure to comply will result in no lab participation with the corresponding zeros in experiments until the form is submitted.
- 8. Mid-term: It may include questions from the tests (recycled questions) and new questions (you have not seen them before but with similar difficulty). No makeup!
- 9. Final Exam: It may include questions from the tests (recycled questions) and new questions (you have not seen them before but with similar difficulty). The MC section will include ALL chapters. No makeup!
- **10.** Students will not be allowed to make up any 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.
- 11. Notes/formulas: During exams, students can only use the table of equations provided in Canvas (No other notes).
- 12. Special Project: Please see below.

Rubric

Criterion	High (5)	Medium (3)	Medium-Low (2)	Low (1)	Student Evaluation	Instructor Evaluation
Content/	accurate and	information is	information has	major errors in		
information	concise; all	accurate; relevant	some errors; most	information		
	relevant	information is	of the relevant	presented; not all		
	information is	present with some	information is	relevant		
	presented	details missing;	present; states	information		
	completely; clearly	states all principles	some of the	presented; names		
	describes all	involved &	principles covered;	a few or none of		
	principles involved;	describes most;	no history	the principles		
	gives accurate	gives brief history	,	involved; no		
	history of	5 , ,		history		
	application or			,		
	theory					
Presentation	makes eye	some eye contact;	no eye contact;	avoids looking at		
	contact; speaks	little need to	uses notes	audience; reads		
	knowledgeably	reference notes;	frequently; very	notes; no		
	without referring	some involvement	little involvement	involvement with		
	to notes; involves	with fellow	with fellow	fellow students;		
	fellow students;	students; varies	students; rarely	speaks in a		
	clear well	voice at times	varies voice	, monotone		
	modulated voice					
Visual Aids (models,	aid used in the	aid is used but as	visual aid is messy	no visual aids used		
diagrams, etc.)	presentation is	such is messy	and poorly			
	neat and	(globs of glue,	organized; adds			
	organized;	dirty/cramped,	little support to			
	provides excellent	dirty, pieces of	the presentation			
	, support to the	tapes, etc.);	,			
	presentation	provides good				
	, making the words	support for the				
	more easily	presentation				
	understood	,				
Creativity	keeps other	some students	fails to capture	fails to capture		
-	students	appear distracted	and maintain	student interest at		
	interested	at times during the	interest of all	any time		
	throughout	presentation	students			
Organization	presentation	presentation	presentation not	presentation lacks		
2	follows a logical	follows a logical	given in a logical	organization;		



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	pattern; smooth transitions between sections	pattern; only a few rough points	sequence but some organization present; transitions are abrupt	speaker appears to move randomly from one idea to the next	
Understanding of the Topic	presenter conveys an outstanding understanding of the material	presenter conveys a good understanding of the material	presenter lacks a complete understanding of the material	presenter has a poor understanding of the material	

Oral presentation

- a. Follow Rubric for point distribution.
- b. Topics: Any chapters not addressed in class.
- c. Please refrain from merely reading aloud from the PPT or notes; explain your section in your own words or points may be deducted!

Review questions

- d. About five (5).
- e. They should reflect what you have taught to your classmates. You may use the ones available in BB but make sure you know the answers and the reason for those answers.

Review problems (about three with increasing level of difficulty).

f. You have to be able to explain them to your classmates in an understandable way.

Presentation dates: according to sign-up list. Once dates have been established, they cannot be changed because presentations have a sequential order. You will be allowed to pick the topic and your team members (no more than 3 per group) or you may work individually if you prefer to do so.

Minimum time is 30 minutes and up to an hour long (to be determined depending how many groups will present per day).

F = 59% and below

- > If you are absent the day of your presentation, your grade is ZERO (no exceptions!) so plan ahead.
- > Use your own computer or the one available in the classroom.

Course Grading Based on Course Objectives

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

\succ	Homework /Class Participation	15%
\triangleright	Tests – Presentation	20%
۶	Lab Reports - Lab Tests	15%
۶	Mid-term	20%
۶	Final Exam	30%
≻	TOTAL	100%

All grades are calculated by using the standard scale of:

A = 100-90% B = 89-80% C = 79-70% D = 69-60%

Grades will be displayed in Canvas and you need to earn at least a "C" to pass the course.



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 <u>General Catalog</u> 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

- <u>Electronic Devices</u>: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- <u>Food and Drink:</u> 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.
- <u>Disruptive Students</u>: 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 <u>General Catalog</u>.
- <u>Children in the classroom</u>: 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 (!!!!)].

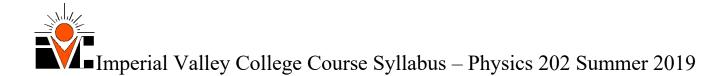
Academic Honesty

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 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.

- CANVAS LMS. Canvas is Imperial Valley College's main Learning Management System. To log onto Canvas, use this link: <u>Canvas</u> <u>Student Login</u>. The <u>Canvas Student Guides Site</u> 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.
- <u>Learning Services</u>. There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your <u>Campus Map</u> for the <u>Math Lab</u>; <u>Reading</u>, <u>Writing & Language Labs</u>; and the <u>Study Skills Center</u>.
- <u>Library Services</u>. There is more to our library than just books. You have access to tutors in the <u>Study Skills Center</u>, 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 <u>Disabled</u> <u>Student Programs and Services</u> (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.

- <u>Student Health Center</u>. 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 <u>Student Health</u> <u>Center</u> at 760-355-6128 in Room 1536 for more information.
- <u>Mental Health Counseling Services</u>. Short-term individual, couples, family and group counseling services are available for currently enrolled students. Services are provided in a confidential, supportive, and culturally sensitive environment. Please contact the IVC Mental Health Counseling Services at 760-355-6310 or in the building 1536 for appointments or more information.

Veteran's Center

The mission of the <u>IVC Military and Veteran Success Center</u> is to provide a holistic approach to serving military/veteran students on three key areas: 1) Academics, 2) Health and Wellness, and 3) Camaraderie; to serve as a central hub that connects military/veteran students, as well as their families, to campus and community resources. Their goal is to ensure a seamless transition from military to civilian life. The Center is located in Building 600 (Office 624), telephone 760-355-6141.

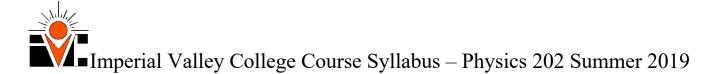
Extended Opportunity Program and Services (EOPS)

The Extended Opportunity Program and Services (EOPS) offers services such as priority registration, personal/academic counseling, tutoring, book vouchers, and community referrals to qualifying low-income students. EOPS is composed of a group of professionals ready to assist you with the resolution of both academic and personal issues. Our staff is set up to understand the problems of our culturally diverse population and strives to meet student needs that are as diverse as our student population.

Also under the umbrella of EOPS our CARE (Cooperative Agency Resources for Education) Program for single parents is specifically designed to provide support services and assist with the resolution of issues that are particular to this population. Students that are single parents receiving TANF/Cash Aid assistance may qualify for our CARE program, for additional information on CARE please contact Lourdes Mercado, 760-355- 6448, <u>lourdes.mercado@imperial.edu</u>.

EOPS provides additional support and services that may identify with one of the following experiences:

- Current and former foster youth students that were in the foster care system at any point in their lives
- Students experiencing homelessness
- Formerly incarcerated students



To apply for EOPS and for additional information on EOPS services, please contact Alexis Ayala, 760-355-5713, <u>alexis.ayala@imperial.edu</u>.

Student Equity Program

- The Student Equity Program strives to improve Imperial Valley College's success outcomes, particularly for students who have been historically underrepresented and underserved. The college identifies strategies to monitor and address equity issues, making efforts to mitigate any disproportionate impact on student success and achievement. Our institutional data provides insight surrounding student populations who historically, are not fully represented. Student Equity addresses disparities and/or disproportionate impact in student success across disaggregated student equity groups including gender, ethnicity, disability status, financial need, Veterans, foster youth, homelessness, and formerly incarcerated students. The Student Equity Program provides direct supportive services to empower students experiencing insecurities related to food, housing, transportation, textbooks, and shower access. We recognize that students who struggle meeting their basic needs are also at an academic and economic disadvantage, creating barriers to academic success and wellness. We strive to remove barriers that affect IVC students' access to education, degree and certificate completion, successful completion of developmental math and English courses, and the ability to transfer to a university. Contact: 760.355.5736 or 760.355.5733 Building 100.
- The Student Equity Program also houses IVC's Homeless Liaison, who provides direct services, campus, and community
 referrals to students experiencing homelessness as defined by the McKinney-Vento Act. Contact: 760.355.5736 Building
 100.

Student Rights and Responsibilities

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 <u>General Catalog</u>.

Information Literacy

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC <u>Library Department</u> provides numerous <u>Information Literacy Tutorials</u> to assist students in this endeavor.

Anticipated Class Schedule / Calendar

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

WEEK #	CORE CONTENT	ASSIGNMENTS – TESTS	
1-June 17	Syllabus / Introduction	Read Chapter 21	
	Chapter 21	Read Chapter 22	
	Chapter 22		
		Read Chapter 23	
2-June 24	Chapter 23	Read Chapter 24	
	Chapter 24		
		Test # 1 (Chapters 21-22-23)	
	Chapter 25	Dood Chapter 25	
	Chapter 25	Read Chapter 25	
3-July 01	Chapter 26	Read Chapter 26	



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4-July 08	Chapter 27	Read Chapter 27
	Chapter 28	Read Chapter 28
		Mid-term (Chapters 21-26)
5-July 15	Chapter 29	Read Chapter 29
	Chapter 30	Read Chapter 30
		Read Chapter 31
6-July 22	Chapter 31	Read Chapter 32
	Chapter 32	HW is due
		Final Exam (Chapters 21-32)