UNIVERSITY of VIRGINIA

UVA IN VALENCIA PROGRAM

PHYS 2030 – GENERAL PHYSICS I LAB

FOR PRE-HEALTH STUDENTS

I. COURSE DESCRIPTION

Physics 2030 is a separately graded course. The goal of this workshop is to learn a systematic problem-solving methodology: to provide practice in collaborative work and problem-solving, to help develop better oral and written communication skills, and to foster confidence in the ability to perform experimental measurements and to properly analyze and interpret data. This is achieved through an introduction to relevant physical concepts and phenomena, as well as laboratory procedures, the use of computers and data sensors, and instruction in basic laboratory techniques. Physics 2030 covers experiments related to the principles of mechanics, rotational dynamics, the properties of matter, and wave motion.

II. GRADING SCALE AND BREAKDOWN

Grades will be awarded according to the **Uva grading scale**:

A 10-9 **A-** 8,9-8	**B+** 7,9-7 **B** 6,9-6 **B-** 5,9-5,5	**C** 5,4-5	**F** 4,9-0

Grade Breakdown

Pre-lab homework	20%
Lab performace and Weekly lab report	40%
Post-lab homework	40%

Pre-lab homework (20%)

Before the first session of each laboratory or class, read the laboratory manual in its entirety. Solve all predictions and preparatory questions. It is not important that you get every prediction right, but it is important that you have made a sincere attempt. Before starting the practical activities, the instructor will ask questions related to the manual that was studied, in order to check prior preparation related to the lab session that will be conducted.

Lab performace and Weekly lab report (40%)

During the lab session, you must answer all warm-ups and predictions, and attach data, results, graphs, and analysis. These results are due at the end of the lab period. You will work in pairs or groups of three. A free exchange of ideas between group members (and anyone in the laboratory) is absolutely essential to your success in the lab. We expect you to share in taking data, operating the computer system, and writing the report. Set clear expectations and firm deadlines among your group members from the very first meeting. The report must be submitted individually. Each student must submit an independent report based on the results obtained.

Post-lab homework (40%)

You are expected to clean up your workplace after you finish the lab. Please leave the tables in similar or better condition than you found them. Repeated offenders of this policy will receive a penalty on their reports. One report per student will be submitted for grading. The following rubric is important regarding participation grades:

- **A:** The student always prepares for class and complies with the daily assigned work plan; participates voluntarily and frequently, works well as a team, and contributes positively to the classroom environment.
- **B:** The student participates voluntarily and frequently by answering questions from the instructor.
- **C:** The student participates sporadically when asked by the instructor and occasionally asks questions.
- **D:** The student does not make an effort to participate or does minimal work.
- F: The student is absent and shows disrespect to other peers and to the instructor.

III. BIBLIOGRAPHY AND MATERIALS

The reference textbook we will use is College Physics: A Strategic Approach, Knight, Jones & Field, Pearson Education, 4th edition. Additionally, the manual for each laboratory experiment will be provided in advance; these should serve as a guide for each lab session.

IV. COURSE PLANNING AND CALENDAR

(Please note that this could change as the semester progresses)

DATES	CONTENTS
9/8/2026	**Statistical processing of measurement results**
9/10/2026	**Statistical processing of measurement results**
9/15/2026	**Determinación de la densidad de una sustancia.**
9/17/2026	**Determinación de la densidad de una sustancia.**
9/22/2026	**Friction**
9/24/2026	**Friction**
9/29/2026	**Toppling o Overturning**
10/01/2026	**Toppling o Overturning**
10/06/2026	**Review**
10/08/2026	**Spring**
10/20/2026	**Spring**
10/22/2026	**Oscillations.**
10/27/2026	**Oscillations.**
10/29/2026	**Moment of Inertia of a Body with Respect to Various Axes.**

11/03/2026	**Moment of Inertia of a Body with Respect to Various Axes.**
11/05/2026	**Study of the Simple Pendulum and the Physical Pendulum**
11/10/2026	**Study of the Simple Pendulum and the Physical Pendulum**
11/12/2026	**Review**
11/17/2026	**Study of the fall of a body in a resistant medium**
11/19/2026	**Study of the fall of a body in a resistant medium**
11/24/2026	**Free fall of a body with negligible air resistance**
11/26/2026	**Free fall of a body with negligible air resistance**
12/01/2026	**Review**
12/03/2026	**Study of the Physical Pendulum**
12/10/2026	**Study of the Physical Pendulum**
12/11/2026	**Review**

IMPORTANT INFORMATION

1) Use of Spanish at the Center

The use of Spanish at the Center is strongly encouraged. Remember that you have come to Spain to learn Spanish and immerse yourself in its culture, and there is no better way to do so than by using Spanish on as many occasions as possible.

2) Class Attendance and Tardiness

2.1) Attendance and punctuality are essential for the successful completion of the course. Consequently, unexcused absences and lateness will negatively affect the final grade.

2.2) Only one unexcused absence is permitted. Please bear this in mind when planning trips or outings.

2.3) Arriving more than 5 minutes late to class will count as half an absence (1/2). It is the student's responsibility to notify the instructor of an absence before the class begins.

2.4) Arriving more than 30 minutes late to class will be considered an absence.

2.5) Four (4) unexcused absences will result in the student not receiving credit for the course.

2.6) Only documented absences will be considered excused: a religious holiday, a family emergency, or a medical appointment. Medical absences must be supported by a doctor's note and submitted at reception on the day the student returns to class after the incident has ended.

3) Academic Integrity

3.1) The exchange of information is not only permitted but is also a way of enriching the knowledge acquired during the course. However, all work submitted for each course must be individual and original in every respect. Any sources and direct quotations used must be properly cited.

3.2) Remember that the use of artificial intelligence to complete assignments or examinations is strictly prohibited unless an instructor expressly states otherwise. Such use constitutes a lack of authenticity, and may amount to direct plagiarism, in addition to undermining the development of critical thinking and writing skills, which are among the primary goals of this program. Failure to comply with this rule will result in a grade of "F" for the course.

3.3) Any work that has received credit for one course will NOT be accepted for credit in another course. There will be NO exceptions to this rule. Reusing such work will result in immediate failure of the second course. If

assignments for two different courses are related in any way and the student has questions about whether the second project is permissible, the matter must be discussed with all instructors involved. This will prevent any possible unintentional violation of this rule.

3.4) As with punctuality, assignments must be submitted on time. Any late submission will result in a reduction of the grade for that assignment.

3.5) Failure to comply with the provisions set out above will result in the loss of the corresponding course credits for the course in which these rules have been violated.

3.6) If you have a documented special need that requires academic accommodations (SDAC), it must be certified by your home institution. Please contact the Head of Studies in Valencia, María Andrés (maria.andres@uvavalencia.org).

4) Activities, Workshops, and Lectures

Throughout the course, various activities, workshops, and lectures are organized. Participation may be voluntary or mandatory if the instructor considers the activity relevant to the course.

5) Classroom Conduct

5.1) It is very important that all students arrive to class on time, prepared, and with the materials needed for the day. During class, students must treat one another and the instructor with respect, demonstrate a positive attitude, and help create a participatory and collaborative environment that supports effective learning. Any violation of these expectations will have direct consequences.

5.2) Electronic devices (laptop, mobile phone, smartwatch) may be used in class only for course-related purposes. If a student uses such technology for personal reasons during class, the student may be penalized with an unexcused absence.

5.3) The use of computer or electronic technology during examinations is prohibited unless the instructor determines otherwise in accordance with the examination format.

6) Course Content

On occasion, and always within the context of the course, certain “sensitive” topics may be addressed both inside and outside the classroom. Therefore, if a student feels offended by such content in a particular class, the student may leave the class, and doing so will not have any negative effect whatsoever on the final grade. Faculty members will always be open to communication and dialogue in order to promote better intercultural understanding.

7) Final Clarification

The instructor may modify or add activities and/or change the dates indicated according to the learning needs of the group. Effective learning requires not only careful planning, but also a certain degree of flexibility.