



PHYSICS
Science
Remedial Activities for Secondary V Physics
203-001-50 (all sections)
Summer 2017

Teachers	Alex Pronine 7A.24, local 4029, pro9physic@gmail.com (Cont'Ed)
Pre-requisites	High School Physics 553-504 (grade less than 70%), or High School Sec IV Science 558-404 or 402, or Physical Science 436 or CEGEP 982-003-50
Co-requisites	Remedial Activities for Sec V Mathematics (201-015-50)
Ponderation	6.8-3.4-6.8 (6 hours 50 min of lecture, 3 hours 25 min of labs, and 6 hours 50 min of work outside class per week)
Course objectives	This course is a prerequisite for Mechanics (203-NYA-05), the first physics course in the Science Program. It aims at developing the basic knowledge and skills needed to succeed in Mechanics and in the Science Program. It also provides an opportunity for students to develop problem-solving skills.
Course competencies	To exhibit an understanding of basic physics principles through analysis of phenomena in mechanics and geometric optics and to demonstrate preparedness for College level studies in Science. Elements of the Competency: <ol style="list-style-type: none">1. Knowledge<ul style="list-style-type: none">To state the principles and laws of physics dealt with in this course.To state precise definitions of the physical quantities presented in this course, including proper SI units.2. Problem-solving skills<ul style="list-style-type: none">To represent a physical situation by means of appropriate diagrams.To solve problems in an organized, methodical fashion, showing all work and explaining each step.To solve problems involving several main steps.To solve problems involving more than one principle or law.To display a certain facility in employing mathematical techniques to solve physics problems:<ul style="list-style-type: none">{ construction of appropriate mathematical representations of physical situations manipulation of vectors, both graphically and analytically, in two dimensions;{ set up and solution of algebraic equations and systems of equations;{ manipulation of trigonometric, logarithmic and exponential functions;{ construction and interpretation of graphs, including slopes, areas, intercepts and intersection points;{ competent use of a scientific calculator.3. Communication<ul style="list-style-type: none">participate actively and articulately in class discussions and activities.To present answers to numerical problems in complete sentences.To explain simple phenomena from daily life, sports and technology:<ul style="list-style-type: none">{ in terms of the principles and laws presented in this course;{ in a few paragraphs;{ logically and coherently;{ in grammatical English.

4. Laboratory Work

To follow a detailed, written laboratory protocol with sufficient care to obtain reliable data.

To work effectively as part of a lab group of two or three students.

To present data in an organized way, using graphs and tables as appropriate.

To analyze the data as directed in the lab protocol, and draw reasonable conclusions based on the results obtained.

To submit a written laboratory report for each experiment in conformity with the course standards for lab reports, and on time.

5. Attitudes and behaviors

To show curiosity about and interest in the study of physics and its applications.

To have a serious and organized approach to college studies:

{ regular attendance;

{ participation in class and labs;

{ keeping up to date in courses, meeting deadlines for work;

{ seeking help and advice as appropriate, to master material, to improve study skills and to plan academic career;

{ setting priorities and managing time effectively;

{ scrupulous academic honesty.

Attendance & participation

Although class attendance is not compulsory, students should make every effort to attend all classes. In the event that a class is missed, the student is responsible for all material covered or assigned during that class. **Attendance during laboratory experiments and for class tests is however compulsory.** In the rare event that a student for valid reason (*e.g.* due to an intensive course, illness, *etc.*) is or anticipates to be absent during a laboratory experiment or for a class test, the student **must**, where possible, inform the teacher and provide the necessary documents before the absence or, at the latest, on the day of their return. If the absence is excused, students will have the opportunity to complete the assessment.

All other assessments (readings, quizzes, lab activities, *etc.*) missed due to absence are:

assigned a grade of zero where the absence is not excused;

given zero weight in the calculation of the final grade where the absence is excused.

For additional information regarding attendance, students should refer to the Institutional Student Evaluation Policy (ISEP section IV-C).

Literacy standards

It is expected that students will be able to comprehend the course material and express themselves appropriately as a normal part of their academic performance in the course. Marks may be deducted for inadequate communication skills.

Laboratory work

Experimentation is an essential part of science. Students will be expected to perform experiments and report on their results. Your teacher will provide you with instructions for lab experiments and activities (there is no manual to purchase). **Students must be present during the entire lab activity to receive credit.**

Student conduct

Everyone has the right to a safe and non-violent environment. Students are obliged to conduct themselves

**Questions
outside class**

All regular day program teachers will be available in their respective offices to their students during posted office hours. In the first week, your teacher will inform you of their schedule and will post it outside their office.

Room 7A.1 is the physics study room. At scheduled times, a teacher or peer tutor will be on duty there to answer your questions. The schedule of teachers and peer tutors will be posted outside of 7A.1 in the 2nd or 3rd week of term.