

PHYS 120: Physics I

Fall 2021

Professor: Dr. Devika Chithrani

Office Hours: Tuesdays & Wednesdays 12.00-1.00 pm

Email: devikac@uvic.ca

Abstract

Particle dynamics; force and momentum; rotation and static equilibrium; kinetic and potential energy; special relativity.

Text:

For Physics 120, we will use University Physics (OpenStax).

Here, you can find the source materials. This is available for free online. You can order these books online if you need a hard copy. We will use the contents from volume 1 and 3 for this course. We have created a booklet with relevant chapters from those two volumes and it is available as a PDF copy in your bright space.

Here are the links:

<https://openstax.org/details/books/university-physics-volume-1>

<https://openstax.org/details/books/university-physics-volume-3>

Assignments:

This will be done using bright space.

Labs: All labs will be in person. Your lab coordinator will send you information about labs.

Marking Scheme

	A	B	
-Assignments	15%	15%	
-Labs	20%	20%	Labs must be passed (above 50%) to pass course
-Midterm exams	25%	15%	
-Final exam	40%	50%	

The scheme used (**A** or **B**) is the one that gives you the highest mark

Topics covered in the course

Introduction (units and dimensional analysis)

Vectors

Motion Along a Straight Line

Motion in Two and Three Dimensions

Newton's Laws of Motion

Applying Newton's Laws

MIDTERM 1 - OCT, 2022 (Date to be determined)

Work and Kinetic Energy

Potential Energy and Conservation

Momentum, Impulse and Collisions

MIDTERM 2 – Nov, 2022 (Date to be determined)

Rotation of Rigid Bodies

Torque and Static Equilibrium

Relativity

FINAL - To Be Determined

Lectures will be given during the allocated lecture times: Tuesdays, Wednesdays, and Fridays from 1.30 to 2.30 pm PST. Lecture notes will be posted after the lecture. Assignments are biweekly and time estimated for each assignment is ~ 90 minutes. Assignments will be done using Bright space.