

PHYS 120 –Physics I
Course Outline: Sept 2016 – Dec 2016

Instructor: Dr. M. Laidlaw
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Lectures: 1:30 – 2:30 TWF, ELL 167
I will post office hours on the PHYS 120 “CourseSpace” site.

Labs: Lab sections are normally held in Elliott 136. Labs start September 12. You will be given your laboratory schedule at the first lab. You must complete all labs and have satisfactory standing to obtain credit for the course. Students who miss their first scheduled lab may be required to withdraw from the course.

Prerequisite: MATH 100 or 109 and BC Physics 12
I will teach this course assuming that you have mastered equivalent material to BC Physics 12. Lab exercises are elaborations of material covered in BC Physics 12.

Required Texts: “University Physics” Young/Freedman
“PHYS 120 Workbook” Keeler/Laidlaw
“PHYS 120 Lab Manual”

The “University Physics” text is sold in the Bookstore packaged with access to an online course management system: MasteringPhysics. This system is required in order to access, complete, and receive credit for the assignments.

Course objective:

In this course we will give an overview of, and teach the basic principles of, a number of areas of physics. You will learn to analyze physical systems and to identify the principles by which they operate. You will also learn to apply and interpret mathematical tools such as vectors, calculus, and symbolic manipulation to predict and understand the behavior of these systems. In the process we will stimulate your curiosity about the physical world and help you develop analytical thinking skills that you can apply in your future studies.

Course content:

Particle dynamics and curvilinear motion; force and momentum; rotational dynamics and angular momentum; kinetic and potential energy; special relativity.

Organizational Details:

Midterm Exams:

There will be in-class midterm exams on October 14 and November 15.
I expect you to write both midterm exams.

Final Exam:

There will a final exam during the December exam period.
The date is centrally scheduled, and normally finalized in late October.
Do not plan December travel before you know the exam schedule.
You must write the final exam to get credit for this course.

Supplementary Course Material:

I will distribute any course material via the “CourseSpaces” site for PHYS 120, available at coursespaces.uvic.ca. I expect that this material will include guidance about what material to study in preparation for lectures and exams.

Assignments:

Assignments will be assigned and due approximately weekly.
There will be two kinds of assignments:

- Automated assignments administered through www.masteringphysics.com
- Written-answer assignments handed in during class.

For the automated assignments the course-ID is: **PHYS120UVIC201609**

I have chosen to administer automated assignments to provide some straightforward practice with feedback, and written-answer assignments to give you experience explaining your reasoning.

Assignments are due at the time indicated; I will not accept late assignments and I will not give extensions on any assignments.

Accommodations:

I am willing to arrange reasonable accommodations for:

- Missed exams due to illness or other severe affliction;
- Missed assignments or course deadlines due to illness or other affliction;
- Conflicts between classes or examinations and your religious observances;
- Issues documented through RCSD; and
- Other issues.

If you miss an exam for any reason, I expect you to contact me as soon as possible after the exam. If you anticipate missing a course requirement, I expect you to contact me a reasonable amount of time in advance.

If something comes up that adversely affects your performance, please talk to me. I can't help you if I don't know about the problem.

Students who have previously attempted PHYS 120 may be eligible to be *exempted* from laboratory work; applications for this exemption will only be considered before September 23.

Keys to Success

Don't cheat on exams, assignments, or in your labs. Cheating, plagiarism, and other forms of academic fraud are taken very seriously both by the instructors and the University. The *Policy on Academic Integrity* can be found in the Undergraduate Calendar. It is available online at:

<http://web.uvic.ca/calendar2016-09/FACS/UnIn/UARe/PoAcI.html>

You should note that the typical penalty for cheating on an exam is being assigned the grade F in the course. If the instructors have a reasonable apprehension that an academic integrity violation has occurred then they may take this into account in their exercise of academic judgment when assigning grades; this is separate from any disciplinary process.

There are several places where you can get help, both with Physics and with other issues:

- The Physics Aid Center (drop-in Physics Q&A held in Elliot 038)
- The Learning Commons (help with Math, Writing, and Learning Skills.)
- Your instructors. We have office hours for a reason.
- Resource Centre for Students with a Disability (472-4946)
- Counseling Services (721-8341)

Keys to success:

- Attend lectures – you won't be exposed to the material if you don't.
- Read the text – the text explains things in a slightly different way from us; having access to different perspectives will help you synthesize the material.
- Read the workbook – we have chosen the problems in it to serve as examples of the concepts we believe are important.
- Do the assignments – We choose the problems to help teach the principles that are important for learning.
- Study – We expect that this class will take you around 12 hours per week between classes, labs, assignments, and studying.
- Ask for help if you find yourself falling behind.

What we expect you to do:

- Read the text prior to coming to lecture.
- Work through problems in the workbook as the material is covered.
- Start your assignments well before the due date.
- Study continually; this isn't a class you can do well in with a "cram and memorize" strategy.

You may ONLY use a non-programmable, non-graphing calculator for exams. Examples of acceptable calculators are the Sharp EL-510R or EL-510RNB; they can be bought in the Bookstore for about \$10.

Marking and Grades:

To obtain credit in the course you must:

- Have a satisfactory score on the final (end-of-term) exam. In the past a score of roughly 40 has been minimally satisfactory.
- Complete all labs *and* have satisfactory standing in the labs.
- Have a score above 50 based on the following method of calculation:

	Value	
Assignments (total)	10	approximately 2 weekly
Labs	20	all labs must be completed
Midterms (total)	20	
Final Exam	50	

In all cases, I will use the score (as determined above) to guide my determination of an appropriate letter grade. Once I have determined an appropriate letter grade, I will assign a corresponding percentage grade. The University of Victoria has a standardized conversion between percentage grades and letter grades. This marking scheme is:

A+	90-100	B+	77-79	C+	65-69	F	0-49
A	85-89	B	73-76	C	60-64		
A-	80-84	B-	70-72	D	50-59	N	Not Complete

The meanings of the percentage grades are explained in the current Undergraduate Calendar. I will ensure that assigned grades correspond to the narrative descriptions.

The official descriptions can be found online:

<http://web.uvic.ca/calendar2016-09/FACS/UnIn/UARe/Grad.html>.

In Physics, a discipline norm is that mastery combines very good comprehension with the ability to demonstrate that comprehension under time pressure, such as in an exam situation. Full engagement with course activities includes submitting essentially all assignments.

Marks in individual components typically roughly correspond to the following grades:

Exams:	0-40: F	40-60: C/D	60-80: B-range	80-100: A-range
Assignments:	0-50: F	50-80: C/D	80-100: A or B-range	
Labs:	0-50: F	50-70: D	70-100: A through C-range	

I do not grade on a curve.

I will review all lab marks prior to assigning a final grade.

I will normally not offer supplemental examinations, and so will normally not assign the grade E.

The grade N is a failing grade that indicates that you did not complete the required course work. I will assign an N if you do not write the final exams, if you do not complete all labs, or if you do not have satisfactory standing in the labs. I will assign the percentage grade 0% for all N grades.