

PHYS 111 – Introductory Physics II
Course Outline: Jan – Apr 2017

Instructor:	M. Laidlaw	J. Rudge	D. Chithrani
Sections:	A01	A02	A03
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Lectures: 10:30 – 11:30 TWF, ELL 168 (A01)
11:30 – 12:30 TWF, ELL 168 (A02)
1:30 – 2:30 TWF, ELL168 (A03)
We will post our office hours on the PHYS 111 “CourseSpaces” site.

Labs: Lab sections are normally held in Elliott 144.
Labs start January 9 – you will be given your laboratory schedule then.
Attend the labs at the times assigned by your laboratory instructor.
You must complete all labs and have satisfactory standing in the labs to obtain credit for the course.

Prerequisite: PHYS 110, and credit or concurrent registration in a calculus class.
The calculus class (MATH 100, 109 or 102) must be at UVic if it is taken concurrently. We do not recommend MATH 102. We will structure the course assuming that you are taking MATH 101 in the same term you are taking PHYS 111.

Required Texts: “University Physics” - UVic Custom Edition (Volume II)
“PHYS 111 Workbook” Keeler/Laidlaw
“PHYS 111 Lab Manual”

The “University Physics” text from the first term (Volume I) was 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:

Heat engines; harmonic motion; wave motion; geometric and wave optics; modern physics.

Organizational Details:

Midterm Exams:

There will be two midterm exams tentatively on February 10 and March 17.

The exams are scheduled for 6:30 pm – 8:00 pm both days.

We will give instructions about exam location nearer the time of the exams.

If these exams conflict with scheduled university activities, such as tutorials, lectures, or labs, please contact the course coordinator (Dr. Laidlaw).

We expect you to write both midterm exams.

Final Exam:

There will be a final exam during the April exam period.

The date is centrally scheduled, and normally finalized in late February.

Do not plan April travel before you know the exam schedule.

You must write the final exam to get credit for this course.

Supplementary Course Material:

We will distribute any course material via the “CourseSpace” site for PHYS 111.

We 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.

Assignments will be administered through www.masteringphysics.com

The course-ID you need is: **PHYS111UVIC2017SPRING**

We have chosen to administer assignments through this system because the interactive features provide prompt feedback that will help you learn the material.

Accommodations:

We are 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, we expect you to contact us as soon as possible after the exam. If you anticipate missing a course requirement, we expect you to contact us a reasonable amount of time in advance.

If something comes up that adversely affects your performance, please talk to your instructor or the course coordinator.

RCSD mediated accommodation will be arranged through the course coordinator.

Students who have previously attempted PHYS 111 may be eligible to be *exempted* from laboratory work; applications for this exemption will only be considered prior to January 13.

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 put examples in it to illustrate key points and to serve as examples of 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 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 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:

	Scheme 1	Scheme 2	
Assignments	10	10	approximately weekly
Labs	15	15	all labs must be completed
Midterms	15	25	
Final Exam	60	50	

Your mark will be calculated from the scheme that gives the higher score.

In all cases, we will use the score (as determined above) to guide our determination of an appropriate letter grade. Once we have determined an appropriate letter grade, we 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. We 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	

In the past, courses like this have typically had roughly the following grade distribution:

A-range: 20%; B-range: 40%; C/D-range: 30%; F: 10%

We do not grade on a curve.

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

All instructors will review all final grades assigned.

We will normally not offer supplemental examinations or assign the grade E.

The grade N is a failing grade that indicates that you did not complete the required course work. We 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.

We will assign the percentage grade 0% for all N grades.

Studies being done on this course

#1 - Assignments

Assignment completion rates in this course will be the subject of a study conducted by Mark Laidlaw and Richard Keeler. The purpose of this research is to

- Measure the percentage of students who complete the assigned homework
- Quantify the relationship between homework completed and assigned final grades.
- Assess the viability of different methods of automated assessment

The anticipated benefit is to demonstrate whether assignments can be administered through UVic's CourseSpaces system. The data used in the study will be anonymous. The use of your data will not affect your mark in any way; no analysis will be done before grades are finalized. Your data will be processed as follows: Using the student number, final grades will be associated with scores on each assignment. All identifying features such as student number are then removed from the data.

In class, near the end of the course, a questionnaire about your experiences with the online assignment system will be circulated. This questionnaire will be anonymous, you are not required to complete it. The goal of the questionnaire is to get qualitative feedback regarding the assignments which grades alone fail to capture.

If you have questions about the methods and goals of the research, about how your data will be used, or about the use of your data, please contact Mark Laidlaw by email at laidlaw@uvic.ca. You may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

#2 – Exams

Exam results in this course will be the subject of a study conducted by Mark Laidlaw.

The object of the study is to characterize the difficulty of exam questions. The anticipated benefits of the study are to help standardize course grades from year to year, and to improve question design. The data used in the study will be anonymous and will be statistical in nature (for example, 53% of students who got a "B" answered question 20 correctly). The use of your exam data will not affect your mark in any way, as no analysis will be done before grades are finalized. You will receive a follow-up email with more details after the completion of the course. If you have questions about the methods and goals of the research, or about how your data will be used, please contact Mark Laidlaw by email at laidlaw@uvic.ca.

You may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).