
Course Syllabus for
PHYA21H - Winter 2018
Introduction to Physics IIA

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Typos corrected on Januaryth are shown in green.

COURSE DESCRIPTION

Happy new year and welcome to all of you !

This second physics course is intended for students in physical and mathematical sciences programs. It covers the main concepts required for an understanding of Longitudinal and Transverse Waves, Electricity and Magnetism, Optics, and Special Relativity. It provides an introduction to these topics with particular emphasis on developing a mathematical framework for problem solving and analysis. However, many important breakthroughs in the understanding of physics have resulted from observation. Consequently, there will be a substantial emphasis on empirical work in the weekly laboratories as well theoretical investigation.

Course Web Site <http://portal.utoronto.ca/>

COURSE MATERIAL

- The Textbook : Physics for Scientists and Engineers (4th edition) by Knight. Copies are available at the UTSC bookstore. There are a variety of formats (including an e-book). We will be using Mastering Physics in PHYA21, you do need to get a package which includes it.

You do not need to purchase a lab manual for this course !

- iClicker : You will need to purchase an iClicker. available from the campus bookstore. When you register your iClicker, be sure to use your UTORid not your student number. The website will ask you for your student number, ignore that and use your UTORid. There is a version which works on smart phones, you can get that app if you prefer.

LECTURES

Slides will be posted online after the lecture. They will be supplemented in class by worked examples of problems. These will not be posted online. Attendance is strongly recommended but will not be monitored.

There will be a participation component to this course, however you will be offered the option to opt out (see below).

Please note that these questions will be basic problems that you should master before the tests and exam. Questions on the tests and exam will likely be more difficult than these quiz questions.

TERM TESTS & FINAL EXAM :

Both the term tests and final exam will draw from the lectures, practicals, textbook, and Mastering-Physics homework. This could include material presented in the lectures or tutorial material that is not covered in the textbook. It could also include assigned reading material that was covered in the textbook but not explicitly discussed in lectures.

All tests and exams are cumulative.

You will be allowed to bring a single 8.5" by 11" aid-sheet, double sided, and hand-written (no photocopies) to the midterm and exam. This aid sheet can feature whatever you wish. The same size restrictions apply for the midterm and exam ~~one sheet only~~ so you will have to redo your aid sheet for each test. Also you must clearly write your full name and student number on that sheet, which you will hand-in with the test or the exam.

There will be no make-up midterm. If you miss the test for an excusable reason (usually medical) the weighting of the missed test will be added to the formal labs and exam (each increased by 10%).

EVALUATION

	-FINAL EXAM	40%
2 TERM TESTS (2 14%) on Feb. 9 th & March 15 th		28%
- PRACTICALS (2 reports 8%, Practical notebook 15%, TA impression 2%)		25%
- HOMEWORK (ABOUT 10 WEEKLY ASSIGNMENTS)		4% in total & more practice
- LECTURE PARTICIPATION (CLICKER USE)		3% in total
	TOTAL	100%

- The Tests : There will be two term-test in this course (please, refer to the course calendar for details).
- The Final Exam will be three hours long, some time during the month of April. The exact date, time and place will be announced.
 The term-tests and the final exam will draw from the lectures, tutorials and textbook. This could include material presented in the lectures or tutorial material that is not covered in the textbook. It could also include assigned reading material that was covered in the textbook but not explicitly discussed in lectures or even question pre-class work.
 The exam will cover all the material, including material that was on the term test. You will be permitted to bring a hard-copy translation dictionary to the test and exam.
- Lecture Participation : During lectures, Clicker questions will be asked. These are multiple choice questions. You get marks for participating ; you do not need to get these correct. If you would like to opt-out of this component, you have to e-mail me by January 17th and the

weigh of this component will be added to that of the final exam.

The participation grade will be based on the number of questions you answer. There will be a 10% forgiveness policy. The following example illustrates the situation : if there are 80 Clicker questions, then 90% of 80 is 72, and your grade is computed as if there were only 72 questions. So if you answered 70 out of 80 questions, your grade would be 70 out of 72. You cannot get more than 100% credit though ; if you answered 75 questions in the previous example, your grade would be a perfect score, not 75 out of 72.

You may not use someone else's Clicker to vote. This is giving them marks which they did not earn, hence is academic fraud ! Appropriate use of the Clickers will be checked during randomly chosen lectures. If you are caught with another student's Clicker, or if you are caught getting credit without being in the lecture, all students involved risk severe academic sanctions.

CONCERNS

If you have any concerns about the course and your ability to do well, please come see me and we can discuss your situation. I am happy to make reasonable accommodations to ensure that all students have an equal opportunity to do well in this course. The university has many resources to provide us the best chance to help you succeed.

If you see a potential problem with your ability to participate in the course or the assessment methods you can speak with me or the people at ACCESSAbility Services who can advise us both.

ACADEMIC HONESTY & PLAGIARISM

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student's individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters :

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>

outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to :

- In papers and assignments : Using someone else's ideas or words without appropriate acknowledgment ; submitting your own work in more than one course without the permission of the instructor ; making up sources or facts ; obtaining or providing unauthorised assistance on any assignment.
- On tests and exams : Using or possessing unauthorised aids ; looking at someone else's answers during an exam or test ; misrepresenting your identity.
- In academic work : Falsifying institutional documents or grades ; falsifying or altering any documentation required by the University, including (but not limited to) doctors notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see <http://www.utoronto.ca/academicintegrity/resourcesforstudents.html>).

PHYA21H3S -Winter 2018 - Tentative Course Schedule

Week	Practicals	Dates	Lectures	Reading
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