

COURSE NO: PHYS 1030 TITLE: General Physics 2
 (Web Site: <http://www.physics.umanitoba.ca/undergraduate/phys1030>)

LECTURES

A01	MWF 8:30 a.m.	306 Buller
Dr. J. Mammei	215 Allen Bldg.	Consultation Times: Mon 9:30-10:30 am, Thurs 11:30am-12:30pm
jmammei@physics.umanitoba.ca	474-6195	
A02	MWF 11:30 a.m.	240 University College
Dr. C. O'Dea	336 Allen Bldg.	Consultation Times: Mon & Wed, 1:00-2:00 pm
christopher.o'dea@umanitoba.ca	474-9863	

LABS/TUTORIALS Room 402 Allen

The **first** laboratory in PHYS 1030 is during the week of January 30 – February 3, 2017. Students **must** attend the lab in the section chosen at registration time.

You should have, at the first laboratory, the PHYS 1030 Laboratory Manual (see below).

The schedule of laboratory activities is provided on page 4 of this document. The lab sections are:

B01	Tuesday	8:30-11:30 am
B02	Tuesday	11:30-2:30 pm
B03	Tuesday	2:30-5:30 pm
B04	Wednesday	8:30-11:30 am
B05	Wednesday	11:30-2:30 pm
B06	Wednesday	2:30-5:30 pm

Lab Coordinators: Dr. R. Cameron (ruth.cameron@umanitoba.ca)
 Office: 217 Allen Building
 Tel: 474-9378

A. Yamchuk (andriy.yamchuk@umanitoba.ca)
 Office: 401 Allen Building
 Tel: 474-9214

Email communications about this course must originate from a University of Manitoba email account (e.g. an address with @umanitoba.ca) and have PHYS 1030 in the 'subject line'. We will endeavour to reply to an email concerning this course within 24 to 48 hours of receipt.

REQUIRED TEXTBOOKS & MATERIALS

Cutnell, J.D. and Johnson, K. W., *Physics*, 10th edition (Wiley)
 Registration code for WileyPLUS (free with new copies of the textbook at the bookstore)
 PHYS 1030 Laboratory Manual 2016-2017, e-book code available in bookstore
 iClicker (required for all lecture sections)

EVALUATION PROCEDURE:

Laboratory reports* (5)	20%	
Tutorial tests** (4)	8%	
Class participation	2%	
Homework***	5%	
Term test	20%	(Thursday, Mar. 9, 7:00-9:00 pm)
<u>Final exam</u>	<u>45%</u>	(to be scheduled by the Registrar's Office)
Total	100%	

The schedule of lab reports, tutorial tests, midterm and final exam are detailed in the attached schedule table. The marks of the lab reports, tutorial tests, midterm and final exam will be posted online within one week of the scheduled labs, tests and exams. A sufficient percentage of the total mark including at least 3 lab reports, 2 tutorial tests and the midterm test will be provided to the students before the Voluntary Withdrawal deadline. The final grades will be posted on the course website and submitted to Aurora by the grade submission deadline.

NOTE: Students having previously taken PHYS 1030 MAY APPLY for an exemption from the laboratory component of the course in 2016-17, provided that their performance in the laboratory exceeded a minimum standard of 80%. To apply for an exemption, students MUST see the Physics and Astronomy Office (301 Allen Building) in person on or before January 31, 2017, and have completed the laboratories within the last two years. Students who receive an exemption will have their previous laboratory mark credited directly towards the 2017 mark for PHYS 1030, as outlined above.

The preliminary low-numerical-boundaries for the letter grades:

A+	90%
A	80%
B+	75%
B	70%
C+	65%
C	60%
D	50%
F	Below 50%

Note that the final numerical boundary for each letter grade may be adjusted depending on the total mark distribution of the class; no student's final grade will be reduced due to the boundary adjustment.

*** Students who obtain a lab exemption are still required to write the tutorial tests in the timetabled slot. See the attached schedule for dates of tutorial tests. The tutorial tests are conducted in the laboratory sessions and are an important component of the course mark (see above).**

**** Different laboratory sections receive different versions of the tutorial tests. Although the instructors attempt to set all versions of the test at the same level of difficulty, there inevitably remain some differences. The marks for the tutorial tests may therefore be adjusted slightly so the average marks for each lab section are the same.**

***** 5% of the final grade will be awarded for homework problems, using the WileyPLUS online learning and evaluation system. WileyPLUS is designed to provide helpful feedback to students on problem-solving and to provide hints to guide them to the correct answer. Problem assignments will be due each week. Details will be announced in class and on the course web site.**

POLICY ON MISSED TESTS/TUTORIALS

No rewrites will be offered. If you miss the mid-term test for a legitimate, documented reason, then the weight of the final exam will be increased to 65% of total mark. If you cannot attend a tutorial due to illness or some other **legitimate** reason, then you **may** be given permission to write the test in a different section during the same week. **Missed tests for any other reason will be given a mark of zero.**

POLICY ON LABORATORY ATTENDANCE AND SUBMISSION OF LAB REPORTS

Attendance at **all** laboratory sessions is mandatory. Students should come to the lab **ON TIME** and listen to the introduction. Students coming more than 15 minutes late will not be allowed to do the experiment. Special circumstances might be considered. In order to receive **any** credit for the laboratory component all students are required to complete **at least four out of the five experiments** scheduled in the laboratory sessions, however, ALL five experiments count towards the final lab mark. Credit for a completed lab requires that a lab report be submitted.

Laboratory reports are generally due by the end of the laboratory period, and must be submitted into an online dropbox which can be found in UM Learn. The Dropbox closes at the end of the lab period and late reports will not be accepted. Consult the introductory section of the PHYS 1030 Laboratory Manual (2016-2017) for more details.

STUDENT ACCESSIBILITY SERVICES

If you are a student with a disability, please contact SAS for academic accommodation supports and services such as note-taking, interpreting, assistive technology and exam accommodations. Students who have, or think they may have, a disability (e.g. mental illness, learning, medical, hearing, injury related, visual) are invited to contact SAS to arrange a confidential consultation.

Student Accessibility Services

520 University Centre

204 474 7423

<http://umanitoba.ca/student/saa/accessibility/>

Student_accessibility@umanitoba.ca

SCHEDULE A

A Schedule A document is posted on the course website. This is a Policy and Resource Document with information on various University and Unit policies regarding academic integrity, student discipline, and respectful learning environment, for example, and on academic and student supports that are available, including a statement regarding mental health with referral information to the Student Counseling Centre and University Health Services.

ACCESSING WILEYPLUS

Instructions on how to register and use WileyPLUS will be given in class and on the course website. A registration code is required to access the WileyPLUS site, so **if you purchased your registration code with your textbook, make sure you don't lose it!** If you have a second-hand copy of the text, you will have to purchase your registration code separately; this can be done online by following the instructions at <http://www.wiley.com/college/fdoc/>, or at the customer service centre in the bookstore.

**schedulePHYS 1030 Lecture/Laboratory/Tutorial/Test Schedule
Winter 2017**

Week		Date	Lecture	Cutnell & Johnson	Topic	Laboratory/Tutorial/Test
1	W	Jan. 18	1	18	Electric Forces and Fields	No Lab or Tutorial
	F	20	2			
2	M	23	3	19	Electric Potential Energy & Potential (omit 19.5)	No Lab or Tutorial
	W	25	4			
	F	27	5			
3	M	30	6	20	Electric Circuits (omit 20.5, 20.12, 20.13)	Expt # 1 – Equipotential Lines
	W	Feb. 1	7			
	F	3	8			
4	M	6	9	21	Magnetic Forces & Magnetic Fields (omit 21.9)	Tutorial 1
	W	8	10			
	F	10	11			
5	M	13	12	21	Magnetic Forces & Magnetic Fields (omit 21.9)	Expt # 2 – Wheatstone Bridge
	W	15	13			
	F	17	14			
6	M	20			No Lecture – Mid-Term Break	
	W	22				
	F	24				
7	M	27	15	22	Electromagnetic Induction (omit 22.8, 22.9)	Tutorial 2
	W	Mar. 1	16			
	F	3	17			
8	M	6	18	24, 25	Electromagnetic Waves & Laws of Reflection (omit 24.4, 24.5, 24.6 & 25.4, 25.5, 25.6)	No Lab or Tutorial Week of Midterm Test
	W	8	19			
	Th	9	---		Mid-term test 7-9 pm	
	F	10	20	26	Refraction, Lenses & Optical Instruments	
9	M	13	21			Expt # 3 – e/m of the Electron
	W	15	22			
	F	17	23			
10	M	20	24	27	Interference (omit 27.9)	Tutorial 3
	W	22	25			
	F	24	26			
11	M	27	27	28	Special Relativity (omit 28.7)	Expt # 4 – Geometrical Optics
	W	29	28			
	F	31	29			
12	M	Apr. 3	30	29	Particles & Waves (omit 29.4)	Tutorial 4
	W	5	31			
	F	7	32			
13	M	10	33	30	Atom (omit 30.5, 30.6)	Expt # 5 – Spectroscopy
	W	12	34			
	F	14				
14	M	17	35	31	Nucleus & Radioactivity	No Lab or Tutorial
	W	19	36			
	F	21	37			

HOMEWORK PROBLEMS

Perhaps the most important thing you will learn from this course is how to think logically and solve problems. This is an important skill that can be applied to any subsequent area of study. Solving problems yourself and discussing them with your instructor and your classmates is the best way to learn.

Homework problems from the textbook will be assigned weekly via the WileyPLUS online learning and evaluation system. A list of recommended problems will also be posted on the course web page. You should solve all of these problems, attempting them as the material is discussed in class. Be cautioned that reading solutions prepared by someone else is no substitute for working them out yourself. Note that numerical answers for odd numbered questions and problems are given in the back of the textbook. If you have extra time, it is always advisable to work on additional problems from the textbook. Note also that previous years' tests and solutions are provided for your reference on the course website.

Additional aids to solving problems and understanding the important concepts are available in the Read, Study & Practice section of the WileyPLUS site. Here you can explore many helpful resources, including the Student Study Guide, Interactive Solutions, Interactive Learningware, Concept Simulations, and Problem Hints and Solutions.

PLAGIARISM AND CHEATING

(University of Manitoba Undergraduate Calendar, General Academic Regulations, Academic Integrity)

To plagiarize is to take ideas or words of another person and pass them off as one's own. In short, it is stealing something intangible rather than an object. Obviously it is not necessary to state the source of well known or easily verifiable facts, but students are expected to acknowledge the sources of ideas and expressions they use in their written work, whether quoted directly or paraphrased. This applies to diagrams, statistical tables and the like, as well as to written material, and materials or information from Internet sources. To provide adequate documentation is not only an indication of academic honesty but also a courtesy which enables the reader to consult these sources with ease. Failure to do so constitutes plagiarism. It will also be considered plagiarism and/or cheating if a student submits a term paper written in whole or in part by someone other than him/herself, or copies the answer or answers of another student in any test, examination, or take-home assignment.

Plagiarism or any other form of cheating in examinations or term tests (e.g., crib notes) is subject to serious academic penalty (e.g. suspension or expulsion from the faculty or university). A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty.

EXAMINATIONS: PERSONATIONS

(University of Manitoba Undergraduate Calendar, General Academic Regulations, Final Examinations)

A student who arranges for another individual to undertake or write any nature of examination for and on his/her behalf, as well as the individual who undertakes or writes the examination, will be subject to discipline under the university's Student Discipline Bylaw, which could lead to suspension or expulsion from the university. In addition, the Canadian Criminal Code treats the personation of a candidate at a competitive or qualifying examination held at a university as an offence punishable by summary conviction. Section 362 of the Code provides:

Personation at Examination

362. Every one who falsely, with intent to gain advantage for him/herself or some other person, personates a candidate at a competitive or qualifying examination held under the authority of law or in connection with a university, college or school or who knowingly avails him/herself of the results of such personation is guilty of an offence punishable on summary conviction. 1953- 54,c.51,s.347.

Both the personator and the individual who avails him/herself of the personation could be found guilty. Summary conviction could result in a fine being levied or up to two years of imprisonment.

FACULTY OF SCIENCE STATEMENT ON ACADEMIC DISHONESTY

The Faculty of Science and The University of Manitoba regard acts of academic dishonesty in quizzes, tests, examinations, laboratory reports or assignments as serious offences and may assess a variety of penalties depending on the nature of the offence.

Acts of academic dishonesty include, but are not limited to bringing unauthorized materials into a test or exam, copying from another individual, using answers provided by tutors, plagiarism, and examination personation.

Note: cell phones, pagers, PDAs, MP3 units or electronic translators are explicitly listed as unauthorized materials, and must not be present during tests or examinations.

Penalties that may apply, as provided for under the University of Manitoba's Student Discipline ByLaw, range from a grade of zero for the assignment or examination, failure in the course, to expulsion from the University. The Student Discipline ByLaw may be accessed at:

http://umanitoba.ca/admin/governance/media/Student_Discipline_Bylaw_-_2016_09_01.pdf

Suggested minimum penalties assessed by the Faculty of Science for acts of academic dishonesty are available on the Faculty of Science webpage:

http://umanitoba.ca/faculties/science/resources/Acad_Dishon_TABLE_RevCSS_AdminC_Jul2012_WEB.pdf

All Faculty members (and their teaching assistants) have been instructed to be vigilant and report all incidents of academic dishonesty to the Head of the Department.