COURSE NO: PHYS 1030 TITLE: General Physics 2
(http://www2.physics.umanitoba.ca/u/burgess/courses/P1030/phys1030_W2020.html)

LECTURES

A01 **MWF 8:30 a.m.** **Frank Kennedy Centre 136**
Dr. C O'Dea office: Allen 336 Consultation Times: 1:00-2:00 p.m. (M, W)
or by appointment
Tel: 204-474-9378 email: Christopher.O'Dea@umanitoba.ca

A02 **MWF 11:30 a.m.** **Wallace 223**
Dr. J. Burgess office: Allen 318 Consultation Times: 9:00-10:00 a.m. (W), 2:00-3:00 p.m. (R)
or by appointment
Tel: 204-474-6180 email: Jacob.Burgess@umanitoba.ca

LABS/TUTORIALS Room 402 Allen

The first Laboratory in PHYS 1030 is in the week of January 20 -24, 2020. All labs and tutorials will be held in Room 402 Allen. All students should bring the following to the first laboratory session: the PHYS 1030 Laboratory Manual.

The schedule of laboratory activities is provided on page 4 of this document. Dr. Ruth Cameron (Room: 217 Allen Building, Ph: 204 474 9378, Ruth.Cameron@umanitoba.ca) and Andriy Yamchuk (Room: 401 Allen Building, Ph: 204 474 9214, Andriy.Yamchuk@umanitoba.ca) will be co-ordinating the laboratory.

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

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. Any email communication about the laboratory should include the lab section in the subject line.

REQUIRED TEXTBOOKS & MATERIALS

Cutnell, J.D. and Johnson, K. W., *Physics*, 11th edition (Wiley)
Registration code for WileyPLUS (free with new copies of the textbook at the bookstore)
PHYS 1030 Laboratory Manual 2020, available in bookstore
iClicker – This system will be used to enhance classroom problem solving and discussion sessions.

EVALUATION PROCEDURE:

Laboratory reports (5)	20%
Tutorial tests (4)*	10%
Class Participation (iClicker)	4%
Homework**	6%
Term test	15%
Final exam	45%
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 2 lab reports, 2 tutorial tests and the midtem 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 taken PHYS 1030 within the last 2 years MAY APPLY for an exemption from the laboratory component of the course in 2020, provided that their performance in the laboratory exceeded a minimum standard of 80% averaged over all labs. To apply for an exemption, students MUST complete the exemption request form available on the Physics and Astronomy Departmental Website and follow the instructions provided following submission of the form January 15, 2020. Students who receive an exemption will have their previous laboratory mark credited directly towards the 2020 mark for PHYS 1030, as outlined above.

***An important component of the course mark is based on tutorial tests, which are conducted in the laboratory sessions. Students who obtain a lab exemption are still required to write the tutorial tests in the time tabled slot. See the attached schedule for dates of tutorial tests.**
**** 6% 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.**

SCHEDULE OF TERM WORK AND TESTS:

Four tutorial tests	(see attached schedule)
Five laboratory reports	(see attached schedule)
Midterm test	Thursday, February 27, 2020, 6:00 – 8:00 pm.
Final exam	April, to be scheduled by Student Records

POLICY ON MISSED TESTS/TUTORIALS

If you miss the mid-term test for a legitimate, documented reason, a single deferred midterm will be scheduled or the weight of the final exam will be increased to 60%. If you cannot attend a tutorial due to illness or some other **legitimate** reason, then you **may** be given permission to write the tutorial test at a different time during the same week. **Missed tests for any other reason count as zero!** Consult the introductory section of the PHYS 1030 Laboratory Manual (2020) for more details.

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 (2019) for more details.

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

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

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

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.

A list of recommended problems will be announced in lectures and posted on the course web page. You should solve as many of the recommended problems as possible, 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 on the Wiley website: http://www.wileyplus.com/class/744697.

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.

PHYS 1030 Lecture/Laboratory/Tutorial/Test Schedule
Winter 2020

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

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 UM Learn. 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 Counselling Centre and University Health Services.

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_-_2009_01_01.pdf

The Faculty of Science guidelines on plagiarism and cheating and suggested minimum penalties are available at:

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.