

PHYS 1050 – Winter 2016
Physics I: Mechanics

INSTRUCTOR: P.G. Blunden

Lecture: MWF 1:30-2:20 p.m. 100 Fletcher Argue

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Email: blunden@physics.umanitoba.ca

Course website: <http://www.physics.umanitoba.ca/~blunden/phys1050>

Consultation Times: Monday & Friday 2:30-3:30 p.m.

LABS/TUTORIALS	Room 403-405 Allen
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The **first** laboratory in PHYS1050 is on **Thursday, January 7** or **Friday, January 8, 2016**.

Students **must** attend the lab in the slot chosen at registration time.

You should have, at the first laboratory, the PHYS 1050 Laboratory Manual and the laboratory notebook (see below).

The schedule of laboratory activities is provided on page three (3) of this document. The lab sections and slots are:

B01	Friday	2:30-5:30 p.m.
B02	Thursday	2:30-5:30 p.m.
B03	Friday	8:30-11:30 a.m.

Lab Coordinators: Dr. R. Cameron (ruth.cameron@umanitoba.ca)

Office: 221 Allen Building, Tel: 474-9378

A. Yamchuk (andriy.yamchuk@umanitoba.ca)

Office: 401 Allen Building, Tel: 474-9214

REQUIRED TEXTBOOKS & MATERIALS

Halliday, Resnick & Walker, *Fundamentals of Physics* (10th ed.) [this course uses volumes 1 & 4]
PHYS 1050 Laboratory Manual 2015-2016, e-book code available in bookstore.

EVALUATION PROCEDURE:

Laboratory reports (5)	20%*
Tutorial tests (4)	10%*
Term test	20%
Final exam	50%
Total	100%

NOTE: Students who have previously taken PHYS 1050 within the last two years MAY APPLY for an exemption from the laboratory component of the course, provided that their performance in the laboratory exceeded a minimum standard of 80%. To apply for an exemption, students **MUST** see the general office (301 Allen) in person on or before **January 12, 2016**. Students who receive an exemption will have their previous laboratory mark credited directly towards their mark for PHYS 1050, as outlined above.

Email communications about this course must originate from a University of Manitoba email account (e.g. an address with @umanitoba.ca) and have PHYS 1050 in the 'subject line'. I will endeavour to reply to an email concerning this course within 24 to 48 hours of receipt.

Cellular telephones and other wireless devices will be **turned off** during the lecture. If there is a pressing need for you to be contactable during the lecture (e.g. a family member is in the hospital or similar situation), let me know and I can make an accommodation.

***Note that 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 timetabled slot. See the attached schedule for dates of tutorial tests.**

SCHEDULE OF TERM WORK AND TESTS:

Four tutorial tests	(see attached schedule)
Five laboratory reports	(see attached schedule)
Mid-term test	Thursday, February 11, 2016, 7:00 pm – 9:00 pm
Final exam	April, to be scheduled by Student Records

POLICY ON MISSED TESTS/TUTORIALS

No rewrites are given for the mid-term test. If you miss the mid-term test for a legitimate, **documented** reason, then the weight of the final exam will be increased to 70%. 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 count as zero!** Consult the introductory section of the PHYS 1050 Laboratory Manual (2015-2016) (page 4) for more details.

POLICY ON LABORATORY ATTENDANCE AND SUBMISSION OF LAB REPORTS

Attendance at **all** laboratory sessions is mandatory. In order to pass the course, students are required to complete at least four out of the five experiments scheduled in the laboratory sessions. Credit for a completed lab requires that a lab report be submitted. One mark will be deducted from the final report for students coming up to 15 minutes late. Students coming more than 15 minutes late will not be allowed to do the experiment. Special circumstances might be considered. In the event that you are unable to attend a laboratory session, you should contact Dr. Ruth Cameron or Andriy Yamchuk (401 Allen), **before** the date of that session, if possible, to arrange for a make-up laboratory (in another laboratory section if possible). Permission will normally be granted in those cases where reasonable grounds exist.

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 Desire2Learn (D2L). The Dropbox closes at the end of the lab period and late reports will not be accepted. Consult the introductory section of the PHYS 1050 Laboratory Manual (2015-2016) (pp. 2-3) for more details.

VOLUNTARY WITHDRAWAL DEADLINES

Registration and Revision Period (full refund)	January 6-19, 2016
Voluntary Withdrawal (no refund)	March 18, 2016

**PHYS 1050 Lecture/Laboratory/Tutorial/Test Schedule
Winter 2016**

Week		Date	Lecture	Topic	Laboratory / Tutorial/Test
1	W	Jan. 6	1	Translational Kinematics Chapter 2 Chapter 3 Chapter 4	Expt # 1 part 1- Introduction
	F	8	2		
2	M	11	3		Expt # 1 part 2– Motion Down a Frictionless Incline
	W	13	4		
	F	15	5		
3	M	18	6	Translational Dynamics Chapter 5 Chapter 6	Tutorial # 1 and Test
	W	20	7		
	F	22	8		
4	M	25	9		Expt # 2 - Centripetal Force
	W	27	10		
	F	29	11		
5	M	Feb. 1	12	Work and Energy Chapter 7 Chapter 8	Tutorial # 2 and Test
	W	3	13		
	F	5	14		
6	M	8	15	MID-TERM (7-9 PM)	WEEK OF TERM TEST No LABS OR TUTORIALS
	W	10	16		
	TH	11			
	F	12	17		
7	M	15-19		MID-TERM BREAK	No LABS OR TUTORIALS
8	M	22	18	Work and Energy (continued)	Expt # 3 - Conservation of Energy
	W	24	19		
	F	26	20		
9	M	29	21	Linear Momentum and Collisions Chapter 9	Tutorial # 3 and Test
	W	Mar. 2	22		
	F	4	23		
10	M	7	24	Rotational Kinematics and Dynamics Chapter 10 Chapter 11	Expt. # 4 - Elastic Collision
	W	9	25		
	F	11	26		
11	M	14	27		Tutorial # 4 and Test
	W	16	28		
	F	18	29		
12	M	21	30		No LABS OR TUTORIALS
	W	23	31		
	F	25		GOOD FRIDAY	UNIVERSITY CLOSED
13	M	28	32	Special Relativity Chapter 37	Expt # 5 - Rotational Dynamics
	W	30	33		
	F	Apr. 1	32		
14	M	4	35	Last Day of Classes	No LABS OR TUTORIALS
	W	6	36		
	F	8	37		

“Important note from the Dean of Science:

It is your responsibility to insure that you are entitled to be registered in this course. This means that you have:

- the appropriate prerequisites as noted in the calendar description, or have permission from the instructor to waive these prerequisites;
- not previously taken, or are concurrently registered in, this course and another that has been identified as “not to be held with” in the course description. For example, PHYS 1050 cannot be held for credit with PHYS 1020 or PHYS 1021 (or 016.102), PHYS 1410 (or 016.141) or PHYS 1420 (or 016.142) (or the former 016.118, 016.120 or 016.127).

The registration system may have allowed you to register in this course, but it is your responsibility to check. If you are not entitled to be in this course, you will be withdrawn, or the course may not be used in your degree program. There will be no fee adjustment. This is not appealable. Please be sure to read the course description for this and every course in which you are registered.”

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. 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 in the Laboratory Manual.

Additional aids to solving problems and understanding the important concepts are available on the Wiley website: www.wiley.com/college/halliday. Click on the student companion guide icon for the 10th edition of Halliday, Resnick and Walker, where you can explore several helpful resources, including Interacting Learningware, Concept Simulations, and Problem Hints and Solutions.

PLAGIARISM AND CHEATING (University of Manitoba Undergraduate Calendar, p. 27)

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, p. 26)

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

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.