



REVISED COURSE OUTLINE FOR REMOTE LEARNING

To account for the necessary transition to remote learning from March 13 onward, adjustments have been made to assessment deadlines and requirements so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff). If you are unable to meet the deadlines or requirements specified, please connect with your course instructor to work out alternative dates/assessments.

1. **Course:** PHYS 271, How Things Work - Winter 2020

Lecture 01: TR 11:00 - 12:15 - Remote Learning (check with your instructor or coordinator for details)

Instructor	Email	Phone	Office	Hours
Dr Michael Wieser	mwieser@ucalgary.ca	403 220-3641	SB 131	W 13:00 - 14:00 or by appointment

Course Site:

D2L: PHYS 271 L01-(Winter 2020)-How Things Work

Note: Students must use their U of C account for all course correspondence.

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Component(s)	Weighting %	Date
Written reflections on textbook readings x10	25 %	
In-class activities	30 %	
Physics Presentations x1 - MODIFIED	20 %	
Physics Papers x3	25 %	February 6, March 12, and April 16

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	85 %	80%	75%	70 %	65 %	60%	55%	50 %	45 %

4. **Missed Components Of Term Work:**

The University has suspended requirements for students to provide evidence for reasons for absences so please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations. Please let your instructor know immediately if you are ill and cannot meet the deadlines specified.

5. **Scheduled Out-of-Class Activities:**

There are no scheduled out of class activities for this course.

6. **Course Materials:**

Required Textbook(s):

Louis A. Bloomfield, *How Things Work, Sixth Edition (Fifth Edition will also work for this course)* Wiley.

7. Examination Policy:

There are no examinations in this course.

Students should also read the Calendar, [Section G](#), on Examinations.

8. Approved Mandatory And Optional Course Supplemental Fees:

There are no mandatory or optional course supplemental fees for this course.

9. Writing Across The Curriculum Statement:

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. Human Studies Statement:

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

11. Reappraisal Of Grades:

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

12. Other Important Information For Students:

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Center:** The Students Union Wellness Centre provides health and wellness support for students including information and counselling on physical health, mental health and nutrition. For more information, see www.ucalgary.ca/wellnesscentre or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The University of Calgary is committed to fostering a safe, productive learning environment. The Sexual Violence Policy (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>) is a fundamental element in creating and sustaining a safer campus environment for all community members. We understand that sexual violence can undermine students' academic success and we encourage students who have experienced some form of sexual misconduct to talk to someone about their experience, so they can get the support they need. The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208).
- d. **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties. Examples of academic misconduct may include: submitting or presenting work as if it were the student's own work when it is not; submitting or presenting work in one course which has also

been submitted in another course without the instructor's permission; collaborating in whole or in part without prior agreement of the instructor; borrowing experimental values from others without the instructor's approval; falsification/ fabrication of experimental values in a report. **These are only examples.**

- e. **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- f. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#).
- Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Physics & Astronomy, Dr. David Feder by email phas.ahugrd@ucalgary.ca or phone 403-220-8127. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.
- g. **Safewalk:** Campus Security will escort individuals day or night (See the [Campus Safewalk](#) website). Call [403-220-5333](tel:403-220-5333) for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- h. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- i. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: sciencerep@su.ucalgary.ca. [Student Ombudsman](#), Email: ombuds@ucalgary.ca.
- j. **Internet and Electronic Device Information:** Unless instructed otherwise, cell phones should be turned off during class. All communication with other individuals via laptop, tablet, smart phone or other device is prohibited during class unless specifically permitted by the instructor. Students that violate this policy may be asked to leave the classroom. Repeated violations may result in a charge of misconduct.
- k. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.
- l. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.

PHYS 271 Course Grades

Written reflections on textbook readings (25 %):

You should come to class prepared to discuss and work on the concepts described in the textbook "How Things Work" by Louis A. Bloomfield as listed in the table below. To help you prepare for the work in the lecture, you will write short reflections on the sections of the text that you read. These written reflections should include your responses to the following:

- a short summary of the reading assignment in your own words,
- the concept you find the most challenging or difficult to understand and why, and
- where in your daily life you expect to encounter the concepts that are discussed in the text.

Your written reflection should be ~450 words (or 2/3 of a page, single spaced 12 point) and uploaded to the D2L dropbox at midnight on the dates in the table below.

	Due Date	Section	Concepts and Topics
1	January 20	1.3, 2.1	Energy, Work, Rotational motion
2	January 27	2.2, 2.3	Friction, rolling, momentum, impulse
3	February 3	3.1, 3.2	Hooke's law, Normal forces, elastic and inelastic collisions
4	February 10	3.3	Centripetal forces, Experience of acceleration
5	March 2	4.1, 4.2	Torque, Stable and unstable equilibrium, Propulsion
6	March 9	7.1	Conduction, Convection, Radiation
7	March 16	7.2, 7.3, 8.1	Phase Transitions, Humidity, Thermal energy, Laws of Thermodynamics, Entropy
8	March 23	8.2, 9.1, 9.2	Heat engines, Harmonic oscillators, waves
9	March 30	12.1, 12.2	Electric charges and fields, Current and magnetic fields, EM radiation
10	April 6	13.1, 13.2	Refraction, Interference

In-class activities (30 %):

The full value of this course will come from your thoughtful participation in the class and the grade for in-class activities includes several components. In the class, you will work in groups of 3 to 4 individuals. We will use our time to work on a number of "hands-on" activities to illustrate and think about the ideas that we discuss in this course. At the beginning of each week, the activities will be posted to D2L. You may have to upload your results from an experiment to D2L or answer questions based on the topics we are discussing through the TopHat classroom response system. You should bring an electronic device (mobile phone, smart phone, tablet, laptop computer, etc.) to class in order to participate. If this is not possible, please talk to me as soon as possible so that alternate arrangements can be made. In the case of TopHat questions, the scoring will be half for participation and half for getting the correct response.

MODIFIED:

Due to the restriction on face-to-face meetings, the grade for in-class activities from March 16 onwards will come from TopHat assignments created to accompany the on-line lectures. The last day to submit answers for these assignments will be the last day of the Winter semester (Wednesday, April 15).

Presentations (20 %):

You will be working with your group on **two** presentations, each worth 10 % of the total course grade. The presentations will take place in our classroom on February 25 and February 27 and then again on April 9 and April 14. Each presentation will consist of an analysis or exploration of a natural phenomenon or human-built system. You should incorporate what we have described in the lectures into your presentation. You are free to choose any format you would like for the presentation. For example, you could explain your ideas with a PowerPoint talk, you could create a video, act out a short skit, present an interpretative dance... You will have five minutes for your presentation, and it is important that you stay on time! The grading criteria for the presentations will be posted to D2L in early February. If you are not sure if your presentation idea is suitable, please talk with me.

MODIFIED:

Due to the restriction on face-to-face meetings, there is only one presentation counted towards the course grade.

Physics papers (25 %):

You will write three "term papers" during the semester and these are due on February 6, March 12, and April 16. The purpose of the

term paper is to demonstrate your understanding of the Physics behind a topic. Possible topics for each of the papers will be discussed in the lecture. You can use any resource you would like (textbook, on-line resources, etc.) but make sure that you do not copy the text you are referencing. You must express your ideas in your own words. Make sure to provide references for the sources that you consult. The paper should be ~450 words in length. You might find it useful to include a figure or an image to help illustrate your text. One third of the grade will be for the accuracy of the Physics content, one third for the clarity of the presentation, and one third for the quality of the writing.

MODIFIED:

The third Physics paper can be submitted in any format (video, powerpoint, written document) and be on any topic related to the course. If there are any doubts what might be suitable, please contact the course instructor for clarification.

Course Outcomes:

- Knowledge of Concepts and Theories
- Critical Thinking
- Research and Problem Solving
- Communication
- Self-directed Learning
- Collaboration

Electronically Approved - Mar 17 2020 10:58

Department Approval

Electronically Approved - Mar 17 2020 12:02

Associate Dean's Approval for alternate final examination arrangements