

Elementary University Physics II PHYS 1008A/PHYS 1008B Winter 2024

Course Outline

1. Course calendar description and pre-requisites

This is the second part of a two-term physics course with an emphasis on essentials for scientists in other disciplines. This second part of the course covers Electricity and Magnetism, DC and AC circuits, properties of Electromagnetic radiation and light, optics, elementary quantum physics with introductory concepts of atomic, nuclear, and sub-atomic particles. Applications to other scientific disciplines particularly in the life sciences and real-world examples will be used whenever possible. Precludes additional credit for BIT 1003 (no longer offered), <u>BIT 1007</u>, <u>BIT 1204</u>, <u>PHYS 1002</u>, <u>PHYS 1004</u>. **If you are in the physics programs, you should take PHYS 1002, not PHYS 1008.**

Pre-requisites: <u>PHYS 1001</u> or <u>PHYS 1003</u> or <u>PHYS 1007</u>. Students in this course must have PHYS 1007 or equivalent and are expected to have completed MATH 0107 or MATH 1007 or their equivalent. Otherwise, you must obtain permission of the Physics Department. *If you have failed Physics 1007 in the 2023 Fall term, you must leave this course.*

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Tamara Rozina	Lab Supervisor	tamara.rozina@carleton.ca		

2. Instructors contact information

Instructor office hours will be posted on BrightSpace

In accordance with University policy, all communication with instructors and TAs must be via your Carleton email account. To get your Carleton Email you will need to activate your MyCarletonOne account through Carleton Central. Once you have activated your MyCarletonOne account, log into the MyCarleton Portal.



To help resolve issues related to any missing term work, students must save all of their email correspondence with instructors and TAs until the course grades are finalized.

3. Course textbook

'Physics', Fifth Edition (International Student Edition), Giambattista, McGraw Ryerson Ltd,

ISBN: 9781260570052 (hardcover), 9781260486964 (e-text), 9781260327762 (hardcover + e-text)

These can be purchased from the Carleton University Bookstore in the University Centre (https://www.bkstr.com/carletonstore)

The previous version of the textbook (3rd edition, ISBN 9780073512150) is also sufficient. We will not be using the Publisher's website for assignments, so no access code is required. Please note that the equation numbering in the 3rd edition is different than the current edition used.

4. Course website

The course outline and other course information will be posted on BrightSpace. We reserve the right to amend the course outline on BrightSpace and will inform you if that version changes. In the event of any discrepancy between this document, and the version currently posted on the website, then the website version on BrightSpace will be taken as the definitive version.

If you are unable to access BrightSpace or need help with your computing account, please contact the ITS Service Desk at 613-520-3700 or email: <u>its.service.desk@carleton.ca</u>

5. Course modality

This course is an in-person course where there are a series of synchronous meetings (lectures, tutorials, and labs). There will be no-recordings for the lecture. Students are expected to remain up to date with the deadlines and due dates provided by the instructor.

Section	Time Slot	Location	
PHYS 1008A	Wednesdays and Fridays 13:05 - 14:25	See Carleton Central or the class Brightspace page for room details	
PHYS 1008B	Monday & Wednesdays 16:05 - 17:25		

6. Lecture schedule



* All timeslots are in the Eastern Time zone

7. Labs

Labs start the week of January 15, 2024.

Information about the labs, including location, can be found on the LAB Brightspace page: *Merge PHYS1008 L1:L2:L5:L6:L7 University Physics II (LAB) Winter 2024 [14607: 14608: 14611: 14612: 14613].*

It is imperative that all students attend the first lab. You may attend only the section that you are registered in. All changes (exemptions, etc.) must be arranged with the Lab Coordinator, Ms. Tamara Rozina as soon as possible. If you have a documented reason for missing a laboratory session, you must contact Ms. Rozina (tamara.rozina@carleton.ca) **immediately**. A make-up session may be arranged at the end of term in these cases. If you do not have documentation, you will not be permitted to take a makeup session, and you will receive a mark of zero for that experiment.

Students who are repeating the course might be exempt from the Lab. You are not automatically given a lab exemption – you must apply for it no later than **January 19**, **2024**. Lab exemptions will be considered on a case-by-case basis at the discretion of the Lab Coordinator.

The grade for every lab will be based on a **report**. All reports count toward your total lab grade for the course. **No grade will be dropped.**

All reports must be submitted by the appointed time: **1 week** after the start of the lab session. The **penalty** for a late lab report is **20% up to the End Date** specified on Brightspace for every lab section report submission. It is the student's responsibility to check when the End Date is for each report. No reports will be accepted for grading past their End Date.

Lab section	Time slot
L1	Thursdays 08:35 – 11:25
L2	Thursdays 13:05-15:55
L3	Not offered
L4	Not offered
L5	Tuesdays 08:35 – 11:25
L6	Tuesdays 13:05 - 15:55
L7	Wednesdays 13:05 - 15:55



8. Lab Schedule

Lab #	Title	Week of	Weight (%)	Report Deadline
1	DC Circuits	January 15, 2024	10	1 week
2	Oscilloscope	January 29, 2024	15	1 week
3	Diffraction Grating	February 12, 2024	25	1 week
4	Ray Optics	March 4, 2024	25	1 week
5	Photoelectric Effect	March 18, 2024	25	1 week

9. Tutorials

There will be a tutorial on each alternating week with the labs (see lab and tutorial schedule below). All the sessions will be held **in-person** where the labs are performed.

The structure of the tutorial is as follows:

A set of tutorial problems will be posted on BrightSpace at least a week before the tutorial session. Students should attempt to solve these problems in order to prepare for the tutorial. At the start of the tutorial session students will individually complete a **multiple-choice (MC) quiz consisting of 4 questions.** The MC quizzes are open book and designed for a 15-minute completion time. Next, the TAs will demonstrate solving example problems and answering questions about the tutorial problem set. The last hour of the tutorial will be a close-book tutorial test consisting of two long-answer problems.

The grade for the tutorial test and the multiple-choice quiz will be combined to provide the final Tutorial Test grade for each of the 5 tutorial sessions this semester. **The 4 highest test** grades will be used to determine the final Tutorial Test score.

After your tutorial tests are returned, you are expected to keep them at least until the end of term. Please verify their marks entry on Brightspace and bring any clerical errors to our attention as soon as you can during the term.

Note that if you are late for the tutorial, you will miss the multiple-choice quiz, and forfeit marks. There are no retakes possible.

Students must normally attend the tutorial only in the lab section to which they belong. To be able to attend a different section, students must obtain permission from the lab coordinator (tamara.rozina@carleton.ca). Such permission will usually be granted only for emergencies or medical reasons. So, if you cannot attend your own lab section one



week due to e.g. medical reasons, let us know AS SOON AS POSSIBLE so that you can be rescheduled to a different section.

Lab and Tutorial schedule

Week of	Lab/Tutorial		
January 8, 2024	NO Labs/Tutorials		
January 15, 2024	DC Circuits		
January 22, 2024	Tutorial 1		
January 29, 2024	Oscilloscope		
February 5, 2024	Tutorial 2		
February 12, 2024	Diffraction Grating		
February 19, 2024	Winter Break		
February 26, 2024	Tutorial 3		
March 4, 2024	Ray Optics		
March 11, 2024	Tutorial 4		
March 18, 2024	Photoelectric Effect		
March 25, 2024	Tutorial 5		
April 1, 2024	Review		

10.Lectures

The lectures will be given in-person at the assigned time slots given for two sessions every week according to the schedule in Section 6 of this course outline for each assigned section. It is important that the students attend the lectures as they are given to derive the greatest benefit from the course. In addition to the lecture, each instructor will have Office hour sessions. In Section 14 of the course outline is an approximate schedule for the topics that will be covered each week and the corresponding lectures. Students should read the necessary chapter material prior to the lectures.

Pre-Class Reading Quiz

Each week will contain a short "Pre-Class Reading Quiz" (RQ), to allow the student to check on their understanding of the material prior to starting the



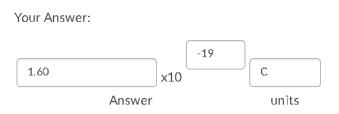
work in the chapter which means students need to scan-read the chapter prior to coming to class. **Please note that the RQ covers** <u>only</u> the sections that will be covered in class as indicated in section 14. There will be 12 RQs in total. Each RQ will close 1 hr prior to the 1st lecture of the week (except the RQ1). Doing these RQs will count as a participation grade in the final course grade. These quizzes are to ensure that you have read the designated chapter(s) prior to taking the class. There will only be one attempt at these RQs and all RQs less the two lowest quizzes will count toward the final grade. Time allocated will be 45 to 60 minutes. The questions will be conceptually based in general and sometimes calculations will be needed to complete an individual question. The first RQ is particularly more difficult in order to test if you are ready for the course.

Homeworks

In addition to the RQs, there are 12 weekly Homeworks (HWs) which are assignment quizzes administered through Brightspace. These HWs will count as the HW grade in the final course grade. The HWs will be based on material studied during the lectures during that week. Each HW will become available at the beginning of the week for the students to attempt. You will have 2 attempts during the week before the HW closes. All 12 HWs less the (2) lowest HWs will count toward the final grade of the HW. See the timetable for the lectures further in this document. Be vigilant and be sure to always check the due dates for the HWs. If there is any discrepancy between the marks posted in the Brightspace gradebook and your calculated values, please notify the instructor immediately.

Numerical Answers

In answering the assignment calculation questions, you will encounter the situation where you must enter a numerical value as the response. Please enter the answer when appropriate in scientific notation with the correct number of significant figures. By default, THREE sig. fig. is required, unless specified otherwise in the question. For example, if your answer is 1.60×10^{-19} C. You will input your answer as



You are allowed a 5% variance between your answer and the one calculated within Brightspace to account for rounding errors. If you do not give your answer with three significant figures, your answer may be outside of this 5% threshold and will therefore be marked as incorrect. Answers of this sort will not be eligible for re-assessment by the professor. In some question you will be asked to use a specific number of decimal points instead of using sig. figs. You need to abide by the stated-required digital precision.

Be sure always to take careful note of the units for your answer. Some questions will ask you to input units of your answer, while some others will only ask for the numerical result. Typically, it is expected that the answer will follow SI units (m, s, J, V, A, etc.)



however there are occasions in which non-standard units will be required for the specific question. Generally, these instances will be noted in the question itself, e.g. "Express your answer in km". Also, units are not to be entered with the numerical answer for these assignments! If required, please input the unit in the specified box. Scientific notations in the question text

Due to the limitation of BrightSpace's capability of displaying scientific notations, you may see the following in the questions text.

BrightSpace display in the question text	Actual value
2.50x10^-5	2.50x10 ⁻⁵
2.50x10^0	2.50
Unfortunately, BS still displays the	
exponent term even it is 10 to the power	
of zero. So just treat 10^0 =1.0	
(2.50x10^0)x10 ² , or (2.50x10^0)E2, or	2.50x10 ²
(2.50x10^0)x10^2	
Some time you may see such mixed	
display, again, note that 10^0 =1.0.	

Scientific Calculators:

It is highly recommended that you use and understand the functionality of a reliable scientific calculator for all calculations on assignments and tests. It is good practice to fully understand how to use the scientific notation functionality that all scientific calculators will have available. This will save a great deal of time in all your calculations and greatly reduces mistakes.

11. Final Exam (In Person)

There is no mid-term examination. We regard the five tutorial tests as a way of providing feedback and guidance on your performance. If you do not perform to your own satisfaction on a tutorial test, it is imperative to discuss this with your lecturer during office hours or by email. Do not leave this consultation until the end of the course. Effective intervention and assistance are best applied at the beginning of term.

The final examination will be scheduled during the regular April examination period at the end of the term. It is the responsibility of the student to be present during this period; in particular, holiday travel arrangements must not be made before the examination schedule is known.

The final exam may include questions related to material contained within the lab portion of the course.



12.Mark distribution

Total	100%
Final Exam	25%
Pre-Class Chapter Reading Quizzes (RQs) (best 10 out of 12)	10%
Labs (5)	35%
Tutorials (best 4 out of 5)	15%
HWs (Assignment Quizzes) (best 10 out of 12)	15%

If you miss a lab or homework for a reason that justified for accommodation, you need to let your instructor, or the lab supervisor know within 1 week from the deadline of the missing work. or you receive Zero mark for that missing work.

13. Passing Condition

In order to pass the course, students must meet the following conditions:

- An overall mark must be greater than 50%, AND
- Must achieve 40% or more on *BOTH* the Theory (≥ 26/65 marks) AND the Lab (≥ 14/35 marks) components of the course. Achieving more the 40% but less than 50% in either Lab or Theory while achieving 50% or more overall will translate into a grade of D-. (NOTE: Theory includes Assignments, Reading Quizzes, Tutorial Tests, and the Final Exam)
- **Final Exam must be attempted** to pass the course, even if you manage to achieve 50% overall mark without the final exam.



14.Lecture schedule:

Week	Date for Phys 1008 A & Phys 1008 B	Lecture #	Text Section	Торіс	Deadline RQ due1 hour before the first lecture of the week except RQ1 HW due every Wednesday for both 1008 A&B
				Course Introduction and Math Concepts	
	Mon Jan 8		16.1	Electric Charge	
	& Wed Jan 10	1	16.2	Conductors and Insulators	
1			16.3	Coulomb's Law	
	Wed Jan 10		16.3	Coulomb's Law (continued)	A: RQ1 Ch 16 is due Friday Jan 12
	&	2	16.4	Electric Field	B: RQ1 Ch 16 is due Wed Jan 10
	Fri Jan 12		16.5	Motion of Charge in E field	
	Mon Jan 15		16.6	Conductors in electrostatic equilibrium	B: RQ2 Ch 17 is due Mon. Jan 15
	&	3	16.7	Gauss' Law for electric fields	
2 (Lab 1)	Wed Jan 17		17.1	Potential Energy	
2 (Lab 1)	Wed Jan 17		17.2	Potential	A: RQ2 Ch 17 is due Wed Jan 17
	&	4	17.3	Field and Potential	A&B: HW1, Intro & Ch 16 is due Wed Jan 17
	Fri Jan 20		17.4	Conservation of Energy; moving charges	
			17.4	Conservation of Energy; moving charges (cont.)	B: RQ3 Ch 18 due Mon Jan 22
	<u>Mon Jan 22</u> &	F	17.5	Capacitors	
3	ھ Wed Jan 24	5	17.6	Dielectrics	
(Tutorial			17.7	Energy in a Capacitor	
Chs.16-			18.1	Current	A: RQ3 Ch 18 due Wed Jan 24
17.3)	Wed Jan 24	C	18.2	EMF & Circuits	A&B: HW2, Ch 16 is due Wed Jan 24
	& Fri Jan 26	-	18.4	Resistance & Resistivity	
i i i suit	111301120		18.5	Kirchhoff's Rules	
	Mon Jan 29		18.6	Series and Parallel Circuits	B: RQ4 Ch 19 is due Mon Jan 29
	&	7	18.8	Power and Energy in Circuits	
	Wed Jan 31		18.10	RC Circuits	
4 (Lab 2)			18.11	Electrical Safety	A: RQ4 Ch 19 is due Wed Jan 31
	Wed Jan 31	8	19.1	Magnetic Fields	A&B: HW3, Ch 17 is due Wed Jan 31
	& Fri Feb 2		19.2	Magnetic Force on a point charge	
			19.3	Charged particle moving perp to a uniform B field	
			19.4	Charged particle in a uniform magnetic field	B: RQ5 Ch 20 is due Mon Feb 5
	Mon Feb 5		19.5	Charged particle in crossed E and B fields	
5 (Tut 2 Chs.17.4,1	&	9	19.8	Magnetic field due to an electric current	
	Wed Feb 7		20.3	Faraday's Law	
			20.4	Lenz's Law	
8,19.2)	Wed Feb 7		20.4	Lenz's Law (continued)	A: RQ5 Ch 20 is due Wed Feb 7
	&	& 10	20.9	Inductance	A&B: HW4, Ch 18 is due Wed Feb 7
	Fri Feb 9			21.1	AC currents and voltages, with resistors



	Mon Feb 12		21.3	Capacitors in AC	B: RQ6 Chs 21, 22 is due Mon Feb 12
	&	11	21.4	Inductors in AC	
	Wed Feb 14		22.3	EM spectrum	
6(Lab 3) <u>W</u>			22.4	Speed of EM waves	A: RQ6 Chs 21, 22 is due Wed Feb 14
	Wed Feb 14	12	22.5	Travelling EM waves in a vacuum	A&B: HW5, Ch 19 is due Wed Feb 14
	& Fri Feb 16	12	22.6	Intensity (part of section)	
	11110010		22.7	Polarization	
Week of Febru	uarv 19-23 - W	/inter Stud	v Break (No classes or tests)	
	Mon Feb 26		23.1	Wavefronts and Rays	B: RQ7 Ch 23 is due Mon Feb 26
	<u>1010111ED 20</u> &	13	23.2	Reflection	
8 (Tut 2	Wed Feb 28		23.3	Refraction	
(Tut 3 Chs.19,20,21)	Wed Feb 28		23.4	Total Internal Reflection (TIR)	A: RQ7 Ch 23 is due Wed Feb 28
0113113,20,21	& Fri Mar 1	14	23.9	Thin lenses	A&B: HW6, Chs 20, 21 is due Wed Feb 28
			23.9	Thin lenses (cont.)	B: RQ8 Chs 24, 25 is due Mon Mar 4
			24.1	Lenses in combination	
	Mon Mar 4 &	15	24.1	The Human Eye	
	Wed Mar 6	15	24.3	Simple magnifier	
9 (Lab 4)					
			24.5 25.1	Compound microscopes (qualitative only) Constructive and destructive interference	A: RQ8 Chs 24, 25 is due Wed Mar 6
	Wed Mar 6	10			A&B: HW7, Chs 21, 22 is due Wed Mar 6.
	& Fri Mar 8	16	25.4	Young's Double Slit	
			25.5	Gratings	Di DOO Chi 37 is due Man Mar 11
	Mon Mar 11	47	25.8	Resolution of optical instruments	B: RQ9 Ch 27 is due Mon Mar 11
10	& Wed Mar 13	17	27.2	Blackbody radiation	
10 (Tut 4	Wed Wal 15		27.3	Photoelectric effect	
Chs 22,23,24)	Wed Mar 13	18	27.6	Spectroscopy	A: RQ9 Ch 27 is due Wed. Mar 13 A&B: HW8, Ch 23 is due Wed. Mar 13
	& Fri Mar 15		27.7	Bohr model: atomic electron energy levels, transitions	
			27.7	Atomic Structure	
			28.1	Wave particle	B: RQ10 Ch 28 is due Mon Mar 18
	Mon Mar 18		28.2	Matter waves (de Broglie)	
	&	19	28.3	Electron microscope	
	Wed Mar 20	lar 20	28.4	Uncertainty Principle	
11 (Lab 5)			28.5	Wave functions: confined particle	A: RQ10 Ch 28 is due Wed Mar 20
	Wed Mar 20		28.6	Hydrogen Atom	A&B: HW9, Chs 24-25 is due Wed Mar 20
	&	20	28.7	Exclusion Principle	—
	Fri Mar 22		28.9	Lasers	—
			28.10	Tunneling	B: RQ 11 Ch 29 is due Mon Mar 25
	Mon Mar 25		29.1	Nuclear structure	
	&	21 r 27	29.2	Binding Energy	
12	Wed Mar 27		29.3	Radioactivity	
(Tut 5			29.3	Decay rates and half life	A: RQ 11 Ch 29 is due Wed. Mar 27
Chs 25,27,28)	Wed Mar 27	<u>7</u> 22	29.4	Biological effects of ionizing radiation	A&B: HW10, Chs 25-27 is due Wed. Mar 27
	&		29.7	Nuclear Fission	A: March 29 is good Friday, no lecture. The
	Fri Mar 29			Nuclear Fusion	content will be moved to the week after.
			29.8		B: RQ 12 Ch 30 is due Mon Apr 1
	Mon Apr 1 & Wed Apr 3		30.1	Fundamental Particles (optional)	
13		23	30.2	Fundamental Interactions (optional)	
13 (Review Tut)		3	30.3	Beyond the Standard Model (optional)	-
(2	30.4	Particle Accelerators (optional)	A: RQ 12 Ch 30 is due Wed Apr 3
	<u>Wed Apr 3</u> & Fri Apr 5	24		Review	A&B: HW11, Chs 27-28 is Wed Apr 3
14	Mon Apr 8	25		Review	



	Wed. Apr. 10			Review (1008A only	A&B: HW12 Chs 28-29 is due Wed Apr 10 April 10 Last day of term follow Friday schedule
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15.University Policies

Grade Definition:

In accordance with the Carleton University Undergraduate Calendar Regulations, the letter grades assigned in this course will have the following percentage equivalents:

A + = 90-100B + = 77-79C + = 67-69D + = 57-59A = 85-89B = 73-76C = 63-66D = 53-56A - = 80-84B - = 70-72C - = 60-62D - = 50-52F = <50WDN = Withdrawn from the courseABS = Student absent from final examDEF = Deferred (See above)

Academic Regulations, Accommodations, Plagiarism, Etc.:

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here: http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/

Academic Accommodations for Students with Disabilities:

The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation.

If you are already registered with the PMC, contact your PMC coordinator to send your *Letter of Accommodation* at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (*if applicable*).

https://carleton.ca/pmc/

*The deadlines for contacting the Paul Menton Centre regarding accommodation for final exams for the Winter exam period is **March 15, 2024**.

For Religious Obligations:

Students requesting academic accommodations on the basis of religious obligation should make a formal, written request to their instructors for alternate dates and/or means of satisfying academic requirements. Such requests should be made during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist, but no later than two weeks before the compulsory event.



Accommodation is to be worked out directly and on an individual basis between the student and the instructor(s) involved. Instructors will make accommodations in a way that avoids academic disadvantage to the student.

Students or instructors who have questions or want to confirm accommodation eligibility of a religious event or practice may refer to the Equity Services website for a list of holy days and Carleton's Academic Accommodation policies, or may contact an Equity Services Advisor in the Equity Services Department for assistance.

<u>carleton.ca/equity/wp-content/uploads/Student-Guide-to-</u> <u>AcademicAccommodation.pdf</u>

For Pregnancy:

Pregnant students requiring academic accommodations are encouraged to contact an Equity Advisor in Equity Services to complete a letter of accommodation. The student must then make an appointment to discuss her needs with the instructor at least two weeks prior to the first academic event in which it is anticipated the accommodation will be required.

<u>carleton.ca/equity/wp-content/uploads/Student-Guide-to-</u> <u>AcademicAccommodation.pdf</u>

Plagiarism:

Plagiarism is the passing off someone else's work as your own and is a serious academic offence. For the details of what constitutes plagiarism, the potential penalties and the procedures refer to the section on Instructional Offences in the Undergraduate Calendar.

What are the Penalties for Plagiarism?

A student found to have plagiarized an assignment may be subject to one of several penalties including: expulsion; suspension from all studies at Carleton; suspension from full-time studies; and/or a reprimand; a refusal of permission to continue or to register in a specific degree program; academic probation; award of an FNS, Fail, or an ABS.

What are the Procedures?

All allegations of plagiarism are reported to the Dean of Faculty of Science. Documentation is prepared by instructors and/or departmental chairs.

The Dean writes to the student and the University Ombudsperson about the alleged plagiarism.

The Dean reviews the allegation. If it is not resolved at this level, then it is referred to a tribunal appointed by the Senate.



Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy (see <u>https://carleton.ca/registrar/academicintegrity/</u>). The Policy is strictly enforced and is binding on all students. Plagiarism and cheating – presenting another's ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the undergraduate degree. Academic dishonesty in any form will not be tolerated. Students who infringe the Policy may be subject to one of several penalties including: expulsion; suspension from all studies at Carleton; suspension from full-time studies; a refusal of permission to continue or to register in a specific degree program; academic probation; or a grade of Failure in the course.

Assistance for Students:

Academic and Career Development Services: <u>https://carleton.ca/career</u> Writing Services: <u>http://www.carleton.ca/csas/writing-services/</u> Peer Assisted Study Sessions (PASS): <u>https://carleton.ca/csas/group-support/pass/</u> Math Tutorial Centre: <u>https://carleton.ca/math/math-tutorial-centre/</u> Science Student Success Centre: <u>https://sssc.carleton.ca/</u>

Important Information:

- Student or professor materials created for this course (including presentations and posted notes, labs, case studies, assignments, and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).
- Students must always retain a hard copy of all work that is submitted.
- Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.
- Carleton University is committed to protecting the privacy of those who study or work here (currently and formerly). To that end, Carleton's Privacy Office seeks to encourage the implementation of the privacy provisions of Ontario's Freedom of Information and Protection of Privacy Act (FIPPA) within the university.

Important Dates for the academic year:

https://carleton.ca/registrar/registration/dates/academic-dates/