



Introductory Physics I with Laboratory

Course Information

Course Number: 1P91

Term/Year/Duration: Fall 2025 (D2)

Course Title: Introductory Physics I with Laboratory

Instructor Information

Instructor Name: Prof. Gavin Hester

Email: ghester@brocku.ca

Office Location: MC E221

Teaching Assistants: Alessandro Pisana, Ashland Knowles, Pritish Behura, Jordan Fazio, Amots Avigad, Teresa Dong, Vlad Ganiyeva, Cameron Dyrseth, Hazel Gifford, Yannick Bisson, Jose Armando Perez Loera

Lab Coordinators: Dr. Ivana Komljenovic Metcalf, Kurtis Bauer

Times and Locations

Lectures: Monday and Tuesday - 8 am to 9 am in the Sean O'Sullivan Theater, Thistle Complex

Weekly Quizzes: Thursday – 8 am to 9 am in Sean O'Sullivan Theater, Thistle Complex.

Weekly Tutorials: Friday – 8 am to 9 am in Sean O'Sullivan Theater, Thistle Complex.

Office Hours: Monday's, 1 pm to 2 pm; Email to setup remote/in person appointment otherwise.

Help-Desk Hours:

- Monday, Tuesday, Wednesday, Friday: 11 am to 12 pm
- Wednesday: 5 pm to 6 pm

Quiz Remediation:

- Monday, Tuesday, Wednesday: 1 pm to 3 pm
- Tuesday: 5 pm to 6 pm
- Friday: 1 pm to 2 pm

Labs: See your Brock Calendar. Labs are held in MC H200.

Course Calendar Description

Kinematics, Newton's laws and their applications to equilibrium and dynamics; conservation laws; oscillations, waves and sound.

Additional Description

This course is an introduction to physics at the undergraduate level. The course focuses on understanding the fundamentals of motion. Students taking this course will develop crucial mathematical tools and problem-solving strategies. In particular, these skills can be effectively carried to upper-level physics courses and provide the necessary background for other scientific disciplines.

Course Assistance

Help Desk Hours: A number of drop-in hours, where a TA will be available to provide assistance with course content, allow for you to pick up graded quizzes, and assist in understanding incorrect answers on the quizzes. Hours will be posted on Brightspace.

Office Hours: Office hours for the instructors are above and are there to help with the course content. If the listed times do not work, please reach out to request to meet at a different time.

Brock Student Success Center: Brock's Student Success Center offers paid tutoring services. Details on this tutoring are available here: <https://brocku.ca/student-life-success/learning-services/tutoring/>

Disclosure for Use of Grades

As a part of our goal to improve this course, a research project is being conducted regarding the benefits of tutorials and structured homework problems for course performance. As part of this project, your grades and attendance information will be used to quantify the benefit. Grades will be anonymized before being analyzed. You may opt out of having your grades used by contacting the instructor.

Required Readings or Texts

*OpenStax College Physics 2nd Edition – Available for **Free** at*
<https://openstax.org/details/books/college-physics-2e>

This course includes a \$45 lab and material fee. This fee covers lab consumables (\$10) and the use of Mobius homework software (\$35).

Optional Materials

If you would like extra guided problems, we are trying a new software platform called Knewton-Alta. This software provides guided problems for each chapter we will cover in OpenStax and can be useful if you struggle with the limited homework problems assigned. At the end of the semester, two students who completed at least 80% of every chapter's assignment and complete a survey will be entered to win a Visa Gift Card for the cost of Knewton-Alta (\$55.95). Details for getting started with Knewton-Alta will be provided on Brightspace. If you have questions, please see the instructor.

Course Communications

Communications will be primarily sent using Brightspace's announcement feature.

Students can contact the instructor via email (ghester@brocku.ca). Please indicate that you are enrolled in 1P91 in your email.

Assessment Components and Due Dates

1P91 Assessment Components

Assessment Component	Grade Weight
Homework	20%
Quizzes	40%
Lab	30%
Final Exam	10%
Total	100%

Task Descriptions

Homework: Homework assignments will be assigned every week, with a total of 12 assignments over the course of the semester. Each homework assignment will focus on a single chapter of the textbook. Homework is (generally) due on Wednesdays at 11:59 pm ET. **Homework is graded on a pass/fail basis.** You must obtain a score greater than 90% on the homework to pass and are allowed to reattempt any problem an unlimited number of times. Assignments will be administered via Möbius, which can be accessed via Brightspace. Complete solutions are not provided, so you must discuss with a TA or instructor to understand mistakes in the homework.

Quizzes: In-person quizzes will be administered every Thursday from 8 am to 9 am in the Sean O' Sullivan Theater, Thistle Complex. The quiz problems will be centered around a single chapter, but may include content from previous chapters. The quizzes will occur on Thursday following the respective chapter's homework assignment. You may not be admitted to the quiz after the first student has completed their quiz and left. A formula sheet will be provided to you

that includes equations from the whole course. The formula sheet is also available on Brightspace and you are encouraged to use it during tutorials/homework to familiarize yourself with it.

The goal of the quizzes is to prove you have *mastered* a chapter's content. In order to prove your mastery, the following quiz policies apply:

- Quizzes are graded on a pass/fail basis. In order to pass the quiz, you must get every question correct.
- If you get any question(s) incorrect, you will have the one opportunity to reattempt a comparable question(s) outside of class. In order to be admitted to reattempt question(s) you must clearly explain to a teaching assistant what you did wrong and bring your original quiz with.
- You will not be allowed to reattempt question(s) if you miss the original quiz time, except for your one allowed make-up quiz per semester.
- You must reattempt missed question(s) within 10 days of the quiz being returned. Graded quizzes will be available the Friday after the quiz is written and can be picked up in MC H200 during the hours designated on Brightspace.
- To attend a quiz remediation session, you must sign up through a Microsoft form to ensure the room is not over capacity. The link to the forms will be on the relevant content section on Brightspace.
- If you are unable to attend a quiz remediation within the 10 business day time period, your grade will remain a fail. If you have extenuating circumstances, please contact the instructor to discuss.

Lab: Laboratory sessions are based on some concepts that are taught in the theoretical lectures including, but not limited to: kinematics, Newton's laws, and oscillations. You must complete all labs and obtain an overall average of 60% or more to receive a grade in PHYS 1P91. Students receiving an overall lab grade that is lower than 60% will fail the lab component for PHYS 1P91 and will only be able to receive a grade in PHYS 1P21.

Lab reports are due at NOON, five days after your scheduled lab session (or: NOON, two day before your next lab).

Final Exam: The final exam will be cumulative and will be written in a three-hour session. The final exam will be a traditional points-based exam, where partial credit is possible. If your accumulated course grade is greater than 90% at the beginning of the final exam period, you can choose to skip the final exam and have your grade calculated purely using the other course components.

Late Submission Policy

Homework: Generally, the due date for each homework will be Wednesday at 11:59 pm. No late submissions will be accepted without an official academic exception (such as a self-medical declaration form or other exception from Student Accessibility Services).

Quizzes: If you must miss a quiz, you must inform your instructor **in advance** of the quiz date to schedule a make-up quiz. You may only make up one quiz in the semester without an official academic accommodation.

Labs: The late work policy for lab reports is:

Lateness: Maximum possible grade:

<24 hours 70%

<48 hours 40%

<72 hours 10%

The late penalty will be waived for special cases only (i.e. medical or compassionate considerations). Documentation will be required.

Completing all labs and submitting written lab reports are required to complete the lab component of the course.

If you have any questions about the late submission policy, or need to be considered for penalty waiver, please email phys1p91@brocku.ca.

Requirements for attendance and participation, and relationship to grades:

Lectures: There is no requirement to attend lectures. However, your likelihood of receiving a better grade in this course is *strongly* tied with the attendance of lectures. Lectures provide you the opportunity to hear the material explained in a different way from the book, observe demos that challenge your physical intuition, and connect with your classmates to form study groups. Lecture notes will *generally* be posted to Brightspace within 1 hour of the lecture. Posted lecture notes may not include all content presented during the lecture.

Quizzes: If you must miss a quiz, you must inform your instructor **in advance** of the quiz date to schedule a make-up quiz. You may only make-up one quiz in the semester without an official academic accommodation.

Tutorials: The lecture period on Fridays will be used as tutorials. This will be a flipped classroom experience, where you are expected to work on problems with classmates. The instructor and teaching assistant(s) will be available to provide help. Attendance is not required but will be recorded to assess the benefit of the tutorials for those that attend.

Labs: You must complete all labs and obtain an overall average of 60% or more to receive a grade in PHYS 1P91. Students receiving an overall lab grade that is lower than 60% will fail the lab component for PHYS 1P91 and will only be able to receive a grade in PHYS 1P21.

All lab sessions will take place in H200. Your attendance is required as there are no lab exercises that can be completed remotely.

Sequence and Dates of Topics and Readings

Week	Lecture/Reading Chapter	Homework	Quiz Content
Sept. 1 - Sept. 5	Math Skills	Mobius Student Orientation	No Quiz
Sept. 8 - Sept. 12	Chapter 2	Math Skills	Math Skills
Sept. 15 - Sept. 19	Chapter 3	Chapter 2	Chapter 2
Sept. 22 - Sept. 26	Chapter 4	Chapter 3	Chapter 3
Sept. 29 - Oct. 3	Chapter 5	Chapter 4	Chapter 4
Oct. 6 - Oct. 10	Chapter 6	Chapter 5	Chapter 5
Oct. 13 - Oct. 17	No class	No class	No class
Oct. 20 - Oct. 24	Chapter 7	Chapter 6	Chapter 6
Oct. 27 - Oct. 31	Chapter 8	Chapter 7	Chapter 7
Nov. 3 - Nov. 7	Chapter 9	Chapter 8	Chapter 8
Nov. 10 - Nov. 14	Chapter 10	Chapter 9	Chapter 9
Nov. 17 - Nov. 21	Chapter 16	Chapter 10	Chapter 10
Nov. 24 - Nov. 29	Chapter 17	Chapter 16	Chapter 16
Dec. 1 - Dec. 2	Exam Review/Help Sessions	No Required Homework	No Quiz

Important dates for Fall 2025 (D2)

The most recent listing of Important Dates for all durations is at <https://brocku.ca/important-dates/all/>

First day of classes: September 3

National Truth and Reconciliation Day (non-instructional day): September 30

Reading Week: October 13 - 17

Last day of lectures: December 2

Exams: December 6 - 18

Deadline for withdrawal without academic penalty: November 4

Academic Policies

Academic Integrity

Academic misconduct is a serious offence. The principle of academic integrity, particularly of doing one's own work, documenting properly (including use of quotation marks, appropriate paraphrasing and referencing/citation), collaborating appropriately, and avoiding misrepresentation, is a core principle in university study. Students should consult Section VII, "Academic Misconduct", in the "Academic Regulations and University Policies" entry in the [Undergraduate Calendar](#) to view a fuller description of prohibited actions, and the procedures and penalties. Information on what constitutes academic integrity is available at [Brock University Academic Integrity Website](#).

Plagiarism software:

Laboratory reports in this course will be processed using Turnitin.com, phrase-matching software. If you object to uploading your assignments to Turnitin.com for any reason, please notify the instructor to discuss alternative submissions.

Penalties for Academic Misconduct in the Faculty of Mathematics and Science

The following are penalties usually imposed in academic misconduct cases in FMS. Please be aware that the Associate Dean, Undergraduate Programs, may assign different penalties than those listed here, depending on the details of individual cases. When the offense involves misconduct on a final exam, the penalties are steeper.

Course work, including mid-term tests

First academic integrity offence: Zero grade on assignment, additional penalty of 100% of the weight of the assignment to be subtracted from the final grade, mandatory completion of the AZLS Academic Integrity workshop

Second academic integrity offence: Zero grade on assignment, zero grade in course OR 4-month suspension

Third or additional academic integrity offence: Zero grade in course, 1-year suspension, permanent removal from major program.

Final exams:

First academic integrity offence: Zero grade in course.

Second academic integrity offence: Zero grade in course, 4-month suspension

Third or additional academic integrity offence: Zero grade in course, 1-year suspension, permanent removal from major program.

Intellectual Property Notice

All slides, presentations, handouts, tests, exams, and other course materials created by the instructor in this course are the intellectual property of the instructor. A student who publicly posts or sells an instructor's work, without the instructor's express consent, may be charged with misconduct under Brock's Academic Integrity Policy and/or Code of Conduct, and may also face adverse legal consequences for infringement of intellectual property rights.

Accommodations

The University is committed to fostering an inclusive and supportive environment for all students and will adhere to the Human Rights principles that ensure respect for dignity, individualized accommodation, inclusion and full participation. The University provides a wide range of resources to assist students, as follows:

- a) If you require academic accommodation because of a disability or an ongoing health or mental health condition, please contact Student Accessibility Services at askSAS@brocku.ca or 905 688 5550 ext. 3240.
- b) Medical Self-Declaration Forms (brief absence up to 72 hours)**

In the case of a short-term medical circumstance, if a student wishes to seek an academic consideration, please use the [Medical Self-Declaration Form](#). The request is to be made in good faith by the student requesting the academic consideration due to a short-term condition that impacts their academic activities (e.g., participation in academic classes, delay in assignments, etc.).

The period of this short-term medical condition for academic consideration must fall within a 72-hour (3 day) period. The form must be submitted to the instructor either during your brief absence or if you are too unwell, within 24 hours of the end of your 3 day brief absence.

Medical Verification Form (extended duration)

In cases where a student requests academic consideration due to a medical circumstance that exceeds 72 hours (three days) and will impact their academic activities (e.g., participation in academic classes, delay in assignments, etc.), or in the case of a final exam deferral, the [medical verification form](#) must be signed by the student and the health professional as per process set out in the [Faculty Handbook III:9.4.1](#).

- c) If you are experiencing mental health concerns, contact the Student Wellness and Accessibility Centre. *Good2Talk* is a service specifically for post-secondary students, available 24/7, 365 days a year, and provides anonymous assistance: [Good 2 Talk](#) or call **1-866-925-5454**. For information on wellness, coping and resiliency, visit: [Brock University \(Mental Health\)](#)
- d) If you require academic accommodation on religious grounds, you should make a formal, written request to your instructor(s) for alternative dates and/or means of satisfying requirements. Such requests should be made during the first two weeks of any given academic term, or as soon as possible after a need for accommodation is known to exist.
- e) If you have been affected by sexual violence, the Human Rights & Equity Office offers support, information, reasonable accommodations, and resources through the Sexual Violence Support & Education Coordinator. For information on sexual violence, visit [Brock's Sexual Assault and Harassment Policy](#) or contact the Sexual Violence Support & Response Coordinator at humanrights@brocku.ca or 905 688 5550 ext. 4387.
- f) If you have experienced discrimination or harassment on any of the above grounds, including racial, gender or other forms of discrimination, contact the Human Rights and Equity Office at humanrights@brocku.ca.