

## Course Outline – Physics 0012 B

In the event of a COVID-19 resurgence during the course that necessitates the course moving away from in-person delivery, course content may be delivered online either synchronously (i.e., at the times indicated in the timetable) or asynchronously (e.g., posted on OWL for students to view at their convenience). There may also be changes to any remaining assessments at the discretion of the course instructor. In the event of a COVID-19 resurgence, detailed information about the impact on this course will be communicated by the Office of the Dean and by the course instructor.

### General Information

Course #: Physics 0012 B  
 Section #: 530  
 Term: Winter  
 Year: 2021-22

Delivery: Classes will be conducted online until 31<sup>st</sup> of January and then will be in-person. Students will be notified if online delivery is extended beyond January 31.

	Time	Room
Lectures	Tuesday: 4.30 pm – 6.30 pm	BR-303, Brescia
Laboratory	Thursday: 4.30 pm – 7.30 pm	BR- 2006, Brescia

### Instructor Information

Name: Dimuthu Henadeerage Don  
 E-mail: [dhemacha@uwo.ca](mailto:dhemacha@uwo.ca)  
 Telephone number for office appointments: 2262363866  
 Office hours: *Please e mail me to set up a zoom meeting*  
 Office location: TBA

### Course Description

Physics 0012 is the second half of the physics 0011 course which is an introductory course in physics covering the foundation principles of fluids and pressure, gravity, electricity and magnetism. This course is taught at the pre-university level while focusing on the development of experimental skills, theoretical knowledge and the problem-solving skills required for further studies in physics at the first-year university level.

### Required Course Materials

Text Book: This can be freely available at <https://openstax.org/details/books/college-physics>  
 Scientific Calculator (SHARP EL-510RB, non-programmable calculator is recommended for exams)  
 Online course materials: <https://owl.uwo.ca/> (Western password required)

## Learning Outcomes

By the end of this course, students will be able to understand basic concepts of fluids and pressure, gravity, electricity and magnetism. Students will be able to solve problems related to density and buoyancy, satellite and planetary motion, electricity and magnetism. Physics 0012 laboratory is designed to teach the following laboratory skills: Provide direct experience of physics concepts and laws, teach the use of standard laboratory instruments, teach systematic methods of data collection and data analysis, build up experience in estimating and calculating uncertainties in measurements and in derived quantities, teach clear and accurate reporting of results and draw conclusions.

## Brescia Competencies

The course content will mainly focus on communicating (level 4) your problem-solving skills (level 4) effectively with the instructor. You will have to use your critical thinking skills and analysis skills (level 4) while answering these problems.

## Teaching Methodology and Expectations of Students

Course will be conducted via OWL until the university returns to in-person classes (potentially 31<sup>st</sup> January). Students are encouraged to ask questions through e mails and set up meetings to discuss problems. Labs will be done using online simulations or in-home setups during the online period and will be in-person after. All the materials (slides, videos) will be uploaded in OWL and students are supposed to read them and upload homework and assignments on time.

## Copyright and Intellectual Property

PowerPoint lecture slides and notes, lists of readings, in-class activities, assignment guidelines, and other components of the course materials are typically the intellectual property of the instructor. Unauthorized reproduction through audio-recording, video-recording, photographing, sharing on social media, or posting on course-sharing websites is an infringement of copyright and is prohibited. Such action may be considered a Code of Conduct violation and lead to sanctions.

## Evaluation

Except for multiple choice questions, I would give full marks for a question, only if the student has shown all the steps and the final answer is correct. Any answer that is missing appropriate units, will loses marks. Significant numbers and units are very important in this course and students are encouraged to use scientific notations all the time.

## SCHOLASTIC OFFENSES

A list of laboratory rules is posted on the OWL course page. Scholastic offences will be handled as explained in that document, and as stated in the Brescia College academic policies and regulations listed at the end of this course outline.

## HOMEWORK ASSIGNMENTS

Physics is a subject that cannot be memorized. In order to be successful in your physics course, you must first learn the physics concepts and then practice how to apply those concepts through problem solving. To help you achieve this goal, homework problems will be assigned weekly in this course. You are required to submit the completed homework assignments one week after receiving the problem set. Solutions to homework problem sets will be discussed during the tutorial periods.

#### TUTORIAL QUIZZES

There will be 3 quizzes as scheduled in the course outline and will be discussed during the tutorial sessions. Lab reports: Must be done using original lab manuals and handed in by the deadline via OWL. Lab reports will be marked out of 20 and the discussion will worth 2 points. Everything has to be written in passive voice and using scientific terms. More instructions about lab reports will be provided with the lab manuals.

#### EXAMINATIONS

There is one mid-term exams and one final exam in this course. If it comes to my attention that someone has managed to cheat during an exam, it will be reported to the Dean as a scholastic offence. The Dean or designate will apply a penalty, such as zero on the exam, and an offence file will be created for the student. If you have any difficulty with any of the rules and regulations in this course including the laboratory, please make an appointment with the course instructor to discuss your concerns.

#### Evaluation Breakdown:

Component	Weight
Laboratory (3 labs, Count all)	15%
Tutorial Quizzes (3 quizzes, Count all)	15%
Homework Assignments	10%
Midterm Exam	25%
Final Exam	35%

#### Academic Accommodation

Lab attendance: Physics 0012 B is a laboratory course, and you must obtain over 50% in at least 2 labs to pass this course. All labs have the same weight, and all 3 lab marks will be counted for the final lab grade. If you miss more than one lab, please contact the instructor immediately. You must pass the lab to pass physics 0012B course.

Makeup lab policy: Make-up labs are not permitted for the first two labs missed. We either give you zero or exempt you from the missed lab as explained above.

Students seeking academic accommodation for missed labs, quizzes or exams must provide valid documentation to the Academic Counselling office. A mark of zero will be assigned for the missed labs, quizzes or exams unless it has been excused by an academic counsellor. The policy regarding the absences from the laboratory is stated in the LABORATORY section of this course outline.

If you miss the due date of a homework assignment, contact the instructor immediately. The final decision to accept a late homework assignment will be decided by the course instructor.

The policies governing requests for academic accommodation for course components worth 10% or more of the course grade are outlined in the Brescia College Academic Policies and Regulations included at the end of this course outline.

## Course Content

Weekly Organizer:

Class/Topic	Week	Description	Assignments and/or Readings
<b>Fluids</b>	1	Density and pressure in fluids	
	2	Archimedes' Principle	Quiz 1 from week 1 and 2
<b>Gravity</b>	3	Planetary motion and Kepler's Laws	
	4	Gravitational potential energy and escape velocity	
<b>Electric Circuits</b>	5	Introduction electric circuits	
	6	Mid semester exam	
		Reading Week	
	7	Electric circuits continue	Quiz 2 from week 5 and 7
<b>Electricity</b>	8	Introduction to electric fields	
	9	Electric potential energy	Quiz 3 from week 8 and 9
<b>Magnetism</b>	10	Introduction to magnetism	
	11	AC motor and applications	
	12	Revision	
	13	Final exam	

## 2021-22 BRESCIA UNIVERSITY COLLEGE ACADEMIC POLICIES AND REGULATIONS

### 1. POLICY REGARDING ACADEMIC ACCOMMODATION

The complete policy regarding [Accommodation for Illness - Undergraduate Students](https://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12) can be found at [https://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\\_12](https://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12) .

Students who have long-term or chronic medical conditions which may impede their ability to complete academic responsibilities should seek Academic Accommodation through Student Accessibility Services ([https://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\\_10](https://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_10)).

Personal commitments (e.g., vacation flight bookings, work schedule) which conflict with a scheduled test, exam or course requirement are **not** grounds for academic accommodation.

Students who experience an illness or extenuating circumstance sufficiently severe to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

1. Submitting a **Self-Reported Absence** form provided that the conditions for submission are met;
2. For medical absences, submitting a **Student Medical Certificate (SMC)** signed by a licensed medical or mental health practitioner;
3. For non-medical absences, submitting **appropriate documentation** (e.g., obituary, police report, accident report, court order, etc.) to their Academic Advisor. Students are encouraged to contact their Academic Advisor to clarify what documentation is acceptable.

#### Requests for Academic Consideration Using the Self-Reported Absence Portal

Students who experience an unexpected illness or injury or an extenuating circumstance of 48 hours or less that is sufficiently severe to render them unable to meet academic requirements should self-declare using the online Self-Reported Absence portal. This option should be used in situations where the student expects to resume academic responsibilities within 48 hours. Note that the excused absence includes all courses and academic requirements within the up to 48 hours, it is not intended to provide an excused absence from a single course while students fulfill their academic responsibilities in other courses during that time.

The following conditions are in place for self-reporting of medical or extenuating circumstances:

1. Students will be allowed **a maximum of two self-reported absences** between September and April and one self-reported absence between May and August;
2. The duration of the absence will be for a maximum of 48 hours from the time the Self-Reported Absence form is completed through the online portal, or from 8:30 am the following morning if the form is submitted after 4:30 pm;
3. The excused absence will terminate prior to the end of the 48 hour period if the student undertakes significant academic responsibilities (writes a test, submits a paper) during that time;
4. Self-reported absences will **not** be allowed for scheduled final examinations; midterm examinations scheduled during the December examination period; or for final lab examinations scheduled during the final week of term;
5. Self-report absences may **not** be used for assessments worth more than 30% of any course;
6. Any absences in excess of 48 hours will require students to present a Student Medical Certificate (SMC), or appropriate documentation;
7. Students **must** communicate with their instructors **no later than 24** hours after the end of the period covered by the Self-Reported Absence form to clarify how they will fulfil the academic expectations they may have missed during the absence.

#### Request for Academic Consideration for a Medical Absence

When a student requests academic accommodation (e.g., extension of a deadline, a makeup exam) for work representing 10% or more of the student's overall grade in the course, it is the responsibility of the student to provide

acceptable documentation to support a medical or compassionate claim. All such requests for academic accommodation **must** be made through an Academic Advisor and include supporting documentation.

Academic accommodation for illness will be granted only if the documentation indicates that the onset, duration and severity of the illness are such that the student could not reasonably be expected to complete their academic responsibilities. Minor ailments typically treated by over-the-counter medications will not normally be accommodated.

The following conditions apply for students seeking academic accommodation on medical grounds:

1. Students must submit their Student Medical Certificate (SMC) along with a request for relief specifying the nature of the accommodation being requested no later than two business days after the date specified for resuming responsibilities. An SMC can be downloaded from [http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/medicalform.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf) ;
2. In cases where there might be an extended absence or serious issue, students should submit their documentation promptly and consult their Academic Advisor for advice during their recovery period;
3. Whenever possible, students who require academic accommodation should provide notification and documentation in advance of due dates, scheduled tests or examinations, and other academic requirements;
4. Students **must** communicate with their instructors **no later than 24 hours** after the end of the period covered by the SMC to clarify how they will fulfil the academic expectations they may have missed during the absence;
5. Appropriate academic accommodation will be determined by the Dean's Office/Academic Advisor in consultation with the course instructor(s). Academic accommodation may include extension of deadlines, waiver of attendance requirements, arranging Special Exams (make-ups), re-weighting course requirements, or granting late withdrawal without academic penalty.

The [full policy on requesting accommodation due to illness](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12) can be viewed at:

[http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\\_12](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_12)

## 2. ACADEMIC CONCERNS

If you feel that you have a medical or personal challenge that is interfering with your work, contact your instructor and Academic Advisor as soon as possible. Problems may then be documented and possible arrangements to assist you can be discussed at the time of occurrence rather than on a retroactive basis. Retroactive requests for academic accommodation on medical or compassionate grounds are not normally considered.

If you think that you are too far behind to catch up or that your work load is not manageable, you should consult your Academic Advisor ([https://www.brescia.uwo.ca/enrolment\\_services/academic\\_advising/index.php](https://www.brescia.uwo.ca/enrolment_services/academic_advising/index.php) ). If you consider reducing your workload by dropping one or more courses, this must be done by the appropriate deadlines; please refer to <http://brescia.uwo.ca/academics/registrar-services/> or the list of official sessional dates in the Academic Calendar (<http://www.westerncalendar.uwo.ca/SessionalDates.cfm?SelectedCalendar=Live&ArchiveID=>).

You should consult with the course instructor and the Academic Advisor who can help you consider alternatives to dropping one or more courses. *Note that dropping a course may affect OSAP eligibility and/or Entrance Scholarship eligibility.*

## 3. ABSENCES

**Short Absences:** If you miss a class due to a minor illness or other problems, check your course outline for information regarding attendance requirements and make sure you are not missing a test or assignment. Cover any readings and arrange to borrow notes from a classmate. Contact the course instructor if you have any questions.

Please note that for asynchronous online courses, attendance or participation requirements maybe different than for synchronous or in-person courses.

**Extended Absences:** If you have an extended absence, you should contact the course instructor and an Academic Advisor. Your course instructor and Academic Advisor can discuss ways for you to catch up on missed work, and arrange academic accommodations if appropriate and warranted.

It is important to note that the Academic Dean may refuse permission to write the final examination in a course if the student has failed to maintain satisfactory academic standing throughout the year or for too frequent absence from the class or laboratory

([http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=5&SelectedCalendar=Live&ArchiveID=#SubHeading\\_68](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=5&SelectedCalendar=Live&ArchiveID=#SubHeading_68)).

#### **4. SCHOLASTIC OFFENCES**

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence at:

[http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\\_20](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_20).

Students are responsible for understanding the nature of and avoiding the occurrence of plagiarism and other academic offences. Note that such offences include plagiarism, cheating on an examination, submitting false or fraudulent assignments or credentials, impersonating a candidate, or submitting for credit in any course without the knowledge and approval of the instructor to whom it is submitted, any academic work for which credit has previously been obtained or is being sought in another course in the University or elsewhere. Students are advised to consult the section on Scholastic Discipline for Undergraduate Students in the Academic Calendar.

If you are in doubt about whether what you are doing is inappropriate or not, consult your instructor, the Academic Dean's Office, or the Registrar. A claim that "you didn't know it was wrong" is not accepted as an excuse.

The penalties for a student guilty of a scholastic offence (including plagiarism) include refusal of a passing grade in the assignment, refusal of a passing grade in the course, suspension from the University, and expulsion from the University.

##### **Plagiarism:**

Students must write their essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

##### **Computer-marked Tests/exams:**

Computer-marked multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating. Software currently in use to score computer-marked multiple-choice tests and exams performs a similarity review as part of standard exam analysis.

#### **5. PROCEDURES FOR APPEALING ACADEMIC EVALUATIONS**

All appeals of a grade must be directed first to the course instructor. If the student is not satisfied with the decision of the course instructor, a written appeal is to be sent to the School Chair. If the response of the Chair is considered unsatisfactory to the student, they may then submit a written appeal to the Office of the Dean. If the student is not satisfied with the decision of the Dean, they may appeal to the Senate Review Board Academic (SRBA), if there are sufficient grounds for the appeal and if the matter falls within the jurisdiction of the SRBA. For information on academic appeals consult your Academic Advisor or see the Student Academic Appeals – Undergraduate in the Academic Calendar

[http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page\\_14](http://www.westerncalendar.uwo.ca/PolicyPages.cfm?Command=showCategory&PolicyCategoryID=1&SelectedCalendar=Live&ArchiveID=#Page_14).

Note that final course marks are not official until the Academic Dean has reviewed and signed the final grade report for the course. If course marks deviate from acceptable and appropriate standards, the Academic Dean may require grades to be adjusted to align them with accepted grading practices.



## 6. PREREQUISITES

Unless you have either the prerequisites for a course or written Special Permission from the Dean to enroll in it, you will be removed from the course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisite(s).

## 7. SUPPORT

### Support Services

The Brescia University College Registrar's website, with a link to Academic Advisors, is at <http://brescia.uwo.ca/academics/registrar-services/> . Students can access supports through Brescia's Student Life Centre (<http://brescia.uwo.ca/life/student-life/>) and Learning Skills Services at Western (<https://www.uwo.ca/sdc/learning/>)

### Mental Health and Wellness

Students may experience a range of issues that can cause barriers to your learning, such as increased anxiety, feeling overwhelmed, feeling down or lost, difficulty concentrating and/or lack of motivation. Services are available to assist you with addressing these and other concerns you may be experiencing. You can obtain information about how to obtain help for yourself or others through **Health & Wellness at Brescia** ([https://brescia.uwo.ca/student\\_life/health\\_and\\_wellness/index.php](https://brescia.uwo.ca/student_life/health_and_wellness/index.php) ) and **Health and Wellness at Western**, [http://uwo.ca/health/mental\\_wellbeing/index.html](http://uwo.ca/health/mental_wellbeing/index.html).

### Sexual Violence

All members of the Brescia University College community have a right to work and study in an environment that is free from any form of sexual violence. Brescia University College recognizes that the prevention of, and response to, Sexual Violence is of particular importance in the university environment. Sexual Violence is strictly prohibited and unacceptable and will not be tolerated. Brescia is committed to preventing Sexual Violence and creating a safe space for anyone in the Brescia community who has experienced Sexual Violence.

If you or someone you know has experienced any form of Sexual Violence, you may access resources at [https://brescia.uwo.ca/safe\\_campus/sexual\\_violence/index.php](https://brescia.uwo.ca/safe_campus/sexual_violence/index.php) .

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Portions of this document were taken from the Academic Calendar, the Handbook of Academic and Scholarship Policy, and the Academic Handbook of Senate Regulations. This document is a summary of relevant regulations and does not supersede the academic policies and regulations of the Senate of the University of Western Ontario.

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