



CAMOSUN COLLEGE
School of Arts & Science
Department of Physics & Astronomy

PHYS-101-001
Introduction to Physics
Fall 2018

COURSE OUTLINE

The course description is available on the web @ <http://camosun.ca/learn/calendar/current/web/phys.html>

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1. Instructor Information

(a) Instructor	Elizabeth ploughman
(b) Office hours	Mon, tues, thurs ,fri 9:30-10:20 wed 10:30 to 11:00 and 1:30- 2.00
(c) Location	F314 B
(d) Phone	250-370-3517 Alternative:
(e) E-mail	ploughe@camosun.bc.ca please note that if you require a quick reply you must leave a phone message during term time, if you need extra help see me during my office hrs, if you need to let me know of a problem then email, or phone or talk to me in person

2. Intended Learning Outcomes

Upon completion of this course a student will be able to:

1. Demonstrate skill in the use of S.I. base and derived units.
2. Draw graphs (by hand), determine slopes of linear graphs, linearize non-linear data, and write an equation to represent a linear graph.
3. Solve technical problems involving one-dimensional kinematics for a single particle with constant acceleration.
4. Solve technical problems involving the dynamics of a single particle in one dimension using Newton's Laws of Motion.
5. Perform vector analysis using scaled diagrams with applications to displacement and force.
6. Define the terms work, kinetic energy, gravitational potential energy and power.
7. Solve technical problems using the work-kinetic energy theorem and conservation of mechanical energy.
8. Solve technical problems involving simple DC electric circuits, Ohm's Law, and electric power.
9. Define and describe the following properties of waves: period, frequency, wave speed and amplitude.
10. Define the properties of light, including the electromagnetic spectrum.
11. State and apply the Law of Reflection and the Law of Refraction.
12. Assemble simple experimental apparatus using written instructions.
13. Observe, record, organize and display experimental data in tables, graphs or charts.
14. Analyze linear graphs (determine area, slope, intercept, etc.).
15. Interpret experimental results in the context of the experimental objectives.

3. Required Materials

- (a) Textbook: "Physics 101: Introductory Physics", adapted from "Physics Principles and Problems", Zitzewitz et al, McGraw-Hill Glencoe, 2009
- (b) PHYS 101 Lab Manual
- (c) Scientific Calculator, Drawing instruments (ruler, protractor, etc.)
- (d) Graph Paper (10mm x 10mm)

4. Course Content and Schedule

Lecture: Tues –Fri 11:30-12:20 F 322
Lab: Monday 1:30-3:20 F316

5. Basis of Student Assessment (Weighting)

- (a) Final Exam 50%
- (b) Tests (chapter tests will be announced at least 5 days before the test and your worst will be dropped from your record) 4%
- (c) Lab Reports and any group work completed 10%

****Notes: 1) Students must pass- obtain an overall grade of 50% or higher- in the laboratory component of the course order to obtain credit for the course and miss no more than 1 lab. In addition labs must be completed during the official lab period**

2) While attendance will not be monitored except during the 1st 2 weeks of class, attendance is mandatory and hence students are responsible for being aware of announcements made in class about tests etc. If you have a legitimate reason for missing class please see me when you return, I will not be emailing test info. Etc as you are required to be present!

3) A missed test can only be made up if medical documentations is provided

INSTRUCTOR SPECIFIC POLICIES

1. Homework problems will mainly be assigned from the textbook from the review problems at the end of the chapters . Any that students have difficulty with will be explained in class, so keep all problems assigned neat and organized in a duotang. At the end of the semester you can hand your corrected homework in for up to 2% bonus marks. Credit is for attempting homework, then checking your answers against the answer key and copying the correct solutions off the board in a different color of those you could not do correctly on the 1st try.
2. Lab reports for a particular week will be due one week following the lab. Each student is allowed one dropped or missed lab.
3. Missed tests and labs will only be excused if I am contacted within one week of the absence and with proper supporting documentation provided (counselor's note, doctor's note, etc...). Otherwise, a mark of zero will be assigned.
4. Any outstanding lab reports must be submitted prior to the final exam and the student must speak to me in person about their reasons before submitting the work

PHYSICS DEPARTMENT POLICIES REGARDING TESTING:

1. *The final exam will cover the entire course and will be 3 hours long. As stated in the current college calendar on page 39, "students are expected to write tests and final exams at the scheduled time and place." Exceptions will only be*

considered due to emergency circumstances as outlined in the calendar. Holidays or scheduled flights are not considered to be emergencies.

2. Students must write quizzes, tests, midterm tests, etc., on the date and time assigned by the instructor. Missed exams normally receive a zero grade. Instructors are not required to provide make-up tests. At their discretion, instructors may waive a test in exceptional circumstances such as medical issues or a documented illness.

PHYSICS DEPARTMENT POLICIES REGARDING LABS:

1. Lab attendance is mandatory – you cannot complete a lab using someone else's data and you may be required to "sign in" at the beginning of each lab period. A lab may be waived or made up at a later time only in the case of documented illness or other extenuating circumstances. If you will be absent from a lab period due to illness it is your responsibility to notify your instructor.
2. Unless otherwise stated by your instructor late penalties are as follows: For overdue labs (or assignments), a late penalty of 1 mark per day (10%) will be assessed for the first five days following the due date. After this date a complete report earns a maximum mark of 50%.
3. At the discretion of the instructor, a student who is repeating this Physics course may apply for lab exemption.

6. Grading System

- Standard Grading System (GPA)
- Competency Based Grading System

7. Recommended Materials to Assist Students to Succeed Throughout the Course

Please come by my office hours if you have questions while studying, and feel free to email me to set up an appointment to meet outside of my set times.

8. College Supports, Services and Policies



Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar

with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

A. GRADING SYSTEMS <http://camosun.ca/about/policies/index.html>

The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://camosun.ca/about/policies/index.html> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete</i> : A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.

IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.