



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

PHYS-104-001
General College Physics 1
Winter 2019

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, wed, thurs 3:30-4pm wed, thurs 1:30-2:20 mon 12-12:20 thurs 11:30-12:20
(c) Location	F 314B
(d) Phone	250 370 3517 Alternative:
(e) E-mail	ploughe@camosun.bc.ca note that explanations to homework problems will NEVER be attempted via email because it is not possible to do that for every student's physics issues. Do, however, feel free to let me know of any homework troubles via email because I can then discuss the troublesome questions in class. Further note that this is a classroom based course it is your responsibility to attend, however picture taking of the board for study buddies who have to be absent for various reasons is encouraged (now that most students seem to have smart phones)

2. Intended Learning Outcomes

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

1. Solve technical problems involving one-dimensional kinematics for a single particle undergoing constant acceleration along horizontal and inclined surfaces, and in free fall.
2. Solve technical problems involving the dynamics of a single particle in one dimension, the vector nature of forces, the net force on an object, free-body diagrams for single and two interacting objects, gravitational forces, and inertia.
3. Solve technical problems involving kinetic energy, gravitational potential energy, elastic potential energy, conservation of mechanical energy, and mechanical power, in one dimension.
4. Solve technical problems involving conversions between common temperature scales, specific heat capacity, latent heats, calorimetry, and heat transfer by radiation, thermal conduction and convection.
5. Solve technical problems involving nuclear energy (mass-energy equivalence, binding energy), demonstrate knowledge of nuclear fission, fusion, and fuel disposal problems.
6. Solve elementary technical problems involving graphical and trigonometric vector algebra in two dimensions, two-dimensional kinematics (motion), dynamics (forces), work and power.
7. Solve technical problems involving projectile motion, circular motion with constant speed, gravitational forces and planetary motion.
8. Solve technical problems involving hydrostatics (Archimedes' principle, Pascal's principle) and simple fluids in motion (Equation of continuity, Bernoulli's equation).
9. Assemble experimental apparatus using written instructions.
10. Observe, record, organize and display data in tables, graphs or charts.

11. Analyze linear graphs (determine area, slope, intercept, etc.).
12. Observe and record sources of error and estimate the range of uncertainty in results.
13. Interpret meaning of experimental results in the context of the experimental objectives.
14. Write scientific reports in an acceptable, traditional format.

3. Required Materials

- (a) Texts Physics by Giancoli any edition

Other: homework pack, lab manual

There is also an optional "workbook" which will be printed 2 weeks into the semester (the number of copies printed depends on demand)

4. Course Content and Schedule

As on your timetable

****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 (except for final exam info) 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 homework pack. students will be assigned most of the problems available. keep all problems assigned and attempted organized in a duotang. At the end of each chapter a small amount of lecture time will be given (along with copies of the solution keys) for students to work in small groups (one key per group) on correcting their homework. Corrected homework (or a sheet of paper with my collected signatures) can be submitted at the end of the semester with your finished final exam 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

5. Basis of Student Assessment (Weighting)

- (a) Assignments (corrected only) 2% bonus marks
- b) Unit tests 35% (your worst will be dropped from your record), tests will be announced in class at least 5 days before the test day, if you miss classes see me or consult with your lab partner) to make sure that you did not miss any announcements. It is your responsibility to be in class
- c) Labs 15% your worst will be dropped, all but this one must be submitted unless you provide medical documentation for an absense

6. Grading System

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

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

Text, lab manual, workbook, calculator, 2 duotang folders, erasable pens, drawing equipment

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.