



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

PHYS-105-001
General College Physics 2
Winter 2020

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 9:30-10:20, 1:30-2:20, Wed 9:30-10:20 thurs 11:30 -11:20 and 5:20-5:50 No office hrs fri. Feel free to knock on my door at other times if you have short questions , if I am in my office and not too busy marking etc. I will try to answer your questions before they turn into huge ones	
(c) Location	F314 B	
(d) Phone	250 370 3517	Alternative: _____
(e) E-mail	ploughe@camosun.bc.ca	

2. Intended Learning Outcomes

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

1. Define and describe the following properties of waves: period, frequency, wave speed, and amplitude. State the principal of superposition and understand the properties of waves undergoing constructive and destructive interference.
2. State the conditions for standing waves and identify nodes and anti-nodes. Solve problems of vibrating strings and air columns, including fundamental nodes and harmonics.
3. Solve technical problems involving the behaviour of light at an interface between media (laws of reflection, refraction, dispersion).
4. Solve technical problems involving geometric optics (lenses, mirrors, simple optic devices).
5. Solve technical problems involving the electrostatic force, the electric field and potential.
6. Solve technical problems associated with simple DC circuits and networks of batteries and resistors in series and parallel circuits, Ohm's Law and electric power.
7. Solve technical problems involving magnetic fields due to current-carrying wires, magnetic forces between wires and on charged particles, and the practical application of magnetism.
8. Assemble experimental apparatus using written instructions.
9. Observe, record, organize and display data in tables, graphs or charts.
10. Analyze linear graphs (determine area, slope, intercept, etc.).

11. Observe and record sources of error and estimate the range of uncertainty in results.
12. Interpret meaning of experimental results in the context of the experimental objectives.
13. Write scientific reports in an acceptable, traditional format.

3. Required Materials

- (a) **Texts** 'physics' by Giancoli 7th edition OR any edition and the physics 105 **workbook** , lab manual
- (b) **Other** a workbook will be available. If you do not have the 7th edition of the text the workbook will be required because most of your homework will be from it. If you do have the 7th edition of the text then you may do all your homework from the 7th edition if you wish (and in that case the workbook will be an optional source of extra solved problems) or you may choose to do the workbook homework as those students who do not have a 7th edition of the text will
- (c) .A calculator, ruler, protractor and notebook as well as a lab folder are required

4. Course Content and Schedule

Lectures and labs as on your timetable note that you are required to attend lectures and labs. While attendance will not be taken any notes that you miss are **your own responsibility** to make up (if you rarely miss lectures then you will be able to catch up by reading the relevant pages of the workbook)

4 unit tests which will announced 1 week prior to each test , a cumulative midterm during the **last lab block before the midterm break** and a final exam

Unit test dates will be announced in class but a reminder will be also sent out via group email, so if you wish to receive these reminders please ensure that your camlink email address is correct. (that is the one shown on your registration)

Homework is at the end of this handout

5. Basis of Student Assessment (Weighting)

Home work assignments (including corrections done to term tests) if corrected by the student (using the provided solutions) in a different color are worth **10%**. Completed assignments will be signed off on an index card which you will keep in your possession as the semester proceeds. You will keep this card and submit it with your final exam. It's mark is based on completeness. There will be assignments for : mirrors and lenses, laws of reflection and refraction, circuits, waves, electric forces and fields and magnets, as well as for 4 term tests and 1 midterm corrections

- (a) **lab reports: 20%** a student may miss only one lab without a documented reason, however your lab mark will be based on 3 formal reports and your best other 6 reports

(b) **unit tests and midterm 30% after your worst test is dropped** Notice that there will be 4 50 min 'unit tests' and 1 1 hr +50 min cumulative 'midterm' for grading purposes the midterm is worth the same as each unit test and can be your dropped test. While it is 2 hours that is only so that students have a chance to write a cumulative test **before** the final exam to understand a little the difficulties that arise for students during these cumulative tests that do not arise when doing a test that is more limited in scope. **NO MAKE up tests** are allowed unless medical documentation is provided and **only then if the student has not already attempted the test**

- (c) Exams final **40%**

- (d) Other group discussion around concept questions: the marks for this are based on completeness accumulated with the homework initials on your index card towards bonus marks

(e) PHYSICS DEPARTMENT GUIDELINES REGARDING TESTING AND GRADING:

- The final exam will cover the entire course and will be 3 hours long. As stated in the current college calendar, “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.
- 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.
- Any outstanding homework or labs must be submitted prior to the last day of classes, and will be graded according to the late policy outlined by the instructor.
- Refer to your instructor’s information page for any additional policies regarding testing and grade calculation.

PHYSICS DEPARTMENT GUIDELINES REGARDING LABS:

- Students must obtain an overall grade of 50% or higher in the laboratory component of the course order to obtain credit for the course.
- Attendance is mandatory & 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.
- 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 is still required and earns a maximum mark of 50%.
- At the discretion of the instructor, a student who is repeating this Physics course with a laboratory grade of 70% or higher may apply for lab exemption.
- Students will complete a minimum of 9 laboratory experiments including 3 formal reports (with full uncertainty calculations) and at least at least one lab using technology to perform data analysis.

6. Grading System

Standard Grading System (GPA)

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

workbook

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.