Creation date: March 26, 2021
Revision date:

SAMPLE COURSE OUTLINE

Course Code, Number, and Title:

PHYS 1125: Physics I with Calculus

Course Format:
[Course format may vary by instructor. The typical course format would be:]

Lecture 4.0 h + Seminar 0.0 h + Lab. 2.0 h

Credits: 4.0 **Transfer Credit:** For information, visit bctransferguide.ca

Course Description, Prerequisites, Corequisites:

This is a calculus-based introduction to mechanics. The course examines kinematics (one and two dimensions), dynamics, statics, energy, rotation, waves, oscillations, fluids, gas, heat, thermodynamics in lectures and laboratories. Students planning to go into physical and applied sciences are encouraged to take this course and its second part, PHYS 1225.

Students will receive credit for only one of PHYS 1101 or 1125.

Prerequisite(s): A minimum "B" grade in Physics 12, a minimum "C" grade in PHYS 1118, or a satisfactory score on the Physics Diagnostic Test; and a minimum "C-" grade in one of the following: MATH 1171, 1173 and 1183, 1175, or 1253 (MATH courses may be taken concurrently).

Learning Outcomes:

Upon successful completion of this course, students will be able to…

- Explain and predict how objects & systems move when they are subject to forces
- Explain and predict both translational & rotational motion
- Understand and use the concepts of energy, linear momentum & angular momentum conservation
- Demonstrate an understanding of & solve problems in oscillations, waves & sound
- Solve problems using rigorous problem solving techniques including graphical & dimensional analysis
- Take proper measurements in the laboratory (lab topics reinforce physics concepts discussed in lectures)
- Write laboratory reports

Instructor(s): TBA
Office: TBA **Phone: (604) 323-XXXX**
Office Hours: TBA **Email: TBA**

Textbook and Course Materials:

[Textbook selection may vary by instructor. An example of texts and course materials for this course might be:]

For textbook information, visit https://mycampusstore.langara.bc.ca/buy_courselisting.asp?selTerm=3|8

Note: *This course may use an electronic (online) instructional resource that is located outside of Canada for mandatory graded class work. You may be required to enter personal information, such as your name and email address, to log in to this resource. This means that your personal information could be stored on servers located outside of Canada and may be accessed by U.S. authorities, subject to federal laws. Where possible, you may log in with an email pseudonym as long as you provide the pseudonym to me so I can identify you when reviewing your class work.*

Assessments and Weighting:
Final Exam 40%
Other Assessments 60%
[An example of other assessments might be:]

Assignments & Quizzes10%
Two Written Tests 30%
Labs 20%

Grading System:
Specific grading schemes will be detailed in each course section outline.

A+	93-100%	**B+**	76-79%	**C+**	64-67%	**D**	50-54%
A	85-92%	**B**	72-75%	**C**	60-63%	**F**	0-49%
A-	80-84%	**B-**	68-71%	**C-**	55-59%		

Topics Covered:
[Topics covered may vary by instructor. An example of topics covered might be:]

- Introduction to Calculus, Dimensional Analysis, Graphical Analysis
- Motion in 1D, 2D and 3D
- Newton's Laws of Motion
- Application of Newton's Laws
- Work and Energy
- Conservation of Energy
- Systems of Particles and Conservation of Momentum
- Rotation
- Conservation of Angular momentum
- Simple Harmonic Motion
- Wave Motion and Standing Waves
- Waves: Superposition

As a student at Langara, you are responsible for familiarizing yourself and complying with the following policies:

College Policies:

E1003 - Student Code of Conduct
F1004 - Code of Academic Conduct
E2008 - Academic Standing - Academic Probation and Academic Suspension
E2006 - Appeal of Final Grade
F1002 - Concerns about Instruction
E2011 - Withdrawal from Courses

Departmental/Course Policies:

Information unavailable, please consult Department for details.