

Physics 20 Course Outline

Mr. A Linville



Nuts and Bolts Info:

- Room 166; Contact info: I can be found in room 166 during class time or via phone at (780) 469-1315. Physics 20 is a 5 credit course. The prerequisite is 50% in Science 10.
- Check the course website at www.linville.ca

Necessary Materials:

Students are required to bring a scientific calculator, textbook, notebook, pencil and eraser and any completed homework everyday. Graph paper will be useful; a limited amount will be available in class.

Purpose/Goals/Objectives:

According to the Program of Studies for Physics 20: "To become scientifically literate, students need to develop a knowledge of science and its relationship to technologies and society. They also need to develop the broad-based skills required to identify and analyze problems; to explore and test solutions; and to seek, interpret and evaluate information. Students will be encouraged to develop positive attitudes that support the responsible acquisition and application of knowledge related to science and technology."

Scope and Sequence:

Physics 20 consists of four units covering kinematics, dynamics, circular motion, energy conservation, and simple harmonic motion and waves.

Assessment:

The mark for each unit will be calculated using the following breakdown:

Unit Exam	70%
Quizzes, Assignments & Labs	30%

When I mark written-response questions **little or no credit will be awarded for simply writing down correct equations** or for ambiguous answers unsupported by explanations or logical development.

Unit	Chapters	Weighting (% of course)
Kinematics	1, 2	15
Dynamics	3, 4	20
Circular Motion, Energy Conservation	5, 6	15
SHM, Waves	7, 8	10
Skills Exam		10
Final Exam		30

Evaluation/Grading Policies

The teacher-awarded portion will be presented in four units. Each unit mark will be comprised of 30% for daily work (quizzes, projects, labs, assignments, etc) and 70% for unit exams. If you miss a unit exam, you will be given an opportunity to write an **alternate exam at the end of the course**. If you miss a quiz, no alternate quiz will be given.

To be eligible for a replacement exam, students are required to have completed at least 90% of all homework including labs. The original exam has to be 15% or more below the current mark in the course. When the replacement exam is written is at the discretion of the teacher.

Assignments, including labs, that have not been handed in or omitted by the end of the current unit of study may receive a mark of 0.

Other Supporting Info:

It is strongly recommended that you have at least 65% in Math 10. The following math skills are essential for success in Physics 20:

- formula manipulation
- properties of linear functions
- graphing inverse-square functions
- vector components
- trigonometric ratios
- graphing quadratic functions
- the properties of sinusoidal functions over a single period

If you are absent for ANY reason, it is **your** job to find out what was missed and to catch up; **the text book** is a very good source of information and worked out examples. As your teacher, I will be working very hard this semester to ensure that you have every chance to be successful. I care very much about your success; however, it is unfair to expect me to care more about your education than you. The marks awarded for exams, etc. will be posted in the class and it is your responsibility to ensure that these are recorded properly.

Lab investigations are an important part of Physics 20. It is required by the Program of Studies that students demonstrate their ability to collect, organize, analyze and then interpret data and clearly communicate their results. These skills can not be learned or demonstrated by doing homework problems. Students are given the chance to observe physical phenomena "in action" and obtain an understanding how physics theory came about. Students examine the way in which "physics works" by taking into account the idealized assumptions of the theory and the practical limitations of the experiment.

The following websites will be useful:

- **Course website in case you missed notes or an assignment**
<http://www.linville.ca/>
- **Physics data Sheet:**
See the course website on the School-Education page for the current link.