



# Physics 20

## COURSE OUTLINE

September 2025 - January 2026



**Instructor:** Miss Sydney Swainston  
**Room:** 117

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**Google Classroom Code:**

### INTRODUCTION:

Physics 20 is the study of classical physics, otherwise known as Newtonian Mechanics. The course is both conceptual and mathematical in nature. Physics 20 will be broken down into 4 main units of study.

### PREREQUISITES:

Science 10

### UNITS OF STUDY & LEARNING OUTCOMES:

Topic	Timeline:	Major Objectives	Weighting
Unit 1: Kinematics	September (approx. 16 classes)	<ul style="list-style-type: none"><li>describe motion in terms of displacement, velocity, acceleration and time</li></ul>	15%
Unit 2: Dynamics	October (approx. 20 classes)	<ul style="list-style-type: none"><li>explain the effects of balanced and unbalanced forces on velocity</li></ul>	25%
Unit 3: Energetics	November (approx. 11 classes)	<ul style="list-style-type: none"><li>explain that work is a transfer of energy and that conservation of energy in an isolated system is a fundamental physics concept</li></ul>	15%
Unit 4: Circular Motion and Gravitation	November (approx. 13 classes)	<ul style="list-style-type: none"><li>explain circular motion, using Newton's laws of motion</li><li>explain that gravitational effects extend throughout the universe</li></ul>	15%
Unit 5: Oscillatory Motion and Waves	December (approx. 23 classes)	<ul style="list-style-type: none"><li>describe the conditions that produce oscillatory motion</li><li>describe the properties of mechanical waves and explain how mechanical waves transmit energy</li></ul>	30%

### RESOURCES/TEXTS/SUPPLIES:

Nelson Physics 20 textbook, binder, loose-leaf, pen, pencil, highlighter, graphing calculator

### **TEACHING METHODOLOGIES:**

Teaching methodologies will be varied and adapted to student needs. They will include, but are not limited to, the following:

- Videos
- PowerPoint presentations
- Group work
- Internet research
- Student presentations
- Student self-assessment
- Individual work
- Labs

### **TEACHER EXPECTATIONS AND CLASSROOM CONDUCT:**

#### **Ready**

- When the bell rings, be in your seat with your materials out. If you are late, enter the classroom quickly and quietly.
- If there are warm-up questions on the board, be sure to answer them.
- The due dates for all assignments and labs will be stated in class as well as displayed. It is up to the individual student to make sure that they know when they are due and complete these assignments on time. Assignments must be handed in by the end of the school date when they are due. Late assignments may not be accepted after the posted due date without consultation with Miss Swainston. Extenuating circumstances will be given appropriate consideration.
- You will be informed of a lab at least a day before the class date. Be prepared for the lab by not wearing loose clothing, wearing closed-toe shoes, and having long hair tied back.

#### **Responsible**

- You are expected to keep up with assignments. Class time may be given for the completion of assignments but expect to do some homework.
- You should be checking PowerSchool regularly to keep informed about your progress in the class.
- Be responsible for your own learning.
  - If you are absent, ask your teacher and check the extra hand-outs basket for your class to get missed assignments.
  - If you are absent on a day you were to write a quiz or a test, you will write it on the day that you return to classes.
  - If you need extra help, arrangements can be made with your teacher if needed.

#### **No Bus Days**

- In the event of buses not running; I will run a drop in google scheduled during regular time. This will be time to ask questions, clarify concepts, work on assignments, have group discussions, etc. No new material covered but dependent on the frequency of this situation this could change.

#### **Respectful**

- Respect your classmates by being polite and listening attentively when they are speaking.
- Respect your teacher by listening attentively in class, following all instructions given, and using class time given to complete assignments.
- Respect classroom equipment. After a lab and other activities, make sure that all materials are cleaned and put back in their proper places.

## **COURSE EVALUATION AND STUDENT ASSESSMENT:**

<b>Assessment for Learning</b>	<b>Assessment of Learning</b>
Formative assessment is a systematic process of collecting information or evidence about student learning and is not assigned a grade/mark for the report card.	Summative assessment is the judgment we make about the assessment of student learning based on established criteria and a mark/grade is recorded for the report card.

The purpose of assessment is to improve student learning. This means that judgments of student performance must be criterion-referenced so that descriptive feedback can be given that includes clearly expressed next steps for improvement. Tools of varying complexity are used by the teacher to facilitate this.

### **THE FINAL MARK/GRADE:**

The evaluation for this course is based on the student's achievement of curriculum expectations and the demonstrated skills required for effective learning. Grades for each reporting period will be determined by the following categories and weightings:

<b>Assignments</b>	<b>10%</b>
<b>Quizzes</b>	<b>30%</b>
<b>Unit Exams</b>	<b>40%</b>
<b>Final Exam</b>	<b>20%</b>

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<b>Total</b>	<b>100%</b>
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The final mark/grade represents the quality of the student's overall achievement of the expectations for the course and reflects the corresponding level of achievement. Credit is granted and recorded for this course if the student's final grade is 50% or higher.

### **Reassessment Policy:**

The purpose of reassessment is to allow a student to remove an uncharacteristic grade. Individual reassessments will only be granted in extenuating circumstances.

To qualify for a reassessment the following requirements must be met:

1. You must show evidence of preparing for the original assessment
  - a. For example:
    - i. Completion of all formative and summative assessments (assignments/quizzes/projects).
    - ii. Completion of practice questions/formative assessments
    - iii. Actively engaged in lessons/class/learning activities and effective use of class time.
2. You must review the assessment and receive feedback in order to establish an understanding of your grade.
  - a. For example:
    - i. A student/teacher conference

- ii. Post assessment self-reflection
- 3. You must provide evidence of enhanced learning of the outcomes.
  - a. For Example:
    - i. Completion of teacher tutorial sessions
    - ii. Completion of additional practice materials
    - iii. Exam Analysis - identifying errors/common mistakes/distractors
- 4. You must arrange to meet for reassessment in a timely manner.
- 5. The reassessment may be in an alternative form than the original assessment, but will assess the same outcome(s) from the programs of study.

### General Assessment Statement

Assessments are critical to guiding teaching and learning. Summative assessments are shared/returned with students to provide feedback on their learning. However, when a student does not complete an assessment, for security, that assessment can not be shared or returned to the other students. This delays the feedback to other students and creates inconsistencies in forwarding learning opportunities.

All assessments must be completed in a timely manner to support the learning for all students.

### **Late Policy:**

Late assessments will receive a grade of zero in PowerSchool. If a late assessment is handed in BEFORE it has been graded and given to the rest of the class, I will mark it like normal and a grade with feedback will be awarded. If an assessment is handed in AFTER it has been graded and given to the rest of the class, the zero in PowerSchool will be exempted, but it will not be graded and feedback will not be provided. If an assessment is not handed in at all, the grade of zero will remain in PowerSchool.

### **APPEALS PROCESS:**

Should a situation arise where a student is not satisfied with an assessment outcome, first discuss the matter with the teacher outside of class time. If the teacher and student are unable to resolve the issue, then the teacher will approach another teacher to assess the assignment. (The teacher will not have prior knowledge of the student's name or the previous grade for the given assignment). If there is still an issue, a meeting will be set up between the student, teacher, parents and administration to resolve the matter. The commencement of an appeal must occur in a timely manner; within 48 hours of receiving the marked assignment. In return, the appeal process will be completed as soon as possible.

### **EXTRA HELP:**

I am available to help students after school or mornings by appointment. I expect you to come for extra help if you are struggling with or need clarification of any aspects of the course.