



# Physics 20

## Course Outline

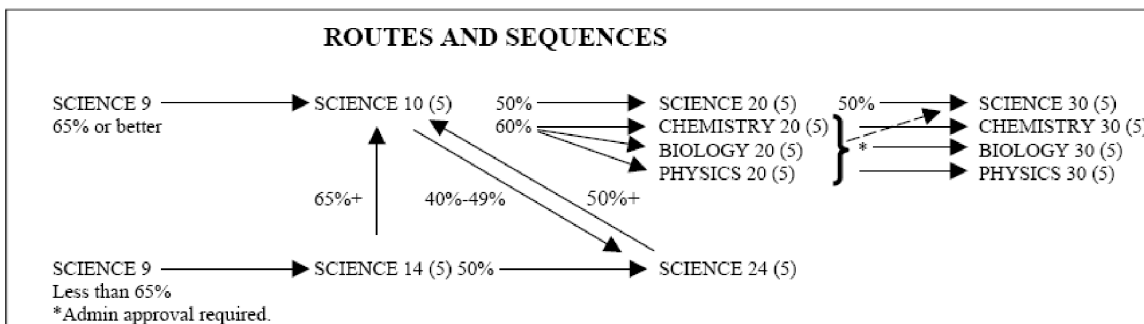
Physics 20 is offered as an **independent learning** course at the Learning Centres. Students can optimize their learning experience through in-person interactions, Google Meets, phone calls, texts, and email communication with their teacher. Throughout the duration of the course, teachers will collaborate with students to formulate a personalized timeline for their academic journey. This tailored approach to scheduling aims to accommodate each student's unique learning pace, goals, and commitments, fostering an environment of flexibility and empowerment.

### Accessing Content and Required Course Work

Students will complete the course by working through modules. Modules are comprised of lessons which include various resources that allow the student to actively engage in the learning process. Course content and resources are provided online through the **Physics 20 Google Classroom**. Before you ask for help on the assignment, be sure to review all available resources including the practice problems on the course Google Classroom. Students require their unique first name.last name@edu.sturgeon.ab.ca account for course completion. An approved calculator (ie. Ti-84) is required for this course.

### Progression Through Course Sequences

Successful completion of Science 10. There are no prerequisites for mature students. A mature student, for Alberta High School Diploma purposes, is one who as of September 1 of the current school year, is 19 years of age or older; or the holder of a previously-awarded high school diploma from the province of Alberta; or an equivalent high school diploma from a jurisdiction acceptable to the Minister.



### Unit Topics and Evaluation

Physics 20 consists of four units of study: A. Kinematics B. Dynamics C. Circular Motion, Work and Energy D. Oscillatory Motion and Waves. The focus is on helping students understand the scientific principles behind the natural events they experience and the technology they use in their daily lives. Students will be encouraged to develop positive attitudes that support the responsible acquisition and application of knowledge related to science and technology.



The major themes allow connections to be drawn between the four units of this course and between all eight units in Physics 20-30. Physics 20 is composed of the following four units broken up into eight modules.

UNIT NUMBER	UNIT TITLE	ASSESSMENTS
A	Kinematics	Assignments 1, 2 and Unit A Assessment
B	Dynamics	Assignments 3, 4 and Unit B Assessment
A & B	Supervised Exam	Midterm Exam
C	Circular Motion, Work and Energy	Assignment 5, 6 and Unit C Assessment
D	Oscillatory Motion and Waves	Assignments 7, 8 and Unit D Assessment
A-D	Supervised Exam	Final Exam

School-Awarded Mark	Overall Weighting
Assignments (8)	50%
Unit Assessments (4)	20%
Midterm Exam	10%
Final Exam	20%

Study Sheet
In addition to their data booklet, students are permitted access to a single-sided, 8 ½ by 11 STUDY SHEET for each module test and the final exam.

A schedule of module due dates will be set up with your teacher as part of your registration. Timelines vary from student to student, depending on when you start the course and how well you grasp the material presented. Keep in mind that in a typical high school classroom, students receive approximately 80 minutes of class time everyday for an entire semester. You should **plan for 125 hours of coursework** to complete the course.

Marks can be viewed on PowerSchool. Pay attention to comments included with your marks. This could mean there are things that your teacher would like to review with you before finalizing the mark on the assignment.



Take the time to come see your teacher and discuss what must be completed or redone. Note: due to course deadlines, corrections will need to be completed in a timely manner as determined by you and your teacher.

## Required Materials:

- 1) An approved scientific calculator (ie.. Ti-84).
- 2) Physics 20 Data Booklet
- 3) Pearson Physics Textbook
- 4) Physics 20 Workbook (Optional, may be used for extra practice)
- 5) Pencils, pens, paper or PDF editing software such as KAMI

## Required Work for Assignments and Tests

Please ensure that you communicate your full solution when solving problems. A full solution includes labeled vector diagram, formula, how you rearranged the formula, work with units, final answer with unit and direction if a vector, rounding the final answer based on the lowest number of significant digits.

## Additional Information and Expectations

All students and staff are expected to treat each other with respect. For more information, please refer to our website: [www.sturgeonlearning.ca](http://www.sturgeonlearning.ca).

