Physics 12 2018/2019

Thomas Haney is a **self-directed** school. Physics 12 is designed to give as much freedom as possible to the students in *how* they complete each of the educational outcomes (Learning Guide expectations) but not *when* the outcome is completed. It is the ministry’s expectation that upon starting a course in September the **student will finish by June** of the same school year except under exceptional circumstances**.** The **learning guides provide one possible route** to complete the educational outcomes but they are ***not the only way***. Students are encouraged to try to obtain cross-curricular credit and adapt the learning guides to their own personal learning style in consultation with their teachers.

This course is divided into three units.  **Typically each reporting term ends with an exam or quiz which are usually cumulative.** Each of the sections is weighted according to the provincial guidelines.

**Tests and course work are equally weighted** in each unit to allow for diverse learning styles and still prepare the student for future educational growth.

Students may use a number of resources to meet the outcomes of this course. The learning guides reference **Giancoli Physics** **5th Ed.** However there are a number of good textbooks and workbooks available including **Gore Physics 2** and **Hecht Physics**. Answer Keys are in the Science Kiosk.

Students are encouraged to use **credible internet sources** and others with caution. A few examples of useful internet sites are:

<http://schools.sd42.ca/erac/> Research Website: username: thomas1 Password: SD42

<http://www.gov.bc.ca/bced/> Ministry of Education

<http://www.phy.ntnu.edu.tw/ntnujava/index.php>

I-Tune U (University lectures on Physics) Try Dr. Lewin from MIT

<http://www.quizmebc.ca/quiz.php>

<http://www.bced.gov.bc.ca/exams/search/>

Various You Tube Physics videos – some way too dangerous to really do and a few are too good to be true.

# Assessment

One-half of your **unit mark comes from *how* you demonstrate your understanding** of the expectations in a format **other than pen and paper testing**. *Reminder*: these are the minimum expectations; if you complete and submit only the laboratory exercises, basic notes and the problems you can usually expect to pass with a mark in the C or C+ range. **An A is** only **given for demonstrating excellence** (remember, seek challenge and experience success!). **Representation and application of the concepts to life** beyond the text and test is of higher value than specific question mastery and will be awarded a better grade. Overall grading in the course covers all three learning domains: cognitive (**thinking**), affective (**attitude**) and kinaesthetic (**doing things**); it is desirable that students demonstrate growth in all three areas. **Tests must be written on or before the dates outlined above unless your teacher changes the dates** to allow for special circumstances.

Three Categories to be assessed:

1. Unit Tests 50%
2. Unit work, Labs and other Demonstrations of learning 50%

The course final exam will be marked and count for 40% of the overall course mark. If you miss an exam or an assignment you may be permitted or required at the discretion of your teacher to write the final exam and count it or a portion of it towards your missed tests or activities (Beware: you will not likely receive the same grade as if you completed the entire course, so don’t expect an A or B type mark for only doing a minimum of tests). **REMEMBER: “A” means EXCELLENCE not okay or good.**

# Plagiarism/Cheating Policy:

Plagiarism is the act of copying the intellectual property of another individual. This includes copying: photographs, ideas, articles, books, notes etc. and claiming the work as your own or implying the work is yours through omission. Others work may be included in part in with your own work if the original author is given full credit for the work in an appropriate citation. **Copied work that is not appropriately cited will be given a mark of ZERO** as a first offence. A repeated offence may result in a zero mark and/or removal from the course and for grade 12 students **withdrawal from the graduation proceedings.** (The graduation ceremonies are to celebrate personally earned honourable success.)

Note: this **applies to labs and notes too. Cite all others work.**

Minimum Expectations and Terminology

These reflect the minimum BC ministry educational expectations. They are grouped together in five main categories: Reaction Kinetics, Dynamic Equilibrium, Solubility Equilibrium, Acid and Base Equilibrium, and Oxidation-Reduction Reactions which you should understand by the end of the year. We will cover these in text book chapter order to minimize confusion and hopping around.

<http://www.bced.gov.bc.ca/irp/pdfs/sciences/>

The outcomes are found on pages

Assignments (readings, questions and activities)

The course text is **Giancoli Physics** **5th Ed.**; we will move through the textbook in the order outlined by the ministry. ***Tests and quizzes will match the content order of the ministry of education.***

**REMEMBER** these readings and questions are only recommendations and may be adjusted in consultation with your teacher!!!! The point is to understand the concepts NOT complete this for something to do. **Representation** of knowledge **is more important than reproduction. Show me what you know!**

**Giancoli Physics** **5th Ed.:** See the Excel spreadsheet for the detailed assignments and Labs

The questions cover the minimum expectations; if you have any difficulty with these you should see your teacher for help, practice more problems or reread the appropriate section. You should be able to do almost all of the problems by the end of the course.

# Laboratory Exercises:

**TBA**

# Labs Rules:

1. **Follow the lab safety rules** if you are unsure ask the teacher or Mrs. Coleman
2. Labs are to be done **in pairs** not groups of 4, 5, 6, etc.
3. **Prepare** for the lab **before you come** in to do the lab eg. Read over the lab, create tables, **graphs**, etc.
4. Complete the lab
5. **Individually** write up the lab either formally or informally as required
6. **Lab reports are due as a package with your work no later than the exam date** and will not be accepted later.

**Lab Write up**

* + Title
  + Lab Partners
  + Date of Activity
  + Data Tables
  + Data Analysis
  + Questions
  + Discussion of Results (Connect in class theory to your lab results)

(example Investigation found on pages 23-25 Nelson Physics)

# What do I really need to do???(The short version)

## Read the sections while taking concise (short and clear) notes

## Do the practice exercises – check your answers. Answers are in the kiosk or the back of the book.

## Test yourself with the sample exam questions – check your answers

<http://www.quizmebc.ca/quiz.php>

<http://www.bced.gov.bc.ca/exams/search/>

Get help as needed!

## Do the lab(s) and answer the questions. How does it relate to the sections covered in the classes?

## Write, draw, diagram, paint, collage....... a 1 page summary for each chapter (be creative you will remember it better – make it you; this is an important activity)

## Hand it in. Remember you are trying to show me what you know in a form that represents your knowledge not just reproduce the textbook.

# Course Final Exam

* 40% of your course mark, All topics will be covered.
* Multiple Choice and short answer
* Only offered during set times at the end of the year and in January or with special permission.