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| **AP Physics 2** | **Mr. Scott Lawson Room: 205****Email:** **slawson@sd45.bc.ca****Website: www.mrlawsonscience.weebly.com/** |

**What will we be learning?**

AP Physics 2 covers material completed at the end of Physics 12 and extends into material covered in terms 1 and 2 of first year university curriculum. The course is taught at an accelerated pace and enriched with inquiry based activities. This course is designed to extend ideas typically covered in Physics 12 and university and introduce new and more challenging topics such as Fluids and Thermodynamics. This is a challenging but rewarding course for students who are interested in an enrichment opportunity. Because of the heavy content workload students are required to do a significant portion of their work outside of class time.

***Course Organization:***

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| **UNIT** | **TOPIC** | **UNIT** | **TOPIC** |
| **0** | Electricity (Review from AP 1) | **4** | Thermodynamics |
| **1** | Electrostatics + RC Circuits | **5** | Waves (Light) |
| **2** | Electromagnetism | **6** | Atomic and Nuclear Physics |
| **3** | Fluids | **7** | Review |

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| **Physics 12 and AP Physics 2: Marks Explanation** |
| Unit Tests Unit Quizzes/Student LogAssignments/Labs/Projects | 60%15%25% | Term’s one and two will be worth 35% of your course mark respectively, while term three will be worth 30% of your course mark. Students will also be given a work habits grade.  |
| **FINAL MARK**Course Mark AP Physics 2 | 100%0% |

**What are the Expectations?**

You are expected to take an ***active* role** in this class. This means thinking, asking questions, contributing to class discussions, making connections, planning for improvement, and taking ownership over your own learning. You are also expected to collaborate with your peers in order to help everyone achieve their learning goals. This will come in the form of peer feedback and group discussions.

**Each student is expected to**:

1) Come to class, on time, every time, prepared to work.

2) Act safely and maturely in class

3) Respect the rights of other students to obtain an education, and the rights of the teacher to do their job

With the help of Mr. Lawson and your peers, you will develop the ability to understand what you have already learned, determine what you have yet to learn, and decide how you can best improve on your achievement.

Throughout the course, you should always be able to answer the following questions:

1. **What am I learning?**
2. **How’s it going?**
3. **Where to next?**
4. **Why does it matter?**

***AP Physics 2 is a demanding course***. You should be prepared to do homework every day to keep up with labs, assignments and readings. Daily review of course material at home is essential for success. You need to bring all necessary classroom supplies and textbook to class every day. It may be helpful to get contact information of your colleagues in class to help with your learning and review.

***What materials are needed for each class?***

1. ***A computer or tablet, note this mandatory as paper copies of labs and worksheets will not be handed out this year, you will also be required to download and complete readings from my website to “pre-load” before class***
2. 3-ring binder – with dividers
3. 80-page notebook for ***quizzes*** note: this will be handed in with your quiz log at the end of each unit
4. Agenda book to record homework and due dates and exam dates
5. Pens (various colours), pencils, ruler, and a **calculator** (Physics is a MATH BASED COURSE)
6. Your creative and inquisitive mind

**Absences:** All absences from the class must be excused by a phone call to the office **on/before** the day you are absent (call 981-1234 ext. 1300 before 8:25 a.m.). **YOU** are responsible for getting peer notes, handouts, due dates and catching up with the material missed. Please DO NOT ask the following question: “*I was away last class what did I miss?”*
 ***Work Habits*:** In order to achieve a Work Habits level of “G,” you must be *consistently* on time, do all assignments and be productive in class. ***Be aware that you do NOT automatically deserve a “G”; you must earn it.***

**Deadlines:** It is expected that you are ready to hand in your completed assignments by the due date ***at the beginning of class***. Most assignments will be handed in online and you will not be able to hand in the assignment after the assigned due date. In extenuating circumstances, any extension of deadline must be discussed with Mr. Lawson well in advance of the due date.

***Student Logs*:** Each class you will be given a quiz on the material from the previous day. ***It will be your responsibility to retake the quiz if you are unsuccessful and record your progress on your student logs***. These student logs are due the day of the Unit Test and will **not be accepted after**. If the Unit Quiz for a unit is not written, student logs will not count for that unit.

***Exam Policy*:** Unit tests are weighted heavily; however there will be **NO** rewrites. At the end of each term we will have a summary exam that ***will*** be used to replace your lowest test score for the term. You can ONLY write this exam if you have completed all Unit Tests during the term and all assignments/worksheets from the term.

**Evaluation:** As stated earlier, you will be expected to take an active role and be responsible for your own learning. Every unit will be organized by an overall learning goal and 2-5 specific concepts, which will be formally assessed using a variety of assignments, labs, daily quizzes, and tests. We will assess all concepts, assignments and labs using performance-based rubrics that have clear criteria.

 **Extra help?**

Monday and Friday Morning 7:45-8:15 AM, Thursday’s at Lunch W205

**Anything Else?**

If you have any questions or concerns, please do not hesitate to talk to me or email me ~ slawson@sd45.bc.ca

**Quizzes:**

Just like in Physics 12 you will take several short quizzes throughout the unit that reflect the concepts covered in class. Just like in Physics 12 you will be responsible for recording your results in your student log. At the end of each unit we will write a summative quiz. All quizzes will follow the AP format and grading.

**Final Exam:**

All students are required to take the Physics AP 1 and 2 exams in May. Your score on this exam will **NOT** count for marks. However, we will write a full AP Physics practice exam in preparation for the real thing.

**Physics 12 AP – The Facts**

What Is It?

Physics 2 AP is an enriched curriculum that covers both the regular Physics 12 curriculum and first year university-level Physics.

*Having said this, the course will be taught quite differently than your Physics 12 class. In AP you will be expected to complete a significant portion of the course ON YOUR OWN before each class. Please be prepared for each class so you can take part in all activities during class.*

Who Should Take This Course?

This class is intended for students who are planning on going into a post-secondary science or engineering program.

When Is Class?

If you take this course you will be assigned both a block of Physics 12 and a block of Physics AP. The AP curriculum covers both Physics 12 as well as the additional material mentioned above. Success on the AP exam will require a mastery of both!

How Is My Mark Determined?

You will receive credit for both Physics 12 and Physics 2 AP. While your mark in Physics 12 is entirely based on that course, your mark in AP will be a blend of the two. In general universities will consider only your Physics 12 mark when calculating your average; having Physics 2 AP is a bonus!

How Much Work Is It?

It is important to remember that Physics 12 is a big step up from Physics 11; Physics 2 AP will be more so. Obviously there will be more work required, but we will do our best to make it a worthwhile and enriching experience.

What Do I Have To Do To Be Ready?

Time is our enemy. We will have a great deal of material to cover in a relatively short time. Since we only meet every other day, you will be required to prepare yourself by learning the material BEFORE you come to class. That way class time can be used for troubleshooting and enrichment!

Why Would I Do This To Myself?

Because you lie awake at night pondering the deeper meaning of a universe whose very nature taunts your limited knowledge with its vastness!

Ok so also, you do it because it will qualify you to write the two Physics AP exams in May. Students who receive a 4 or 5 on this exam can receive credit for first year university. Those that opt not to write the exam will enter first year physics with a much richer understanding of the material.