

Physics 12 – Course Outline 2019-20

Mr. Flink

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<u>Topic</u>	<u>Approximate Time</u>
Unit 1: Skills, Methods and the Nature of Physics <ul style="list-style-type: none">Metric conversions, Scientific Notation, Sig Figs and Graphing	<1 week
Unit 2: Vectors & Kinematics in 2-D <ul style="list-style-type: none">Vectors, Displacement, Velocity, Acceleration using vector concepts	2 weeks
Unit 3: Vector Dynamics <ul style="list-style-type: none">Using Newton's 1st, 2nd and 3rd Laws, systems of forces as vectors	2 weeks
Unit 4: Vector Momentum <ul style="list-style-type: none">Multiple objects, elastic & inelastic collisions	2 weeks
Unit 5: Circular Motion & Universal Gravitation <ul style="list-style-type: none">Moving in circles, weightlessness, orbits and geosynchronous orbit, escape velocity	2 weeks
Midterm Exam 1 (Unit 1-5)	end of term 3
Unit 6: Equilibrium <ul style="list-style-type: none">Requirements of equilibrium, translational and rotational forms, torque, applications	2 weeks
Unit 7: Electrostatics <ul style="list-style-type: none">The nature of electric charge, fields, energy, electric potential energy, electric potential	2 weeks
Unit 8: Electric Circuits <ul style="list-style-type: none">Series, parallel and combination connections, Ohm's and Kirchoff's Laws	2 weeks
Unit 9: Magnetism & Induction <ul style="list-style-type: none">Magnetic force and fields, relationship of magnetic field to current and force, right hand rules, induction, generators and motors	2 weeks
Midterm Exam 2 (Unit 6-9)	end of term 4

Assessment

Term 3 Tests	20% or 10%	Midterm exams function as retests of the unit tests. If your mark improves on the midterm, the weight will be changed from 10% to 20% to emphasize the improved understanding and ability demonstrated.
Midterm 1	10% or 20%	
Term 4 Tests	20% or 10%	
Midterm 2	10% or 20%	
Lab work	30%	
Quizzes	5%	
Assignments	5%	

Work Habits

A work habit mark of G (fully meets expectations), S (working towards expectations) and N (not meeting expectations) will be assigned each reporting period. This grade will be used by post-secondary institution and the passport of Education. ***For every 5 late assignments, the work habit grade will drop one letter grade. Excessive late arrival to class will also result in a lower work habit grade.***

Course Expectations

1. **BE ON TIME:** The first few minutes of class are very important. They set the tone for the entire lesson. Nothing is more disruptive than a stream of students drifting in late and interrupting activities. If you are late, enter the classroom **quickly** and **quietly**, record your name in the late log, and take your seat. All "lates" are recorded. After your **second** unexcused late you will be spending some time with me to discuss your lateness.
2. **LEAVING THE CLASSROOM:** Students are expected to go to the washroom before class. However, emergencies may occur and for this students must first ask permission and sign out. One student is allowed outside at a time. Students will not be allowed to leave the classroom during the first and last 10 minutes of class. Students that need to leave the school for an appointment, etc. need parental permission (note or phone call) and must **sign out at the office.**
3. **MISSED CLASS:** Attending classes regularly will ensure you do not miss important concepts. Every missed day will have a negative impact on your learning, regardless of the reason. Even if you are not feeling the greatest, you will learn more than if you are absent. If you know that you will be absent make sure that you inform me beforehand by email (fink_b@surreyschools.ca). If you miss a class it is **YOUR RESPONSIBILITY** to get any notes or assignments that you missed. I suggest that you take the phone numbers of several people who live near you so that you may call and ask about the day's proceedings (see back of this sheet). These people should be counted on to collect any handouts for you. Following these suggestions will prevent you from falling too far behind.
4. **COMPLETING ASSIGNMENTS:** Assignments are important for your learning and you are expected to complete every assignment whether you are here or not. Labs that are late will be accepted **1 class** past the due date, with a mark deduction. If you struggle with assignments, the minimum you can do for each assigned problem is:
1) **Draw a picture** 2) **Write out the known variables** 3) **Write down a relevant equation**
5. **BE A PURPOSEFUL LEARNER:** At all times be on task and participate in the lesson. Put your cell phone away- it is not relevant to your learning. Behave in a mature and cooperative way using every minute of class time effectively. Also, remember that it is your teacher who dismisses you **not** the announcements or the bell.
6. **MATERIALS:** The tools necessary for this course are two pens (one red and one blue or black), a pencil with eraser, 3 ring binder with ample supply of notepaper, a ruler, and a scientific calculator. A digital device (smart phone or tablet) will occasionally be used with a special app called SparkVuew for lab investigations.
7. **EXTRA HELP:** If you would like to see me for extra help, you can make arrangements with me and I will do my best to help you. I suggest you get a study partner from this class and work together. The responsibility is **YOURS** to stay on track. Suggested support websites:
<http://hyperphysics.phy-astr.gsu.edu/hbase/hframe.html> ; <http://www.physicsclassroom.com/>
8. **TESTS:** make up a large part of your Physics mark. In order to prepare for these tests it is important that you attend class, complete all homework, write all quizzes, do all reviews and seek extra help when needed. Students in senior level classes should expect that there will be **NO** re-

writes! If a student misses a class when a test is given, regardless of the reason, it is at the teacher's discretion whether the student will be allowed to write at another time convenient for the teacher. If the absence is unexcused, the student will not make up the test. In the case of a test missed due to excused absence, the parent must phone the teacher directly to discuss the reason for the absence; a hand-written note or email will not be sufficient. Students are expected to write the test on the early Fridays or time of convenience to the teacher. Once the test has been handed back to the class, students will not be able to write the test. In the case of planned and or extended absence (e.g., vacation or wedding), students must communicate with the teacher as early in the semester as possible in order to arrange for alternate test dates. Keep in mind that teachers may choose not to offer alternate test dates.

9. **ACADEMIC DISHONESTY POLICY:** Academic dishonesty is unfair and discouraging to the majority of students who pursue their studies honestly. Students engaging in any of the following behaviours will be considered cheating:

- Using any type of device/books or cheat sheets. Cell phones and devices will be handed in to the teacher before an assessment has taken place and bags/jackets will be put at the back of the classroom. Students will not have access to the washroom or the bags/cell phones until all students are done the test.
- Communicating with other students for any reason and in any manner during the exam.
- Exposing written papers to the view of other students. The plea of accident or forgetfulness shall not be received
- Continuing to write after the instruction to stop writing has been given.
- Taking any examination material from the examination room at any time without permission of the course teacher
- Plagiarism (presenting the work of another person as your own or allowing another person to present your work as their own).

Both cheating and plagiarism are dishonest, unethical and violate the value of learning and the integrity of our school community. As such, students caught cheating will be open to disciplinary action including a referral to the office as well as suspension for repeat offences. Students will not be given credit for any assessment written under these circumstances. In addition, students *may* or *may not* be offered a second chance to complete the assessment task in which cheating took place.

Advice for Success

- Think **LEARNER** not student- YOU are here to learn and you are responsible for your learning
- **Attend** every class and do not be late to class:

Students:	Ave # abs.	Ave # late
Top 5	0.4	0.2
Bottom 5	11	6.6

- Get assigned work **done on time**:

Students:	Assign %	Course %
Top 5	96.3	92.0
Bottom 5	36.4	38.2

- Have a **growth mindset**

Students:	# who review old tests
Top 5	5
Bottom 5	0

- Have a **growth mindset**

Students:	Ave Grade
Do Test review	84.2
Don't Test review	59.7

- **Discipline** yourself to stay off your device during class
- Come to class early and **prepare yourself mentally**
- Collaborate effectively with others- we learn more effectively with others
- **Be organized**- know where things are, name and date, put things away
- **PREVIEW** topics- very powerful learning strategy
- **Review** what you learned in class after that class
- **Take notes on your notes**- summarize and restate the big ideas

.....
Tear off and return this strip of paper. I have read and understand the above science department policies.

Student signature: _____ Student Name: _____

Parent signature: _____ Parent Email: _____