

Physics 12 Course Outline

Mr. Craig Evely
Duncan MacMillan High School
Winter 2018

Overview:

Physics 12 will look into the study of interactions between matter and energy in hopes to explain the various physical behaviours of the universe. There is a strong focus in two-dimensional movement and the forces associated with different type of fields. This is a demanding course that requires students to stay up to date with the assigned work, have a strong mathematical background, and a willingness to adventure into new and complex material.

Physics 12 consists of four major units, which are broken down as follows:

Unit	Time	Description
Dynamics Extension - Vectors	15-20 hours	<ul style="list-style-type: none">- Presenting vectors- Vector analysis in kinematics and forces- Inclined Planes- Solving problems involving multiple vectors with algebraic methods
2-Dimensional Motion	30-35 hours	<ul style="list-style-type: none">- Projectile motion- Simple harmonic motion in springs- Collisions in two dimensions- Elastic and Inelastic collisions- Planetary motion - uniform circular motion- Universal gravitation and satellite motion
Fields	30-35 hours	<ul style="list-style-type: none">- Static electricity- Electric fields, electric potential- Lines of force- Gravitational fields- Magnetic Fields- Circuits ** (optional)
Modern Physics	15-20 hours	<ul style="list-style-type: none">- Quantum theory- Nuclear physics

Assessment

This course will be evaluated, in units, by the following methods:

- In-class and take-home assignments throughout each unit
- Comprehension checks regularly
- Labs and lab reports
- Mid unit quizzes
- Unit Tests
- Final Exam

Units will be weighted according to time spent covering them (see above chart), but are subject to change. Due dates will be communicated within the semester; it is your responsibility to seek out any missed assessments and submit them in a timely manner. It is highly recommended to keep up with the work assigned, as this course moves quickly.

Classroom Protocol

1. It is your responsibility to ask the teacher or a fellow student about missed work.
2. Have respect and consideration for others and their property.
3. Do not leave the room without permission and do not ask to leave early.
4. Use lab time efficiently - it is not for group socializing.
5. Listen carefully to instructions and focus on the work at hand.
6. I expect an atmosphere of mutual respect and consideration. This means that when you ask a question or otherwise communicate with me, I will give you my full attention. I expect the same in return.
7. Copying another student's work is dishonest and unacceptable.
8. Come prepared (notes, notebook, pens/pencils and paper). Attend all classes and make efficient use of class time to complete required activities, assignments and projects.
9. Treat the resources used in the classroom/lab properly. Any problems with the computer hardware/software, etc. need to be reported to me. Do not attempt to fix it yourself.

Behavior Policy

- The use of cell phones and other electronic devices are not permitted during instructional time.
- Being late for class is not acceptable. Students have sufficient time to retrieve their class materials and arrive in class at a proper time.
- In the event of an absence to a class, you are expected to get the work that you have missed. The instructor will keep a record of all materials covered each day. If you miss a written test on the day of the absence, the test must be written the next day you are present.
- Cheating during tests and assignments is not permitted. Cheating is seen as being a choice on behalf of the student. Cheating is defined as, but not limited to:
 - Bringing in unauthorized material to an assessment
 - Copying off of a friend's test or assignment
 - Plagiarizing work from any source
- You are strongly encouraged to complete all assignments and homework in a timely fashion. Dates will be given in order for you to manage the work that needs to be completed. This is an important aspect of the course. Do not leave things to the last minute, as you will have plenty of work to hand in throughout the semester!

For Parents/Guardians:

Student reports are issued four times during the school year: November, February, April and June. Parent/teacher meetings will be held during the November and April reporting periods.

Please feel free to contact by email through PowerSchool or contact the school if you have any questions.

Contact:

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