

# 2020-2021 Physics 30 Course Outline

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Workbook: Physics 30 Workbook, Kennedy & Oswald • Text: Physics Pearson

## Course Overview and Outcomes

### 1. Physics 30 will be presented in four units:

<b>Unit A: Momentum and Impulse [~15%]</b> <ul style="list-style-type: none"><li>• Newtons Laws</li><li>• Momentum</li><li>• Impulse</li><li>• 1 and 2-d collisions</li></ul>	<b>Unit C: Electromagnetic Radiation [~30%]</b> <ul style="list-style-type: none"><li>• Properties of light and all forms of EMR</li><li>• Wave model of light</li><li>• Particle model of light</li></ul>
<b>Unit B: Electric and Magnetic Fields [~35%]</b> <ul style="list-style-type: none"><li>• Static Electricity and Fields</li><li>• Parallel Plates</li><li>• Magnetic Fields</li></ul>	<b>Unit D: Atomic Physics [~20%]</b> <ul style="list-style-type: none"><li>• Nucleus physics and atomic theory</li><li>• Study of the nucleus and intro to quantum mechanics</li></ul>

### 2. Scientific Skills

Scientific skill development is essential for students to answer questions, solve problems, make decisions, develop scientific understandings, and apply science and technology to new situations. Critical thinking, problem solving, innovation, communication, and collaboration are some of the key competency outcomes in this course. Skills will be evaluated based on the following skills categories: analyzing and interpreting, communication and teamwork, initiating and planning, and performing and recording. This is intrinsic in the way questions are asked in the course, which require a good understanding and synthesis of information to answer a question, rather than simple memorization and/or solving.

## Evaluation

Student report card marks are determined on the basis of homework, class assignments, quizzes, unit exams, and a final exam. A general mark breakdown follows:

Term Work	
<ul style="list-style-type: none"><li>• Formative Assessment (Quizzes, Projects, Assignments, Labs)</li><li>• Unit Final Assessment (Unit Tests)</li></ul>	35% 35%
Diploma - Final Exam	30%

## Course Expectations

### Student Expectations

- All students are to be mature and respectful of each other, the teacher, classrooms and the lab. Students are expected to maintain a clean and tidy classroom.
- Take responsibility for your own learning! Please ask questions and seek extra help if you do not understand. I am here to help you succeed! If I don't know you need help, I can't help you. When you're in class, be in class. Focus on the subject and learn what you can in the time we have.

**Attendance:** ALL classes are important, whether we are doing a lesson, activity, project, quiz, test, or review. Every missed class is a missed opportunity to learn and will result in students putting in ample amount of their own time to catch up. Students are to tell me in advance of an upcoming absence whenever possible and arrange a time to meet prior to this absence in order to stay on top of material. With the exception of an illness documented by the office, students who miss class and do not inform me ahead of time will be expected to catch up on their own. Students are expected to catch up on any concepts, notes, labs, work missed due to lateness or absence.

**Use of Class Time:** Students are expected to be ready to work when class begins, to use all class time effectively, and to complete any unfinished work on their own time during focus or at home. All assigned work is relevant and important, and practice is needed to become proficient. All assignments must be completed.

**Missing Quizzes and Tests:** Students must write all quizzes and tests. When necessary, quizzes/tests will be made up on a case-by-case basis.

**Technology:** We will be using a number of different technologies throughout the course on a daily basis. The following technology guidelines are expected:

- When anyone is speaking to the class (teaching, discussions, giving instructions, etc.), phones, tablets should be put away or facedown computer should be closed.
- Headphones are ok to listen to music at appropriate times (if you're not sure, ask) but never when anyone is speaking to the class.
- During work times, devices can be used to access information in any form that will help your understanding.
- Use maturity and common sense when making decisions about the use of a tech device. The line between a productive use and a distracting use is pretty clear.
- Pictures and videos are NOT permitted to be taken during class without the express permission of all those in the video/picture AND the teacher due to issues of confidentiality and privacy. Students taking videos/pictures may be asked to erase the video and have it confirmed by the teacher and/or have their device temporarily taken away.

**Late/Missing assignments** can be submitted up to **three (3) days** after the due date for the original assignment. Depending on the assignment, the original may **NOT** be accepted, or may require alternative guidelines, at the teacher's discretion.

Should the assignment still be outstanding after this point, the following steps may occur:

- Students must meet with the teacher to create a plan for completing the outstanding work over a mutually agreed upon time frame.
- Students may--at the teacher's discretion--discuss the option of having the opportunity to re-do assignments or parts thereof in order to show understanding of the material. Not all assignments can be redone or replaced, it is important to have a discussion.
- Students may complete an alternate assignment either of the teacher's design or the student's (with teacher approval). These assignments may be used as "re-do's" or as a completion mark, dependent on the task/teacher discretion. It may be possible to replace a completion mark with an alternate or replacement assignment at a later date, dependent on the circumstances.
- Students may be required to attend CAST or other scheduled times.
- The timeline for the return/grading of late work does not take precedence over more recent assignments--they will be addressed at the earliest convenience.
- *If work is not submitted and the unit test has been written, then the unit test may be used to replace the grade of the missing assignment -if appropriate- at the teacher's discretion.*
- *Failure to complete enough work may result in an incomplete grade in the course as not all outcomes have been assessed.*

Please note. Redoing any course work is not meant to be a marks grab, but show growth and understanding, which is why it is important to be done by the direction of the teacher. Please communicate.

### **Plagiarism**

Plagiarism of any kind will not be tolerated. If you are unsure if you are committing plagiarism, see your teacher! Incidents of plagiarism will be dealt with by the teacher, learning leads and administration (if needed). Breach of academic integrity can result in a grade of zero. This includes allowing others to plagiarize your work.