

COURSE: Grade 11 Physics
Instructor: Ryan Lin
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OBJECTIVES

- (i) develop analytical skills, strategies, and habits of mind required for scientific inquiry, including critical thinking and inferring
- (ii) develop communicative skills, strategies, and habits required for scientific inquiry
- (iii) learn fundamental concepts of introductory high school physics
- (iv) extend fundamental concepts beyond the mandate of the Ontario curriculum
- (v) gain exposure to both mainstream and unconventional applications of scientific concepts

COURSE MATERIALS

none required — *PowerPoint notes will be provided for download*

STUDY AIDS

Paper and a pen or pencil for note-taking

Week 1&2 – Intro and How to Write Motion

- Introduction
- How to write motion

Week 3&4 – Motion in A Plane

- Free Body Diagram
- Motion in Two Dimensions
- Projectile Motion

Week 5&6 – Newton's Law

- Newton's Law
- Application of forces

Week 7&8 – Work and Mechanical Energy

- Thermal Energy
- Heat Transfer
- Power and Efficiency
- MIDTERM TEST

Week 9&10 – Energy Transformation

- Forms of energy
- Work and Power
- Thermal Energy

Week 11&12 – Wave Transferring Energy & Exploring a Wave Model for Sound

- Vibration
- Waves
- Speed of Sound
- Application of Sound Model

Updated: Jan. /28th /2018

Week 13&14 – Electric Energy and Magnetism

- Circuit
- Electricity Inducing Magnetic Field
- Magnetic Field Inducing Electricity

Week 15&16 – Modern Physics

- Nuclear Energy
- Atoms and Isotopes
- Radioactive Decay
- Half Life
- Fission and Fusion
- FINAL TEST