P.S. 035 Manhattan High School

Course Code: SPS22QQB

Syllabus for: Physics 2

Teacher Name: Ms. Rojas

Year and Term: 2017-2018

Learning Standards: S1- Physical Science Concepts
S4- Scientific Connections and Understanding
S5- Scientific Thinking
S6- Scientific Tools and Technologies
S7- Scientific Communication
S8- Scientific Investigation

Course Description: Physics is a Regents course that connects the topic of Math, Momentum, Work, Energy, & Power, Electricity, Circuits & Magnetism, Waves and Modern Physics

Calendar or Unit Map:

Momentum
- Defining Momentum
- Impulse
- Impulse-Momentum Theorem
- Non-Constant Forces
- Conservation of Momentum

Work, Energy, & Power
- Work
- Force vs Displacement Graphs
- Hooke's Law
- Power
- Energy
- Gravitational Potential Energy
- Work-Energy Theorem
- Sources of Energy on Earth
- Conservation of Energy

Electricity
- Electric Charges
- Conductors and Insulators
- Charging by Conduction
- Charging by Induction
- Coulomb's Law
- Electric Fields
- Electric Potential Difference
- Parallel Planes
- Equipotential Lines

Circuits & Magnetism
- Electric Current
- Resistance
- Ohm's Law
- Electrical Circuits
- Energy + Power
- Voltmeters
- Ammeters
- Series Circuits
- Parallel Circuits
- Magnetic Fields
- The Compass
- Electromagnetism

Waves
- Wave Characteristics
- The Wave Equation
- Sound Waves
- Interference
- Standing Waves
- Doppler Effect
- Reflection
- Refraction
- Diffraction
- Electromagnetic Spectrum

Modern Physics
- Wave-Particle Duality
- Blackbody Radiation
- Photoelectric Effect
- De Broglie Wavelength
- Models of the Atom
- Energy Level Diagrams
- Atomic Spectra
- Mass—Energy Equivalence
- The Standard Model

Course Materials: Notebook, 200 index cards, USB flash drive, home computer

Grading Policy:

1-30%- Labs	1-30%- Labs
2-10%- Exams	2-60%- Exams
3-10%- Voc. Exams	3-10%- Voc. Exams
4-15%- Wit packets	OR for Beacon Student
5-10%- Voc. Cards	1-30%- Labs
6-10%- Movies	2-30%- Exams
7-10%- Projects	3-10%- Voc. Exams
8-05%- H.W.	4-30%- Projects
OR	