Teacher name: Mary Tsotsis

Subject: Physics IB Higher Level, Year 1

Number of periods per week: 5

Class: Physics IB 11 HL

Course description - aims and skills- retake policy

Without the understanding of physics, many applications in physics such as electronics and mechanics would not exist today. From cancer treatment to tackling climate change, gaming to robotics and artificial intelligence, physics and physicists are on the front line, helping to shape the future. At a time when jobs are changing, physics offers a vast and expanding range of career paths.

IB Physics aims to deepen students' understanding of the natural world by exploring concepts, methods, and tools in physics. Key goals include developing conceptual understanding, analytical sills, resilience, problem solving and technology skills in a scientific context. Students will also learn to communicate effectively, collaborate, and become aware of the implications of science in the world. Through this course, they will be better prepared for their future studies. In addition, all students will design, carry out and evaluate an individual investigation, with the goal to demonstrate and to further develop their research, experimental, and critical thinking skills.

Students with an unsatisfactory score on a test, are welcome to retake the test to improve their knowledge, skills, confidence and grade, if they complete additional work required.

Timeline:

August-September: Measurements in IB Physics, Kinematics

October-November: Forces and Momentum, Work, energy and power

November-December: Rigid Body Mechanics, Galilean and special relativity

January-February: Thermal Energy Transfers, Greenhouse Effect

March-April: Thermodynamics, Wave Behavior

April-May: Doppler effect, Fields