

St. Mary's College

FORM FOUR

Subject: PHYSICS CSEC

COURSE OUTLINE

TERM 1

Proposed Date/Week	Unit/Section	Topic	Modules
1	SECTION A PHYSICAL MEASUREMENTS AND UNITS	FUNDAMENTAL AND DERIVED QUANTITIES	1. Fundamental Quantities and units
			2. Prefixes
			3. Scientific Notation
			4. Derived Units
2-3		MEASUREMENT	5. Scales
			6. Errors
			7. Simple pendulum
			8. Area
			9. Volume
			10. Graphs
			11. Density
4	SECTION B MECHANICS	VECTORS	1. Galileo
			2. Vectors and Scalars
5-6		STATICS	3. Forces
			4. Moment of a Force
			5. Deformation
7-8		DYNAMICS	6. Motion in a Straight Line
			7. Aristotle
			8. Newton's Laws
			9. Momentum
9-10		ENERGY	9. Forms of energy
			10. Conservation of Energy
			11. Potential Energy
			12. Kinetic Energy
			13. Power
11		HYDROSTATICS	14. Pressure
			15. Archimedes' Principle

Term 2

Proposed Date/Week	Unit/Section	Topic	Modules
1-2	SECTION C THERMAL PHYSICS AND KINETIC THEORY	MACROSCOPIC	1. Temperature
		PROPERTIES	2. Expansion
		& PHENOMENA	3. Gas Laws
			4. Brownian Motion
3		NATURE OF HEAT	5. Nature of heat
4-6		THERMAL MEASUREMENTS	6. Specific Heat Capacity
			7. Phases of Matter
			8. Specific Latent Heat
7-8		TRANSFER OF THERMAL ENERGY	9. Conduction
			10. Radiation
			11. Convection
9-10	SECTION D WAVES AND LIGHT	WAVE MOTION	1. Types of Waves
			2. Wave Parameters
11		WAVE PHENOMENA	3. Reflection, Refraction, Diffraction
			4. Superposition

Term 3

Proposed Date/Week	Unit/Section	Topic	Modules
1	SECTION D WAVES AND LIGHT	SOUND	1. Production and Propagation
			2. Speed of Sound
			3. Audio Frequencies
2		ELECTROMAGNETIC WAVES	4. Electromagnetic Waves
3		LIGHT WAVES	5. Waves or Particles
			6. Rays of Light
4-7		REFLECTION & REFRACTION OF LIGHT	7. Laws of Reflection
			8. Image in a Plane Mirror
			9. Refraction
			10. Laws of Refraction
			11. Critical Angle and Total Internal Reflection
			12. Dispersion
8-9		LENSES	13. Action of Lenses
			14. Image Formation
			15. Optical Instruments