



Year 12

PHYSICS

	Unit Title	Start/Length	Topic / Subject Matter	Assessment	Checkpoints	Due Date
Unit 3	Gravity and electromagnetism	Term 1-2 (45 hours)	Unit 3 includes; Topic 2: Electromagnetism. Subject matter includes, field theories have enabled physicists to explain a vast array of natural phenomena and have contributed to the development of technologies that have changed the world, including electrical power generation and distribution systems, artificial satellites and modern communication systems.	IA1: Data Test	Draft Due T2 Week 2 30/04/26	Term 1 Week 7 13/3/26
			Topic 1: Gravity and motion. Subject matter includes students a deeper understanding of motion and its causes by using Newton's laws of motion and the gravitational field model to analyse motion on inclined planes, and the motion of projectiles and satellites.	IA2: Student Experiment		Term 2 Week 5 22/05/26
Unit 4	Revolutions in modern physics	Term 2-3 (45 hours)	Unit 4 includes; Topic 1: Special relativity. Subject matter includes students investigating how the shortcomings of existing theories led to the development of the special theory of relativity.	IA3: Research Investigation	Draft Due T3 Week 2 23/07/26	Term 3 Week 4 6/8/26
			Topic 2: Quantum theory. Subject matter includes, investigating how the shortcomings of existing theories led to the development of the the quantum theory of light. Students will explain observations of a range of phenomena such as atomic emission and absorption spectra, the photoelectric effect, lasers and Earth's energy balance	External Examination (Units 3 & 4)		Term 4 See QCAA TBA
			Topic 3: The Standard Model. Subject matter includes, investigating how the shortcomings of existing theories led to the development matter. Student process, evaluate and examine the Standard Model of particle physics and how it relates to the Big Bang theory.			