

# *Physics T*

## **Rationale**

There is an innate human curiosity about and wish to understand the universe. The study of physics encourages and enables students to develop complex and sophisticated understanding of the universe through observation, questioning, experimentation, discussion, critical analysis and creative thinking. AC Physics T at high school is also an excellent entry level physics course for further study in Physics at a tertiary level and so provides another option for students who choose to take the course. As Physics is a fundamental experimental science, it revolves around students doing hands-on practical which supports the theory they learn in class. It also allows students to develop interpersonal and digital communication skills which are essential in modern scientific endeavour and are important life-enhancing, transferable skills in their own right.

## **Curriculum**

In AC Physics T, students develop their understanding of the basic concepts and principles of physics and to strengthen an understanding through a broad range of interesting applications to the real world. To meet these objectives, an emphasis is placed on sound physical reasoning, problem solving methodology and practical examples. At the same time this course demonstrates the role of physics in other disciplines including engineering, astrophysics and medicine. The two year course is divided into these 5 units:

Unit 1: Introductory Physics

Unit 2: Energy Transfer and Waves

Unit 3: Fields and Quantum Mechanics

Unit 4: Modern Physics

Unit 5: Astronomy

## **Where does it lead to?**

Studying Physics not only broadens the understanding of the universe and its operations but also provides opportunities for students join tertiary institutions to specialise into fields such as geophysics ,field seismology, weather forecasting, teaching, mechanical and electrical engineering, research, astrophysics, film, media and communications.