**PHYSICS**

The study of physics is intended to be interesting for students with a wide range of expectations. Physics seeks to understand and explain the physical world. It examines models and ideas used to make sense of the world and which are sometimes challenged as new knowledge develops.

VCE Physics provides students with opportunities to explore questions related to the natural and constructed world.

**UNIT 1: WHAT IDEAS EXPLAIN THE PHYSICAL WORLD?**

1. How can thermal effects be explained?

2. How do electric circuits work?

3. What is matter and how is it formed?

**UNIT 2: WHAT DO EXPERIMENTS REVEAL ABOUT THE PHYSICAL WORLD?**

1. How can motion be described and explained?

2. Extended practical investigation

3. One option is to be selected by the student from the following:

* What are stars?
* Is there life beyond Earth’s Solar System?
* How do forces act on the human body?
* How can AC electricity charge a DC device?
* How do heavy things fly?
* How do fusion and fission compare as viable nuclear energy power sources?
* How is radiation used to maintain human health?
* How do particle accelerators work?
* How can human vision be enhanced?
* How do instruments make music?
* How can performance in ball sports be improved?
* How does the human body use electricity?

**PHYSICS UNIT 3: HOW DO FIELDS EXPLAIN MOTION AND ELECTRICITY?**

1. How do things move without contact?

2. How are fields used to move electrical energy?

3. How fast can things go?

**PHYSICS UNIT 4: HOW CAN TWO CONTRADICTORY MODELS EXPLAIN BOTH LIGHT AND MATTER?**

1. How can waves explain the behavior of light?

2. How are light and matter similar?

3. Extended practical investigation

**Entry**

Students are advised to do at least Units 1 & 2 Physics if they intend to study Unit 3 and 4 Physics.