The Integrated Science course enables students to investigate science issues, in the context of the world around them. It incorporates aspects of biology, chemistry, geology and physics, and can also include less traditional areas such as forensic science and biotechnology.

**Integrated Science 1AB & 1CD**

**Recommended Background**
C grade in Year 10 Science; Enthusiasm and interest.

**Commitment**
Students in this course will be expected to complete 1-2 hours of study per week. This would include finishing class work, any research required, and preparing for in-class work and assessments.

**Course Content (1A to 1D)**

In each stage 1 unit, the focus for learning is the practice of science, general knowledge of factual content in biological, physical and environmental/earth science and an understanding of the impact of science on the world in which students live.

Approximately 4 Learning Areas will be selected from Flight, Health and Disease, Sports Science, Biotechnology, Technology, Forensic Science, Marine Science, Land Care and Human Physiology.

During this course students will:

- Develop scientific knowledge by evolving ideas and the application of technology;
- Use scientific concepts to solve problems related to everyday technology, processes and situations;
- Use scientific evidence in support of different points of view;
- Use different investigation methods/types including planning, conducting, processing and evaluating;
- Learn skills required to use specific equipment;
- Learn skills to collect data from field and laboratory;
- Learn how to record and display data in different ways including tables, graphs and spreadsheets;
- Analyse data, including identifying trends (qualitative and quantitative);
- Extrapolate their knowledge and skills of investigation methods to new situations;
- Learn safe handling techniques of chemicals, samples and equipment;
- Learn how to ethically handle organisms;
- Use relevant scientific conventions and terminology;
- Learn various skills and techniques to present scientific information clearly (ICT, audio/visual);
- Acquire knowledge and understanding of at least two of the following fields:
  - biological science;
  - physical science;
  - environmental/earth sciences;
- Acquire knowledge and understanding of scientific concepts appropriate to the chosen contexts; and
- Acquire knowledge and understanding of scientific laws, principles generalisations and relationships appropriate to the chosen contexts.

**Integrated Science 2AB**

**Recommended Background**
It is recommended that students studying Integrated Science 2AB should have completed Integrated Science 1CD, or equivalent.

**Commitment**
Students in this course will be expected to complete 1-2 hours of study per week. This would include finishing class work, any research required, and preparing for in-class work and assessments.

**Course Content (2A)**

During this course students will:

- Describe and explain major trends in:
  - Causes and outcomes of motor vehicle accidents;
  - Explain the application of science for:
  - The development of safety features in motor vehicles;
  - Explore the effect of drugs including alcohol on the body;
  - Interpret a situation, formulate a question or hypothesis to plan and conduct an investigation in which several variables are controlled;
Integrated Science

∞ Identify and explain the justification of laws using scientific testing and statistical evidence relating to safety devices and speed limits;
∞ Use equipment and preliminary trials to improve the procedure or measurement techniques to collect valid and reliable data;
∞ Make conclusions which are consistent with the data and explain patterns in the data in terms of scientific knowledge; and
∞ Perform simple calculations.

Course Content (2B)
During this course students will:
∞ Describe and explain major trends in:
  • Supply and use of water;
  • Development around waterways e.g. urban, mining, agriculture, industry;
∞ Explain the application of science for the maintenance and monitoring of water resources; and
∞ Analyse the impact of science on decisions related to:
  • Ensuring the supply of drinking water
  • Preservation of natural waterways
  • Land use and its effect on natural waterways and drinking water supplies.