

# *Biology T*

## **Rationale**

'Biology is the study of the fascinating diversity of life as it has evolved and as it interacts and functions. Investigation of biological systems and their interactions, from cellular processes to ecosystem dynamics, has led to biological knowledge and understanding that enable us to explore and explain everyday observations, find solutions to biological issues, and understand the processes of biological continuity and change over time.'<sup>1</sup>

## **Curriculum**

At ISS students take the Australian Curriculum Biology T. Prerequisites for entry would be completion of Science at Year 10 level.

The course is a practical and useful one. Students can expect to gain skills in investigation, analysis and communication. As it is an experimental subject, practical work is an integral component of the course and students can expect to participate in both fieldwork and classroom experimentation, ultimately designing experiments that allow them to gain answers to questions about the world around them. In this way, students learn about the nature of science, ethics, and application of knowledge to familiar and unfamiliar contexts.

Topics included are diverse and are based around four units of study:

Unit 1 – Biodiversity and Connectedness

Unit 2 – Cells and Organisation

Unit 3 – Heredity and the Continuity of Life

Unit 4 – The Internal Environment

In any one year the choice of the four units may change as there is flexibility in the program that will allow this. The school may offer an optional track for the completion of a Biology T minor (two semesters of study) with a heavy Environmental Science emphasis. These units of study include:

ESS 1 – Ecological Systems and Conservation

ESS 2 – Physical Systems and Energy Use

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

'Studying Senior Secondary Science provides students with a suite of skills and understandings that are valuable to a wide range of further study pathways and careers. Understanding of biological concepts, as well as general science knowledge and skills, is relevant to a range of careers, including those in medical, veterinary, food and marine sciences, agriculture, biotechnology, environmental rehabilitation, biosecurity, quarantine, conservation and eco-tourism. This subject will also provide a foundation for students to critically consider and to make informed decisions about contemporary biological issues in their everyday lives.'<sup>1</sup>

### **Student Reflection**

*'Year 11 and 12 Biology has been a very stimulating experience. Learning extensively about plants right up to human evolution. It is quite interesting to know how living systems around us work and how they contribute to all that we have on our planet today. My favourite topics in biology have to be human physiology and origin of life on our planet. Human physiology because it is truly amazing how the human body works with many intricate functions and reactions happening all at once to support our bodies. Origin of life was also a very interesting topic to learn with many theories and suggestions on how life started on earth. Although these two years of biology require a lot of theory, it was fun to have many in-class practicals and also outside of school excursions to places such as Colo-l-Suva and the seashore to conduct our experiments. Overall I can happily say that picking biology for Year 11 and 12 was a great choice and I have enjoyed the classes and learned a lot in these past two years.'*

Rhea Dass ACT Year 12 Biology student 2016

1. BSSS, AC Biology T, 2015