

BIOLOGY

The Year 11 Biology course investigates cellular structure and provides the basis for understanding the way in which multicellular organisms transport and absorb nutrients and carry out gas exchange. Exploration of variations in the structures and functions of organisms provides a better understanding of the link between the effect of the environment on living things and biodiversity.

The Year 12 course investigates reproduction, inheritance patterns and the causes of genetic variation in both plants and animals. Applications of knowledge in biotechnology and various genetic technologies are explored in the light of their uses in the treatment, prevention and control of infectious and non-infectious disease.

CONTENT

Year 11

The Year 11 course consists of four modules.

- + **Module 1** Cells as the Basis of Life
- + **Module 2** Organisation of Living Things
- + **Module 3** Biological Diversity
- + **Module 4** Ecosystem Dynamics

Year 12

The Year 12 course consists of four modules.

- + **Module 5** Heredity
- + **Module 6** Genetic Change
- + **Module 7** Infectious Disease
- + **Module 8** Non-infectious Disease and Disorders

COURSE REQUIREMENTS

In addition to the study of core modules, students are provided with 15 hours of course time for **Depth Studies** in both Year 11 and Year 12. During this time students may undertake an investigation/activity that allows for the further development of one or more scientific concepts. A Depth Study may be one investigation/activity or a series of investigations/activities. Depth Studies may be included in one module or across several modules. **Practical investigations** are an essential part of the Year 11 and Year 12 courses and must occupy a minimum of 35 hours of course time each year. Fieldwork is also mandated in Year 11 and is an integral part of the learning process. Students will be assessed on three tasks. Details of the assessments are to be confirmed.

Biology can be studied by itself or with one or more of the other science courses. This course is designed for those students who have a demonstrated a substantial achievement level in Stage 5 Science. Students who have not demonstrated significant success in Science in Years 9 and 10 should think carefully before choosing a Stage 6 Science course.

Success in a Stage 6 Science course also requires students to commit a significant amount of individual time to the review of scientific ideas explored in class time. For every hour spent in class students should do at least 45 minutes of work at home through planned study and wide reading from a variety of sources. This time increases as students approach assessment tasks.