



## Biology

### STAGE 6 HSC ~ COURSE OUTLINE

Biology is the study of living organisms, life processes and interactions between organisms and their environment.

The *HSC course* builds upon the Preliminary course. It examines the processes and structures that plants and animals use to maintain a constant internal environment and the way in which characteristics are transmitted from generation to generation. The options cover a variety of interest areas and draw on the increased information and understanding provided by improved technology to examine areas of current research.

#### TOPICS COVERED

##### *HSC Course*

Biology Skills Module 9.1

##### Core Modules

- Maintaining a Balance
- Blueprint of Life
- The Search for Better Health
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##### One Option from the following modules:

- Communication
- Biotechnology
- Genetics: The Code Broken?
- The Human Story
- Biochemistry



#### COURSE REQUIREMENTS

Students will complete a minimum of 80 indicative hours of practical experiences across Preliminary and HSC course time with no less than 35 hours in the HSC course.

#### SYLLABUS OUTCOMES

- H1** evaluates how major advances in scientific understanding and technology have changed the direction or nature of scientific thinking.
- H2** analyses the ways in which models, theories and laws in biology have been tested and validated.
- H3** assesses the impact of particular advances in biology on the development of technologies.
- H4** assesses the impacts of applications of biology on society and the environment.
- H5** identifies possible future directions of biological research.

- H6** explains why the biochemical processes that occur in cells are related to macroscopic changes in the organism.
- H7** analyses the impact of natural and human processes on biodiversity.
- H8** evaluates the impact of human activity on the interactions of organisms and their environment.
- H9** describes the mechanisms of inheritance in molecular terms.
- H10** describes the mechanisms of evolution and assesses the impact of human activity on evolution.

### BOSTES Assessment Information

External examination	Marks	Internal assessment	Weighting
Section I – Core Part A Objective response questions Part B Short-answer questions	20	A. Knowledge and understanding of: • the history, nature, and practice of biology, applications and uses of biology and their implications for society and the environment, and current issues, research and developments in biology • cell ultrastructure and processes, biological diversity, environmental interactions, mechanisms of inheritance and biological evolution	40
	55		
Section II – Options Candidates answer one question on the option they have studied	25	B. Skills in: • planning and conducting first-hand investigations • gathering and processing firsthand data • gathering and processing relevant information from secondary sources	30
		C. Skills in: • communicating information and understanding • developing scientific thinking and problem-solving techniques • working individually and in teams	30
<b>TOTAL MARKS</b>	<b>100</b>	<b>TOTAL MARKS</b>	<b>100</b>

### School Based Evidence of Learning ~ Formal Task Schedule

Task No.	Targeted Outcomes	Learning Context	Task	Date Due	Weighting			Marks
					A	B	C	
1	H 3 – 6	Communication	Practical Task	Tm 4 Wk 9	10%	17.5%	7.5%	35%
2	H 12 – 14	Maintaining a balance	Topic Quiz	Tm 1 Wk 10	10%			10%
3	H 1, 2, 5, 9, 13	Blue Print of Life	Fieldwork / research	T2 Wk 6	5%	10%	20%	35%
4	H 1 – 16	MAB, BOL, Communication	Trial HSC Examination	Tm 2 Wk 9/10	15%	2.5%	2.5%	20%
<b>TOTAL</b>					<b>40%</b>	<b>30%</b>	<b>30%</b>	<b>100%</b>