

Biology

The following contains a description of the course we offer to students at St Marys Senior High. It is intended as a guide to help you select your subjects and you should read it carefully.

Please note:

- The details given represent the way that the course is delivered at St Marys Senior High and may involve different choices from the way other schools might operate the same course.
- Classes can only be formed where sufficient students select the particular course. The fact that a course is listed here is not a commitment to run the course in a particular year.
- The arrangements for particular courses are subject to change for a variety of reasons.

Biology - Course Details

Units	Type	ATAR	Faculty Teaching This Course
2	Board Developed Course – Examinable at the HSC, marks can be used to count towards an ATAR	A – Counts towards an ATAR with no restrictions	Science

What will I be doing in this course?

Biology is the study of life. The study of evolution, the structure and function of organisms, the Earth's biodiversity, heredity, biotechnologies and the effects of disease make up fundamental knowledge of existence, with applications including health and sustainability in a rapidly changing world.

Studying Biology develops a deep knowledge of living things, from the molecular level to macroscopic systems, and their interactions with the environment. Students enhance their learning of a changing world through an awareness of Aboriginal and Torres Strait Islander Peoples' Cultures, Knowledges and Practices relating to the environment, health, biotechnology and sustainability issues.

Biology equips students with the tools to understand the complexity of life and the interconnectedness of ecosystems. Understanding biological systems allows students to engage with issues such as genetic engineering, conservation, disease prevention and environmental sustainability. Through this understanding, they engage with ethical considerations about the relationships between living things and systems.

In Biology, the application of scientific models to predict future environmental changes and their possible effects on society enables students to apply Working Scientifically knowledge through data analysis, problem-solving, scientific reasoning and communication. Fieldwork and scientific investigations help students to acquire practical skills, while communication skills enable them to present findings and conclusions effectively. This knowledge is critical for students becoming informed, scientifically literate citizens capable of addressing local and global challenges.

What should I be able to do at the end of the course?

Students will be able to critically appraise information and apply skills in observation, manipulation and experimental design. Students will plan and organise activities, work with others in teams, communicate ideas and information and be able to solve problems relating to key biological concepts.

How will this course help me in the future?

Biology provides opportunities for students to develop critical and creative thinking skills for a range of post-school contexts. The study of Biology develops students' knowledge and understanding of personal and public health, sustainability, and their relationship with the world. It provides a foundation for careers in health care, environmental science, biotechnology and research, and for the development of informed citizenship in an increasingly scientific and technological world.

When combined with Physics or Chemistry, Biology provides an entry to careers in medicine, health, science, forestry and ecology. Studied alone the course is useful in planning for careers in food technology, family studies and teaching.

The course is designed for students who have attained a high level of achievement in Science and wish to pursue further study in Science, Technology, Engineering or Mathematics (STEM) based courses offered at the tertiary level.

Important information regarding new syllabuses beginning in 2027:

Starting in 2027, students enrolling in Year 11 will complete the new Biology syllabus published in 2025. Students who enrolled in Year 11 in 2026 will be completing the current Biology syllabus published in 2017 for both their preliminary year and HSC year.

The information below is separated into two sections reflecting the different syllabus structures and how it will be delivered at St Marys Senior High School. Please refer to the appropriate section based on your enrolment date.

For further syllabus information and resources, refer to the links below:

- For students enrolling into the 2026 Biology Course:

<https://www.nsw.gov.au/education-and-training/nesa/curriculum/science/biology-stage-6-2017>

- For students enrolling into the 2027 Biology Course:

<https://curriculum.nsw.edu.au/learning-areas/science/biology-11-12-2025/overview>

Year 11 2026 Enrolments - Course Structure

Year 11 Course Structure and Requirements					
Year 11 course (120 hours)	Working Scientifically Skills	Modules		Indicative hours	Depth studies
		Module 1 Cells as the Basis of Life	60	*15 hours in Modules 1–4	
		Module 2 Organisation of Living Things			
		Module 3 Biological Diversity	60		
		Module 4 Ecosystem Dynamics			

Year 12 Course Structure and Requirements					
Year 12 course (120 hours)	Working Scientifically Skills	Module		Indicative hours	Depth studies
		Module 5 Heredity	60	*15 hours in Modules 5–8	
		Module 6 Genetic Change			
		Module 7 Infectious Disease	60		
		Module 8 Non-infectious Disease and Disorders			



How will I be assessed in this course?

A minimum of 35 hours of practical work is required to be completed to satisfactory standards in Year 11 and a minimum of 35 hours of practical work is required to be completed to satisfactory standards in Year 12. The skills learnt will be assessed in practical exams.

The Biology course includes 15 hours of in-class work on a depth study in Year 11, and another 15 hours in Year 12. A depth study is any type of investigation/activity that a student completes individually or collaboratively that allows the further development of one or more concepts found within or inspired by the syllabus. It may be one investigation/activity or a series of investigations/activities.

Depth studies provide opportunities for students to pursue their interests in biology, acquire a depth of understanding, and take responsibility for their own learning. Depth studies promote differentiation and engagement, and support all forms of assessment, including assessment for, as and of learning. Depth studies allow for the demonstration of a range of Working Scientifically skills.

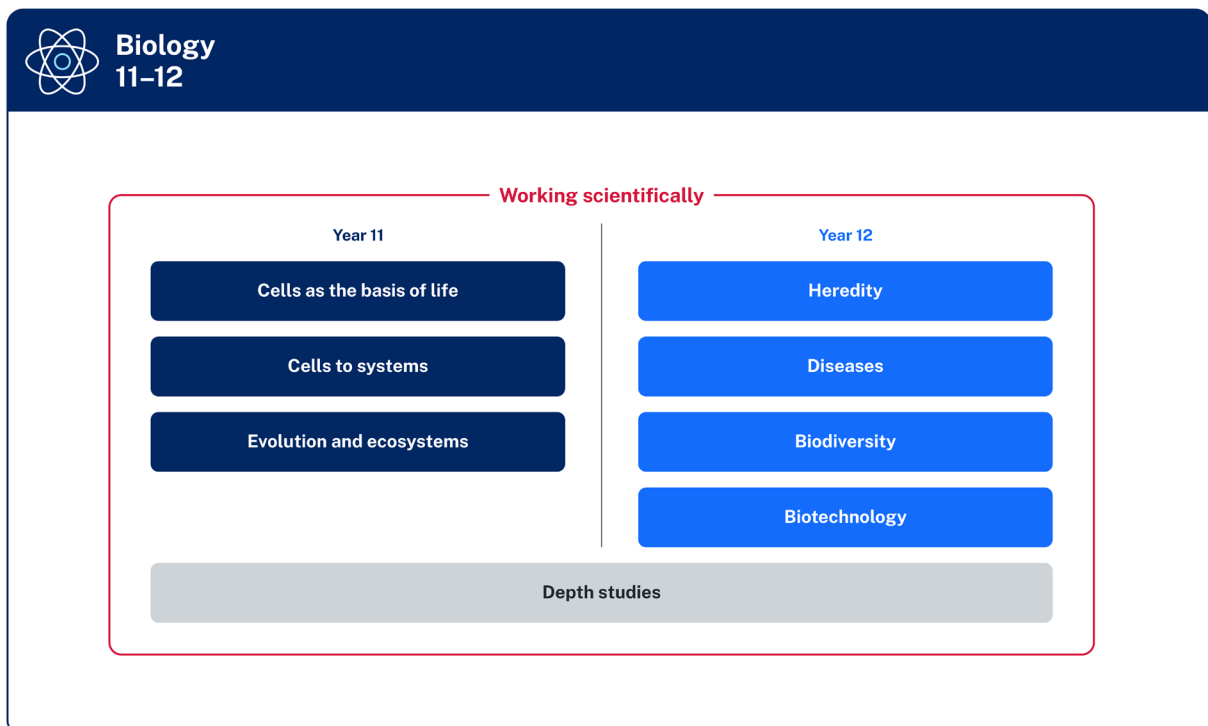
A depth study may be, but is not limited to:

- a practical investigation or series of practical investigations and/or a secondary-sourced investigation or series of secondary-sourced investigations
- presentations, research assignments or fieldwork reports
- the extension of concepts found within the course, either qualitatively and/or quantitatively.

Year 11 2027 Enrolments - Course Structure

Year 11 Course Structure and Requirements				
120 indicative hours including 10 hours of depth studies	Integrated Working Scientifically outcomes and content	Focus Area	Indicative Hours	Depth Studies 10 hours of depth studies across 3 focus areas.
		Cells as the basis of life	40	
		Cells to systems	40	
	One fieldwork exercise	Evolution and ecosystems	40	

Year 12 Course Structure and Requirements				
120 indicative hours including 10 hours of depth studies	Integrated Working Scientifically outcomes and content	Focus Area	Indicative Hours	Depth Studies 10 hours of depth studies across 4 focus areas.
		Heredity	30	
		Diseases	30	
		Biodiversity	30	
		Biotechnology	30	



Assessment in Biology for Year 11 2027 and Year 12 2028

School assessment programs must reflect course components and weightings
The course components and component weightings for Year 11 and Year 12 are mandatory.

Course component	Weighting %
Skills in Working scientifically	60
Knowledge and understanding of course content	40

The St Marys Senior High School assessment program will reflect NESAs sample Year 11 and Year 12 formal school-based assessment program for Biology. These are outlined below.

NESA's sample Year 11 formal school-based assessment program for Biology:

- 3 assessment tasks, including:
 - one depth study or aspect of a depth study
 - a formal written examination
 - a weighting for any individual task of 20% to 40%.

NESA's sample Year 12 formal school-based assessment program for Biology:

- 4 assessment tasks, including:
 - one depth study or aspect of a depth study
 - a formal written examination
 - a weighting for any individual task of 10% to 40%.