

Biology 3&4

What is it and why should I do it?

Biology is, simply, the study of life. Less simply, it is the study of the complex network of events that exist as a result of all the physical and chemical principles of the universe which lead to self replicating, energy exchanging organisms that, in some rare circumstances, generate the wonderful, inexplicable organisational by-product we call consciousness.

You should study Biology if you have any interest in the big questions. Where do we come from? What does it mean to be alive? What is the meaning of life? Can we use the past to predict the future, not just of our species, but of all living things on this planet (and possibly others)? And the wonderful thing about Biology, in contrast to some other disciplines, is that studying it will not only involve nebulous pontificating on those ideas, it will actually provide you with quantifiable, evidence based answers.

In addition, Biology, like all sciences, will provide you with the skills and knowledge to be able to challenge a hypothesis, gather data, analyse the validity and reliability of the data gathered in your experiments (and others), while behaving as genuine scientists. By the end of the course, you will be an informed, thoughtful, skilled scientist with a perspective spanning the 3.8 billion years of life on this planet.

How much homework/study will I have?

All Unit 3 and 4 subjects require 3-5 hours of study per week.

The homework for this subject will be self guided. It is expected that students maintain/develop a set of notes and resources for their own revision purposes. In addition, there is a course outline for the Biozone textbook exercises that is expected to be completed entirely outside of class time.

What contributes to my study score?

There are 5 SAC's, each worth 8% of the overall Study Score for 3/4 Biology (for a combined 40%). The end of year external exam is worth 60%.

The SAC's run throughout the first three terms, and are outlined as follows;

1. Unit 3 OUTCOME 1: Photosynthesis investigations
A report related to two practical activities from a logbook of practical activities (based on photosynthesis).
2. Unit 3 OUTCOME 2: Immunology investigation
A graphic organiser outlining the immunological pathway of a chosen disease.
3. Unit 4 OUTCOME 1: Report on evolutionary change
An analysis of secondary data to explain changes in a population due to evolutionary pressures.
4. Unit 4 OUTCOME 2: Laboratory report of genetic engineering
A scientific report analysing the outcome of the student conducted engineering of bacterial colonies to express a fluorescence gene.
5. Unit 4 OUTCOME 3: Enzyme extended investigation
Design and undertake an investigation related to cellular processes and/or biological change and continuity over time, and present methodologies, findings and conclusions in a scientific poster (related to enzymes).

How do I satisfactorily complete the unit?

To pass any VCE unit you need to demonstrate that you have met the Outcomes.

To meet the outcomes in 3/4 Biology students must:

- Engage in class discussions, experiments, and class based activities
- Complete interactive notes (provided in class and on wiki) on a weekly basis
- Satisfactorily engage in the SAC tasks OR demonstrate content knowledge through the completion of Biozone exercises.

Give me all the details I want to know more:

[VCAA Biology](#)

[PHSC Biology 3&4 Wiki Page](#)