

## COURSE OUTLINE 2012

### Subject and Level:

Year 13 Biology (NCEA Level 3)

### Course Prerequisites:

*Academic Requirements:* 12 or more credits in Level 2 Biology, including AS 90459v2 - Genetics AND AS 90464v2 - Cells; or HOD approval.

- *This course has an extensive reading component. It is recommended that students have previously completed the literacy requirements for University Entrance.*

#### *Subject fees:*

A course book is a required purchase (\$27 in 2010)

A Field study is a part of the course in Term 3, it has a projected cost of \$95.

### Aims:

#### **Life processes, ecology, and evolution**

- Understand the relationship between organisms and their environment.
- Explore the evolutionary processes that have resulted in the diversity of life on Earth and appreciate the place and impact of humans within these processes.
- Understand how humans manipulate the transfer of genetic information from one generation to the next and make informed judgments about the social, ethical, and biological implications relating to this manipulation.

### Course Content:

The major emphasis of the Year 13 course is Genetics and its implications. The topics are:

- Gene expression, speciation and evolution
- Animal behaviour and plant responses to the environment
- Human biological and cultural evolution
- Biotechnology
- A major practical investigation into aspects of the ecological niche of a plant or animal (This will be done at the Marine Studies Centre – Portobello, it is a three-day intensive study which has a cost attached)
- Research into a contemporary biological issue

### Assessment:

A mixture of internally and externally assessed Achievement Standards and Unit Standards will be offered at Level 3. Internal Assessment will be carried out throughout the year and is especially used to assess practical and research skills. One internal assessment activity will be a Field Study.

In general, students will be able to have one reassessment of the internally assessed standards EXCEPT for the field study where reassessment is not possible.

### Where can this take you?

A knowledge of Biology is an important component in the intellectual arsenal of a well-educated person. For those going on to careers in health-related professions; biological and marine sciences, agriculture, horticulture, forestry, fishing, regional planning and administration; journalism, tourism, Biology is important.

### Appeal procedures:

Follows the approved LPHS Assessment Appeals Procedure.

### Contact for further inquiries:

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**Assessment chart:**

<b>AS No</b>	<b>Standard Title</b>	<b>Credits</b>	<b>Internal / External</b>	<b>Format</b>	<b>Indicative Date</b>
90714v2	Research a contemporary biological issue	3	Internal	Research report	Term 1: week 2-3
8931v3	Describe gene expression	4	Internal	Class test	Term 3: week 1
8932v3	Describe gene-gene and gene-environment interaction	3	Internal	Class test	Term 3: week 1
90718v2	Describe applications of biotechnological techniques	3	Internal	Research report	Term 2: week 8-9
90713v2	Carry out a practical investigation into an aspect of an organisms ecological niche with guidance	4	Internal	3 day field study at NZ Marine Studies Centre then experimental report.	Term 2: week 5
90715v2	Describe the role of DNA in relation to gene expression	4	External	Exam	November
90716v2	Describe animal behaviour and plant responses in relation to environmental factors	4	External	Exam	November
90719v2	Describe trends in human evolution	3	External	Exam	November