**COURSE INFORMATION** **Subject: BIOLOGY** **Head of Subject: MS LIZ EVANS**

| | **Year 12** 16 CREDITS OFFERED | **Year 13** 15 CREDITS OFFERED |
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| **Course Content** | **Ecology.** Includes biodiversity, community structure and inter-relationships, conservation and environmental protection. Emphasis is on NZ flora and fauna.<br>**Cell Structure and Function.** Using microscopes, biochemical investigations and videos to provide practical support for investigating the structure of cells. Investigating cell processes such as osmosis, diffusion and enzyme activity is done with practical laboratory work. Includes both External examination and Internal practical work.<br>**Genetics.** The role of DNA and how it relates to gene expression and protein synthesis. Mendelian genetics including mutations and metabolic pathways. Inheritance and the genetic code.<br>**Animals/Plants.** Looking at the variety of plants and animals and their adaptations to living in different habitats and niches. | **Human Evolution.** The study of the evolution of humans from our closest mammalian relatives to now. Includes biological and cultural evolution as well as technological advances and the ethical considerations of these.<br>**Plant and Animal relationships.** How plants and animals interact with the physical world and with each other.<br>**Socio-Scientific Report.** Discussion about a current topic in Biology that engages a significant proportion of the population, e.g. Obesity and Type 2 diabetes.<br>**Homeostasis.** How humans regulate their body systems. |
| **Assessment** | **External (8 credits)**<br>91159 Demonstrate understanding of gene expression (4)<br>91156 Demonstrate understanding of life processes at the cellular level (4)<br><br>**Internal (8 credits)**<br>91190 Investigate how organisms survive in an extreme environment (4)<br>91153 Practical biological investigation (4) | **External (9 credits)**<br>91603 Demonstrate understanding of the responses of plants and animals to their external environment (5)<br>91606 Demonstrate understanding of trends in human evolution (4)<br><br>**Internal (6 credits)**<br>91605 Socio-Scientific Issue (3)<br>91604 Homeostasis in Humans (3) |
| **Costs** | Workbooks $18 | Workbooks $20 |