

2019 SENIOR COURSE INFORMATION

Subject
Head of Department

Biology
Liz Evans

	Year 12 19 CREDITS OFFERED	Year 13 15-16 CREDITS OFFERED
Course Content	<p>Ecology. Includes biodiversity, community structure and inter-relationships, conservation and environmental protection.</p> <p>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.</p> <p>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.</p> <p>Animals/Plants. Looking at the variety of plants and animals and their adaptations to living in different habitats and niches.</p>	<p>Animal Behaviour and Plant Responses. Interactions of animals and plants with biotic and abiotic factors.</p> <p>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.</p> <p>New Zealand ecology Particular emphasis is given to unique New Zealand examples.</p> <p>Genetic Manipulation. Discussion surrounding the ethics and suitability of human intervention(s) at a genetic level.</p>
Pre Requisites	Passes in L1 Biology Internal (AS90926) and Genetics External exam (AS90948)	Achievement in at least 8 credits from Level 2 Biology one of which must be an external paper or at the discretion of HOD based on other L2 subjects
Assessment	<p>External (8 credits) 91159 Demonstrate understanding of gene expression (4) 91156 Demonstrate understanding of life processes at the cellular level (4)</p> <p>Internal (11 credits) 91160 Investigate biological material at a microscopic level (3) 91190 Investigate how organisms survive in an extreme environment (4) 91153 Practical biological investigation (4)</p>	<p>External (9 credits) 91603 Demonstrate understanding of the responses of plants and animals to their external environment. (5) 91606 Demonstrate understanding of trends in human evolution. (4)</p> <p>Internal (6-7 credits) 91601 Carry out a practical investigation in a biological context, with guidance (4) OR 91602 Integrate biological knowledge to develop an informed response to a socio-scientific issue (3) AND 91607 Demonstrate understanding of human manipulations of genetic transfer and its biological implications. (3)</p> <p><i>Students must choose 2 of the 3 internals offered.</i></p>
Costs	Workbook \$22	Workbook \$25