

# Advanced Higher Biology

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## Course Rationale

Advanced Higher Biology covers a wide range of biological topics which build on concepts developed in Higher Biology. The course content forms the basis for study in applied fields of Biology and further study or employment in areas related to Biology. It also enables you to develop understanding of the ways in which biological principles can be applied to the issues facing the individual and society and fosters positive attitudes to others and the environment. In addition, the course provides opportunities for you to improve your problem solving and investigative skills and to develop your practical abilities.

## Course Content

The Advanced Higher Biology Course is based on integrative ideas and unifying principles of modern biological science. The Course covers key aspects of life science at the molecular scale and extends to aspects of the biology of whole organisms that are among the major driving forces of evolution. In undertaking this course you will have opportunity to develop a sound theoretical understanding and practical experience of experimental investigative work in biological science.

The course comprises 3 main areas of study

- **Cells and Proteins**  
(Laboratory techniques, protein biology)
- **Organisms and Evolution**  
(Field techniques, evolution, variation and sexual reproduction, sex and behaviour, parasitism)
- **Investigative Biology**  
(Scientific principles and process, experimentation and critical evaluation of biological research).

## Skills

Throughout the course you will have opportunity to extend, integrate and apply your knowledge of Biology to new situations, and to solve complex problems. You will undertake increasingly complex practical work, recording, processing and analysing data, drawing conclusions and evaluating evidence. Study at this level also provides opportunities to develop your self- management skills as you plan and undertake the personal project. You will design your biological investigation, making use of reference materials and assessing risk, and further your skills in scientific literacy as you report on your findings. Through this you will develop the knowledge and skills to evaluate scientific publications and media reports, and develop informed opinions on biological issues.

## Course Assessment

The course assessment comprises an exam (75%) and a project (25%). In this you will apply skills of scientific inquiry, using related knowledge, to carry out a meaningful and appropriately challenging investigative task in Biology and communicate your findings. These are marked by the SQA and graded A-D.

## Progression

On successful completion of this Course, you could progress to

a biology-based HND/degree programme or one from a wide range of related areas, such as medicine, dentistry, veterinary medicine, professions allied to medicine, horticulture, pharmacology, environmental science and health

- careers in a biology-based or related area including the health sector, agricultural science, education, environmental services

## Career Pathways

Audiologist	Biochemist	Biotechnologist	Clinical psychologist	Countryside Ranger	Dentist
Doctor	Environmental consultant	Food scientist	Geneticist	Marine Biologist	
Microbiologist	Midwife	Nurse	Optometrist	Pharmacologist	
Teacher	Paramedic	Pharmacist	Technical Brewer	Vet Nurse	Vet
					Zoologist