

BIOLOGY (Course Code Bi)

Head of Department: Miss G Kilbourn

Current course: OCR Biology A - H020, H420

Course entry requirements

Students must have achieved a minimum of a grade 7 at GCSE in biology or a grade 7 in both core and additional Science. It is also highly recommended that students have achieved at least a grade 7 at GCSE in maths.

Biological science is a field currently undergoing a dramatic expansion both in terms of research, and in commercial and popular awareness. It is very much the subject of the future with a large number of vacancies for trained and ambitious graduates in biological-based disciplines. It is hugely popular in this school, with over 150 students studying biology at A-level across year 12 and 13.

The subject is inherently fascinating, from the complexities of chemical processes within cells to the subtle, homeostatic control mechanisms of higher organisms. The 2015 syllabus reflects the change in emphasis in biological-based research and students now study biotechnology, advances in gene technologies, and environmental issues such as sustainability, as well as the more traditional aspects of physiology, biochemistry and inheritance.

Presentation of topics in lessons is aimed at understanding ideas and processes, while encouraging students to be leaders of their own learning. Students will need to be excellent independent learners and will need to use their study periods not only to consolidate their understanding of previous lesson content but also to read around the topic in advance of the next lesson. The course is very content heavy but also requires students to apply their knowledge to unfamiliar contexts and problems. In addition to understanding of the theory, students will need to have a strong command of the practical and maths aspects of the course if they are to be successful.

The pass rate at A level is very good with 75% of students achieving grades A*-B. Last year more than fifty students went on to pursue biology-related degree courses at Russell Group universities, including biological sciences, biomedical sciences, ecology, biochemistry, medicine, veterinary science, nursing and sports science.

Potential students should also give consideration to taking up A-level Chemistry; this facilitates understanding in the biochemical and cell biology modules which are covered early in the course. Chemistry and Biology are pre-requisites for some biology-related degrees and all medical courses.

Students are encouraged to extend their interest in the subject beyond the classroom. There are several thriving societies already run by teachers and students for A-level students interested in pursuing biology further, including BioSoc, MedSoc and VetSoc. The extended project qualification is also offered to year 12 students who are excelling in their A-level subjects and are interested in exploring a topic that particularly interests them in much more depth. Students work independently to produce a 'dissertation-style' project and the skills students develop provide excellent preparation for university study.

(November 2018)