Key Stage 5 (12)	
Course title: Cambridge Advanced National in Human biology	
Exam board: Cambridge	
Specification code: HO49 / HI49	
Autumn 1 (September – October) to Autumn 2 (October – December)	**TEACHER 1 Fundamentals of human Biology** (F170) – human cells, stem cells, studying cells, cell membranes and cell transport, cell division, tissues, physiology, organ structure, disease, measuring systems activity.
	Students begin with the fundamentals of biology at a cellular scale, then work their way up in size to cover cells and cellular processes, before moving on to tissues and organs. Organs will be looked at in terms of both normal/ healthy and diseased state. Students will discuss how systems activity can be monitored. This topic reinforces prior learning from year 10. Overlap with A-level Biology in the first half of the term aids transition between courses if required.
	TEACHER 2 Genetics (F172)
	Students begin their internally assessed unit by covering theory content which will assist them with completion of their first assignment. They will examine the structure of DNA and explain how genes are expressed and the regulation thereof. They will look at the inheritance of traits and use graphic representations to predict inheritance patterns. They will also examine the role of a genetic counsellor. This topic reinforces prior learning from year 11. In late November students will complete task 1 with 4.5hours supervised and 3.5 hours unsupervised work. Following this, students will then learn about genetic engineering and gene technologies.
Spring 1 (January – February) to Spring 2 (February – March)	**TEACHER 1 Fundamentals of human Biology** (F170) – Endocrine and nervous systems, pathogens and disease
	Students continue to look at the role of organs in the body, this time from the perspective of homeostatic regulation. This will build on material taught in year 11. Then they will then move on to cover pathogens including bacteria, viruses, and fungi. This will include practical work and will link to material taught in year 10.
	TEACHER 2 - **Genetics** (F172), **Biomedical techniques** (F173)
	Students begin the year by completing tasks 2 (3.5 hours supervised, 3.5 hours unsupervised) and 3 (7 hours supervised, 4 hours unsupervised) of the Genetics NEA. In February they will begin the biomedical techniques unit, drawing on microscopy skills developed with teacher 1. They will learn how to examine tissues and carry out assays for organic and inorganic substances.
Summer 1 (April – June) Summer 2 (June – July)	**TEACHER 1 TEACHER 1 Fundamentals of human Biology** (F170)
	The exam for unit 1 takes place in May, with the exact date changing each year. Once this exam has taken place, the teacher will then begin to deliver content for the following years exam.
	TEACHER 2 - **Biomedical techniques** (F173)
	Students will learn how colourimetry, spectroscopy, titrations, and biosensors are used in biomedical labs. They will also examine how clinical investigations are carried out. Having mastered basic biomedical techniques, students are now ready to plan their own investigation in accordance with the brief provided. The NEA tasks for this unit involved 20 hours of supervised and 5 hours of supervised work.
If a student chooses to leave school at the end of the academic year, they are able to claim the "Certificate" (rather than the "extended certificate") as a result of having completed units 1 and 2	