

# Life and Health Sciences AS and A2 Level

Mr J Magwood & Mr S de Naipir

2021

# What is Life and Health Sciences?

- ▶ The CCEA GCE Life and Health Sciences specification was developed with industry in response to the needs of the growing life and health sciences sector in Northern Ireland.
- ▶ Life and health science related industries make up over 25% of Northern Ireland's total economic output and include a diverse range of public and private businesses and employment opportunities, including pharmaceutical, chemical, agricultural, dental, nursing, environmental and allied health professions.



# Aims of the course:

- ▶ The specification aims to encourage students to:
  - ▶ develop their interest in and enthusiasm for science;
  - ▶ appreciate how the sciences contribute to the success of the economy and society;
  - ▶ develop competence in a range of practical, mathematical and problem solving skills;
  - ▶ develop and demonstrate a deeper appreciation of how science works;
  - ▶ develop essential knowledge and understanding of different areas of the subject; and
  - ▶ develop advanced study skills that help them prepare for higher education.

# Course content:

- ▶ The full Life and Health Sciences course is based on two levels:
  - ▶ Advanced Subsidiary (AS) Level - 40%
  - ▶ Advanced (A2) Level -60%

# Course content:

Content	Assessment	Single Award Weightings
<b>Unit AS 1: Experimental Techniques</b>	Internal assessment Core unit	33.34% of AS 13.34% of A level
<b>Unit AS 2: Human Body Systems</b>	External written examination Core unit 1 hour 30 mins	33.33% of AS 13.33% of A level
<b>Unit AS 3: Aspects of Physical Chemistry in Industrial Processes</b>	External written examination Core unit 1 hour 30 mins	33.33% of AS 13.33% of A level

# Course content:

Content	Assessment	Single Award Weightings
<b>Unit A2 1: Scientific Method, Investigation, Analysis and Evaluation</b>	Internal assessment  Core unit	20% of A level
<b>Unit A2 2: Organic Chemistry</b>	External written examination  1 hour 45 mins  Core unit	20% of A level
<b>Unit A2 3: Medical Physics</b>	External written examination  1 hour 45 mins  Optional units	20% of A level
<b>Unit A2 4: Sound and Light</b>		(Single Award students take any <b>one</b> of these units.)
<b>Unit A2 5: Genetics, Stem Cell Research and Cloning</b>		

# What changes will there be for 2021/2022?

- ▶ CCEA have announced that one unit will be omitted from the AS Specification for the year 2021-2022. They have indicated that they will be releasing information regarding the chosen units in 'early June'. You will be able to access this information from the CCEA website when information has been released.
- ▶ These omissions will be in place to account for further disruptions due to pupil self isolation which may occur throughout 2021/2022.

# Examples of AS Coursework

Content	Learning Outcomes
<b>1.1 Chemistry skills</b>	Students should be able to: <ul style="list-style-type: none"><li>1.1.1 make a standard solution and use it to carry out a titration;</li><li>1.1.2 make suitable observations when carrying out qualitative chemistry tests, such as a flame test or the test for halide ions;</li><li>1.1.3 take suitable measurements to allow the calculation of a rate of reaction;</li><li>1.1.4 use standard techniques to prepare an organic compound and calculate a percentage yield;</li></ul>
<b>1.2 Physics skills</b>	<ul style="list-style-type: none"><li>1.2.1 determine the periodic time of an oscillating body;</li><li>1.2.2 determine the resistivity of a metal;</li><li>1.2.3 determine the focal length of a converging lens;</li><li>1.2.4 determine the critical angle for glass;</li></ul>
<b>1.3 Biology skills</b>	<ul style="list-style-type: none"><li>1.3.1 use qualitative reagents to identify biological molecules;</li><li>1.3.2 use a colorimeter to produce a calibration curve;</li><li>1.3.3 carry out chromatography of amino acids; and</li><li>1.3.4 carry out an osmosis experiment to investigate the impact of tonicity on osmosis.</li></ul>