

Letter of support for International Baccalaureate Biology qualifications submitted for funding approval July 2023.

The purpose of this letter of support is to provide evidence of the university's recognition of the value of this qualification in preparing learners for transition to higher education courses in the subject, or a related area. This is a requirement of the Department for Education's approval process for the funding of Alternative Academic Qualifications (AAQ).

This letter of support is in relation to the following qualifications:

- IBO Level 3 Certificate in HL Biology (AAQ)
- IBO Level 3 Certificate in SL Biology (AAQ)

IBO Level 3 Certificate in HL Biology (AAQ)

- a) We recognise this qualification specifically as meeting subject entry requirements for courses such as: Biology BSc, Biochemistry BSc, Microbiology and Immunology BSc, for which A-level Biology also is a requirement. We recognise this qualification as a 'defined science' qualification as listed [here](#).
- b) We recognise this qualification for entry onto many of our related courses.

As for most universities, many of our programmes do not have pre-requisite subjects and a range of subjects can provide a sound academic preparation for our degrees. IBO Level 3 Certificate in HL Biology (AAQ) provides this sound academic preparation.

The university has for many years accepted the IBO Level 3 Certificate in HL Biology for entry in these courses, either as part of the IB Diploma Programme or as a separate qualification equivalent to A Level, or as part of the IB Career-related programme. The University uses the following equivalence scale to compare the IBO Level 3 Certificate in HL Biology to A level Biology:

IBO Level 3 Certificate in HL Biology (AAQ) grade	A Level grade
7	A*
6	A
5	B
4	C

We have found that the grades achieved by applicants holding the IBO Level 3 Certificate in HL Biology are an accurate guide to potential achievement in undergraduate courses at the university and are an effective part of the selection process.

The IBO Level 3 certificate in HL Biology (AAQ) provides a firm foundation in the principles of biology allowing candidates to progress successfully to undergraduate courses where a deep knowledge of biology is a pre-requisite. The qualification content covers the fundamental principles of biology which includes:

- Biological molecules, water, nucleic acids, carbohydrates and lipids, proteins
- Cell structure and specialisation
- Membranes and membrane transport
- Organelles and compartmentalisation
- Diversity of organisms

- Classification and cladistics
- Evolution and speciation
- Conservation of Biodiversity
- Gas exchange
- Transport
- Muscles and motility
- Adaptation to environment
- Ecological niches
- Enzymes and metabolism
- Respiration
- Photosynthesis
- Chemical signalling
- Neural signalling
- Integration of body systems
- Defence against disease
- Populations and communities
- Transfers of energy and matter
- Mutations and gene editing
- Cell and nuclear division
- Gene expression
- Water potential
- Reproduction
- Inheritance
- Homeostasis
- Natural selection
- Stability and change
- Climate change

Additionally, the qualification develops the key skills necessary for students to access undergraduate biology and other undergraduate science courses:

- Experimental techniques
- The use of appropriate technology to collect, analyse and model data
- The use of mathematics

In our undergraduate courses we expect our students to take an inquiring approach to their studies. The IBO Level 3 Certificate in HL Biology (AAQ) qualification supports this aspect through its inquiry process through which candidates demonstrate independent thinking, initiative, and insight through the following:

- Exploring and designing
- Collecting and processing data
- Concluding and evaluating

IBO Level 3 Certificate in SL Biology (AAQ)

a) We recognise this qualification for entry onto our related courses.

The university welcomes applicants holding the IBO Level 3 SL certificate in Biology (AAQ) as it provides breadth to an applicant's studies and provides a complementary qualification alongside other IBO HL courses, or other qualifications enabling applicants to prepare for courses such as Biochemistry BSc, Biomedical Science BSc, Midwifery BSc, Pharmacology BSc by providing them with the fundamental knowledge and understanding of biology which supports progression to these courses. We value the skills and knowledge that students with this qualification bring.

The IBO Level 3 Certificate in SL Biology (AAQ) provides a firm foundation in the principles of biology allowing candidates to progress successfully to undergraduate courses where a knowledge of biology is desirable. The course content covers the fundamental principles of biology which includes:

- Biological molecules, water, nucleic acids, carbohydrates and lipids, proteins
- Cell structure and specialisation
- Membranes and membrane transport
- Organelles and compartmentalisation
- Diversity of organisms
- Evolution and speciation
- Conservation of Biodiversity
- Gas exchange
- Transport
- Adaptation to environment
- Ecological niches
- Enzymes and metabolism
- Respiration
- Photosynthesis
- Neural signalling
- Integration of body systems
- Defence against disease
- Populations and communities
- Transfers of energy and matter
- Mutations and gene editing
- Cell and nuclear division

- Water potential
- Reproduction
- Inheritance
- Homeostasis
- Natural selection
- Stability and change
- Climate change

Additionally, the qualification develops the key skills necessary for students to access undergraduate biology and other undergraduate science courses:

- Experimental techniques
- The use of appropriate technology to collect data
- The use of mathematics

In our undergraduate courses we expect our students to take an inquiring approach to their studies. The IBO level 3 certificate in SL Biology (AAQ) supports this aspect through its inquiry process which includes:

- Exploring and designing
- Collecting and processing data
- Concluding and evaluating

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