

26 July 2023

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: Bioscience BSc, Biochemistry and Genetics BSc, Human Biology BSc, Diagnostic Radiography BSc, Physiotherapy BSc for which A-level Biology or another science subject also is a requirement.
- 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 UCAS tariff to set entry requirements for mixed qualifications:

IBO Level 3 Certificate in HL Biology (AAQ) grade	UCAS Tariff
7	56
6	48
5	32
4	24
3	12

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 University will accept the following combinations of IBO qualifications:

- Two Standard Level and two Higher Level Certificates
- Three Higher Level Certificates.
- Combinations of IBO Higher Level and Standard Level certificates with other relevant AAQs

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 and Genetics BSc, Paramedic Science BSc, Biomedical Engineering BEng, Nursing (Adult, Child and Mental Health) (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 University uses the UCAS tariff to set entry requirements for mixed qualifications:

IBO Level 3 Certificate in SL Biology (AAQ) grade	UCAS Tariff
7	28
6	24
5	16
4	12
3	6

The University will accept the following combinations of IBO qualifications:

- Two Standard Level and two Higher Level Certificates

- Three Higher Level Certificates.
- Combinations of IBO Higher Level and Standard Level certificates with other relevant AAQs

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

We are very supportive of students, both UK and international, who take the International Baccalaureate qualifications and then progress into Higher Education and welcome the breadth that these qualifications give to their education post-16. This breadth helps to open up opportunities, particularly in STEM and health subjects, for progression into Level 4 of an undergraduate degree with us.

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