



Letter of support for International Baccalaureate Sports, Exercise and Health Science qualifications submitted for funding approval July 2023.

The purpose of this letter of support is to provide evidence of the University of Birmingham'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 provided to meet 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 Sports, Exercise and Health Science (AAQ)
- IBO Level 3 Certificate in SL Sports, Exercise and Health Science (AAQ)

IBO Level 3 Certificate in HL Sports, Exercise and Health Science (AAQ)

- University of Birmingham recognises this qualification specifically as meeting subject entry requirements for courses such as: Physiotherapy BSc, Sport, Exercise and Health Science BSc, Sport, Physical Education and Coaching Science BSc, for which an academic level 3 Sports Science qualification is advantageous.
- We recognise this qualification for entry onto many of our related courses where one or more academic level 3 science subjects are required or preferred.
- We recognise this qualification for entry to all undergraduate programmes for which there are no specific subject requirements, or as part of a qualifications profile which contains required subjects.

From our experience of admitting students to the university on the basis of this qualification we have found that IBO Level 3 Certificate in HL Sports, Exercise and Health Science (AAQ) provides sound academic preparation and a such is currently, and will be, accepted as a part of an applicant's Level 3 qualifications profile for admission to all Undergraduate degree programmes. Applicants offering IBO HL Sports, Exercise and Health Science are considered as being at least equally qualified for admission as those holding A level Physical Education or related science qualifications.

University of Birmingham has for many years accepted the IBO Level 3 Certificate in HL Sports, Exercise and Health Science for entry to undergraduate programmes, using the following equivalence scale to compare the IBO Level 3 certificate in HL Sports, Exercise and Health Science (AAQ) to A level Physical Education:

IBO Level 3 Certificate in HL Sports, Exercise and Health Science (AAQ) grade	A Level Physical Education 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 Sports, Exercise and Health Science are an accurate guide to potential achievement in undergraduate courses at the university and provide an effective basis for the selection process.

Whilst many students offering IBO HL Sports, Exercise and Health Science will do so within the IB Diploma programme, the University of Birmingham also accepts this qualification as either:

1. A standalone qualification offered in combination with other acceptable Level 3 qualifications: for example, IBO Certificate in HL Sports, Exercise and Health Science along with other IBO HL certificates, or alongside A levels or other acceptable Level 3 qualifications.
2. An academic component of the IB Career Related programme; whereby this qualification is accepted in combination with a suitable technical qualification such as a BTEC National Diploma. As such this qualification supports progression to our undergraduate programmes for learners who benefit from a mixed academic and technical curriculum at Level 3.

The IBO Level 3 certificate in HL Sports, Exercise and Health Science (AAQ) provides a firm foundation in the principles of human biology, physiology, nutrition, biomechanics and psychology allowing candidates to progress successfully to undergraduate courses where a knowledge of these subjects is a pre-requisite or advantageous. The qualification content covers subject content which includes:

Exercise physiology and nutrition of the human body

- Inter-system communication: nervous and endocrine systems
- Maintaining homeostasis
- The cardiovascular and respiratory systems
- Water and electrolyte balance
- Fuelling for health and performance
- Energy systems - phosphagen, glycolytic and oxidative systems
- Maximal oxygen consumption (VO₂ max).
- Excess Post-exercise Oxygen Consumption (EPOC)
- Qualities of training and the benefits of being active.
- Fatigue and recovery

Biomechanics

- Anatomical position, planes and movement in planes and rotation along axes.
- Anthropometry
- Structure and function of connective tissues and joints and muscular function to create movement and stability
- The sliding filament theory
- Levers in movement and sport
- Forces, motion and movement

- Analysis of linear and angular motion using Newton's laws of motion.
- Momentum in collisions; friction, work
- The path of a projectile through air is determined by different factors and forces.
- Conditions affecting the external forces acting on an object. Forces, buoyancy, lift and drag acting on a body as it moves through a fluid. Bernoulli's principle and the Magnus effect.
- Movement analysis and its applications
- Causes of injury and susceptibility to injury
- Acute and cumulative trauma
- Chronic or overuse injuries relationship to technique
- Methods of lowering the risk of injury.
- Injury treatment and healing
- Treatment of concussion

Sports psychology and motor learning

- Understanding personality
- Social learning theory and personality change
- Mental toughness
- The theory of the "self-fulfilling prophecy"; Positive outcomes of mental toughness ; Attribution theory
- Motor learning processes

- The psychological refractory period.
- Transfer of learning
- Proficient execution of specific skills and attentional focus.
- Achievement motivation and Need Achievement

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

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

In all of our undergraduate courses, regardless of whether or not a sports science qualification is pre-requisite, we expect our students to take an inquiring approach to their studies. The IBO Level 3 certificate in HL Sports, Exercise and Health Science (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 Sports, Exercise and Health Science (AAQ)

We recognise this qualification for entry as part of a wider Level 3 qualifications profile.

The university welcomes applicants holding the IBO Level 3 Certificate in SL Sports, Exercise and Health Science (AAQ) as it provides breadth to an applicant's studies and provides a complementary qualification alongside other IBO HL courses, or other acceptable Level Three qualifications. This is particularly valuable in providing them with the fundamental knowledge and understanding of sports science which supports progression to a range of courses for which IBO HL or A level physical education are not prerequisite. We value the skills and knowledge that students with this qualification bring and the contribution to their success.

The IBO Level 3 Certificate in SL Sports, Exercise and Health Science (AAQ) provides a firm foundation in the principles of sports science allowing candidates to progress successfully to undergraduate courses where a knowledge of human biology and psychology is desirable. The course content covers the fundamental principles of sports and health science which includes:

Exercise physiology and nutrition of the human body

- Inter-system communication: nervous and endocrine systems
- Maintaining homeostasis
- The cardiovascular and respiratory systems
- Water and electrolyte balance
- Fuelling for health and performance
- Energy systems - phosphagen, glycolytic and oxidative systems
- Maximal oxygen consumption (VO₂ max).
- Qualities of training and the benefits of being active.

Biomechanics

- Anatomical position, planes and movement in planes and rotation along axes.

- Structure and function of connective tissues and joints and muscular function to create movement and stability
- Levers in movement and sport
- Forces, motion and movement
- Analysis of linear and angular motion using Newton's laws of motion.
- The path of a projectile through air is determined by different factors and forces.
- Movement analysis and its applications
- Causes of injury and susceptibility to injury
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- Methods of lowering the risk of injury.
- Injury treatment and healing
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Sports psychology and motor learning

- Understanding personality
- Mental toughness
- Motor learning processes
- The psychological refractory period.
- Transfer of learning
- Proficient execution of specific skills and attentional focus.
- Achievement motivation and Need Achievement

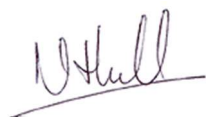
Additionally, the qualification develops the key skills necessary for students to access a wider range of undergraduate science courses:

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

In all of our undergraduate courses we expect our students to take an inquiring approach to their studies. The IBO Level 3 certificate in HL Sports, Exercise and Health Science (AAQ) supports this aspect through its inquiry process which includes:

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

University of Birmingham is therefore fully supportive of these qualifications continuing to be available to learners to support their progression to our undergraduate programmes of study.



Nick Hull
Director of Admissions
University of Birmingham

