



香港學術及職業資歷評審局
Hong Kong Council for Accreditation of
Academic & Vocational Qualifications

ACCREDITATION REPORT

**SCHOOL FOR HIGHER AND PROFESSIONAL EDUCATION,
VOCATIONAL TRAINING COUNCIL
AND
UNIVERSITY OF NORTHUMBRIA AT NEWCASTLE**

LEARNING PROGRAMME RE-ACCREDITATION

BSC (HONS) ENVIRONMENTAL SCIENCE

JANUARY 2024

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Appendix 1 HKCAAVQ Panel Membership

Appendix 2 Graduate Profile of BSc (Hons) Environmental Science

1. TERMS OF REFERENCE

1.1 Based on Service Agreement No.: AA920, the Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ), in the capacity of the Accreditation Authority as provided for under the Accreditation of Academic and Vocational Qualifications Ordinance (Cap. 592), was commissioned by the School for Higher and Professional Education, Vocational Training Council of Hong Kong and University of Northumbria at Newcastle in the UK (known jointly as the Operator hereafter) to conduct learning programme re-accreditation (Re-LPA) exercise with the following Terms of Reference:

- (a) To conduct an accreditation test as provided for in the AAVQO to determine whether the programme of School for Higher and Professional Education, Vocational Training Council and University of Northumbria at Newcastle (the Operator) (with specifications under (B)) meets the stated objectives and HKQF standards and can continue to be offered as accredited programme; and
- (b) To issue to the Operator an accreditation report setting out the results of the determination in relation to (a) by HKCAAVQ.

Specifications of the programme seeking accreditation status

Programme title (English and Chinese, if any)	Exit award title (English and Chinese, if any)	NCR Registration / Reference Number ¹	Mode of study	Programme length	Major(s) leading to distinctive awards	Claimed HKQF level
BSc (Hons) Environmental Science	BSc (Hons) Environmental Science	252502	Full- time	1 year	N/A	5

Addresses² of the campus:

- (a) 3 King Ling Road, Tseng Kwan O, New Territories
- (b) 30 Shing Tai Road, Chai Wan, Hong Kong
- (c) 702 Lai Chi Kok Road, Cheung Sha Wan, Kowloon
- (d) 20 Hing Shing Road, Kwai Chung, New Territories

¹ NCR Registration / Reference number: the number assigned by the Non-local Courses Registry (NCR) under the Non-local Higher and Professional Education (Regulation) Ordinance, to registered / exempted courses respectively.

² All classes of the programmes will only be conducted in these premises which meet the approved premises criteria under section 5 of Cap. 493B.

- (e) 25 Hiu Ming Street, Kwun Tong, Kowloon
- (f) 6 Oi Kwan Road, Wan Chai, Hong Kong
- (g) 20 Tsing Yi Road, Tsing Yi Island, New Territories
- (h) 21 Yuen Wo Road, Sha Tin, New Territories
- (i) 18 Tsing Wun Road, Tuen Mun, New Territories

2. HKCAAVQ'S DETERMINATION

2.1 HKCAAVQ has determined that the BSc (Hons) Environmental Science (BScES) programme meets the stated objectives and QF standard at Level 5 and can continue to be offered as an accredited programme with a validity period of 4 years.

2.2 Validity Period

2.2.1 The validity period will commence on the date specified below. Operators may apply to HKCAAVQ to vary the commencement date of the validity period. Applications will be considered on a case-by-case basis.

2.3 The determinations on the BScES programme are specified as follows:

Name of Local Operator 本地營辦者名稱	School for Higher and Professional Education, Vocational Training Council 職業訓練局 才晉高等教育學院
Name of Non-local Operator 非本地營辦者名稱	University of Northumbria at Newcastle
Name of Award Granting Body 資歷頒授者名稱	University of Northumbria at Newcastle
Title of Learning Programme 進修課程名稱	BSc (Hons) Environmental Science
Title of Qualification(s) [Exit Award(s)] 資歷名稱 (結業資歷)	BSc (Hons) Environmental Science
Primary Area of Study and Training 主要學習及培訓範疇	Sciences

Sub-area (Primary Area of Study and Training) 子範疇（主要學習及培訓範疇）	Physical Sciences
Other Area of Study and Training 其他學習及培訓範疇	Not Applicable
Sub-area (Other Area of Study and Training) 子範疇（其他學習及培訓範疇）	Not Applicable
HKQF Level 香港資歷架構級別	Level 5
HKQF Credits 香港資歷學分	120
Mode(s) of Delivery and Programme Length 修讀模式及修讀期	Full-time, one year
Start Date of Validity Period 有效期的開始日期	1 September 2024
End Date of Validity Period 有效期的終止日期	31 August 2028
Number of Enrolment(s) 招收學員次數	One enrolment per year
Maximum Number of New Students 新學員人數上限	50 per year
Address of Teaching / Training Venue(s)	<p>(1) Hong Kong Institute of Vocational Education (IVE) (Chai Wan) 30 Shing Tai Road, Chai Wan, Hong Kong</p> <p>(2) IVE (Haking Wong) 702 Lai Chi Kok Road, Cheung Sha Wan, Kowloon</p> <p>(3) IVE (Tsing Yi) 20 Tsing Yi Road, Tsing Yi Island, New Territories</p> <p>(4) IVE (Morrison Hill) 6 Oi Kwan Road, Wan Chai, Hong Kong</p> <p>(5) IVE (Tuen Mun)</p>

	<p>18 Tsing Wun Road, Tuen Mun, New Territories</p> <p>(6) IVE (Sha Tin) 21 Yuen Wo Road, Sha Tin, New Territories</p> <p>(7) IVE (Kwai Chung) 20 Hing Shing Road, Kwai Chung, New Territories</p> <p>(8) IVE (Kwun Tong) 25 Hiu Ming Street, Kwun Tong, Kowloon</p> <p>(9) Hong Kong Design Institute (HKDI) and Institute of Vocational Education (IVE) (Lee Wai Lee) 3 King Ling Road, Tseung Kwan O, New Territories</p>
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Offering site of BScES programme:

- IVE (Sha Tin) Campus

2.4 Recommendation

HKCAAVQ offers the following recommendations and advice for continuous improvement of the BScES programme:

- 2.4.1 The Operator should seek other professional recognitions in addition to HKIOA for students in Hong Kong to enhance their employability and align the professional status of the graduates in Hong Kong with that of the UK graduates. (Para. 4.1.6)
- 2.4.2 The Operator should develop more effective and targeted strategies to expand the student intake, particularly from non-feeder communities, including Higher Diplomas and Associate Degrees offered by other institutions. (Para. 4.2.6)
- 2.4.3 The Operator should conduct a thorough analysis, identifying factors that have an impact on students' performance, and formulate

learning support and a comprehensive action plan with targets and timelines to help the BScES students at SHAPE to improve their performance so that it is comparable to the home programme. (Para. 4.4.7)

2.4.4 The Operator should set up Key Performance Indicators (KPIs) for the BScES programme to

- (a) gauge the effectiveness of the programme delivery and the learning progress of students; and
- (b) monitor the BScES programme for improvement and for charting forward (Para. 4.4.9)

2.4.5 The Operator should provide students with targeted and practical career advice, including the possibility of further studies. (Para. 4.6.3)

2.4.6 The Operator should review and strengthen its Quality Assurance (QA) procedures through appropriate measures, reporting and checking systems to ensure all documents, including accreditation documents, are up-to-date and have gone through the necessary quality assurance processes. (Para. 4.7.4)

2.4.7 The Operator should establish a direct and formal channel to collect feedback from external stakeholders, including industry, to improve the programme quality and the employability of the BScES students. (Para. 4.7.5)

2.4.8 The Operator should ensure students are effectively informed of the channels by which they can give feedback on their experience with the BScES programme and that students' views are formally heard and responded to by the Programme Management, as described in the Programme Handbook. (Para. 4.7.6)

2.5 **Advice**

2.5.1 The Operator is advised to encourage students to join relevant professional bodies, while the Operator should provide support to gain recognition by these professional bodies and admission to them where applicable. (Para. 4.1.6)

2.5.2 The Operator is advised to conduct a comprehensive survey exploring the interests/views of potential applicants. (Para. 4.2.6)

- 2.5.3 The Operator is advised to review the programme structure and make substantial adjustment, such as having a bridging course, to ensure students acquire the basic essential knowledge required for studying the BScES programme (Para 4.3.5)
- 2.5.4 The Operator is advised to consider including a formal intensive foundation module before the commencement of the module *Advanced Geospatial Applications* for students who need to acquire the basic knowledge of GIS application. This should be similar to the pre-requisite module *Earth Observations and GIS* required for the UNN students in the UK for the module *Advanced Geospatial Applications*. (Para. 4.3.6)
- 2.5.5 The Panel advised the Operator to increase the practical experience through, for example, laboratory classes and fieldwork, of the students of the BScES programme. (Para. 4.4.4)
- 2.6 HKCAAVQ will subsequently satisfy itself on whether the Operator remains competent to achieve the relevant objectives and the BScES programme continues to meet the standard to achieve the relevant objectives as claimed by the Operator by reference to, amongst other things, the Operator's fulfilment of any conditions and compliance with any restrictions stipulated in this Accreditation Report. For the avoidance of doubt, maintenance of accreditation status is subject to the fulfilment of any condition and compliance with any restriction stipulated in this Accreditation Report.

3. INTRODUCTION

- 3.1 The School for Higher and Professional Education (SHAPE) was set up in 2003 as one of the member institutions of the Vocational Training Council (VTC). Its mission is to explore and operate top-up degree programmes through collaboration with overseas and local universities, thereby providing an articulation pathway to degree level studies for the Higher Diploma graduates of VTC.
- 3.2 The University of Northumbria at Newcastle (UNN), was named Newcastle Polytechnic when it was established in 1969 through the merger of three regional colleges: Rutherford College of Technology,

the College of Art & Industrial Design, and the Municipal College of Commerce. It was awarded the university status in September 1992 and henceforth renamed the University of Northumbria at Newcastle.

- 3.3 UNN and SHAPE, jointly as the Operator, first entered into a collaborative partnership in July 2002. Following the accreditation in October 2011, the Operator gained Initial Evaluation (IE) status and Programme Validation (PV) status for two programmes, the BA (Hons) International Business Management Programme (BAIBM) and BA (Hons) Finance and Investment Management Programme (BAFIM), effective from 1 September 2012.
- 3.4 The number of programmes offered by this collaboration partnership gradually increased and as of September 2023 it offered five accredited programmes which were as follows:
- (a) BA (Hons) Business and International Management
 - (b) BA (Hons) International Hospitality and Tourism Management
 - (c) BSc (Hons) Food Science and Nutrition
 - (d) BA (Hons) International Banking and Finance
 - (e) BSc (Hons) Environmental Science
- 3.5 The BScES programme is part of the collaboration portfolio of the School for Higher and Professional Education (SHAPE) of Vocational Training Council (VTC) of Hong Kong and University of Northumbria at Newcastle (UNN) of the United Kingdom. It was accredited in January 2016 and re-accredited in February 2020.
- 3.6 An HKCAAVQ Panel (Panel Membership at Appendix 1) was set up for the purpose of evaluating the BScES programme to review the accreditation documents submitted on 24 August 2023 and discussed them with various stakeholders of the BScES programme during the site visit on 2-3 November 2023. HKCAAVQ's *Manual for the Four-stage Quality Assurance Process under HKQF (Version 1.1, April 2019)* and the *Revised Generic Level Descriptors* issued by the Education Bureau of Hong Kong were the guiding documents for the Operator and the Panel in conducting this exercise.
- 3.7 In consideration of the Operator's track record established from previous accreditation exercises and in accordance with HKCAAVQ's Differentiation Approach, the BScES programme was considered to have met the following aspects of the accreditation

criteria and thereby the related information was exempted for submission:

Accreditation Criteria	Information NOT Required
LPA-5 Programme Leadership and Staffing	Information on <u>staff development</u> is not required.
LPA-6 Learning, Teaching and Enabling Resources/ Services	Information on institute-wide <u>financial resources</u> is not required.

4. PANEL'S DELIBERATIONS

The following presents the Panel's deliberations on a range of issues pertinent to its major findings. For aspects of the accreditation standards where no observations are made they are considered to be appropriately addressed by the Operator.

4.1 Programme Objectives and Learning Outcomes (LPA-1)

The learning programme must have objectives that address community, education and/or industry needs, with learning outcomes that meet the relevant HKQF standards, for all exit qualifications from the programme.

4.1.1 The Panel noted that the Programme Aims (PAs) and Programme Learning Outcomes (PLOs) of the BScES programme, hosted by the Department of Geography and Environmental Sciences, Faculty of Engineering and Environment of UNN, had remained unchanged since the last re-LPA.

4.1.2 The PAs of the BScES programme are:

- (a) Be able to think independently, understand and justify their own opinions, and recognise the need to challenge their thinking, and the thinking of others;
- (b) Be able to apply their disciplinary knowledge to complex problems in their discipline and its professional or industrial

practice in order to identify appropriate solutions which are sustainable and justifiable;

- (c) Value curiosity, collaboration and analysis as keystones in the creation of new knowledge and practice;
- (d) Be able to communicate effectively to diverse audiences utilising a range of formats and media;
- (e) Display the attitudes and skills to engage and work constructively and sensitively in multi-cultural environments and teams and have an awareness of ethical considerations; and
- (f) Combine all of the above to support their future employability and long term career prospects.

4.1.3 The PLOs of the BScES programme are categorised under three domains, namely (a) Knowledge and Understanding, (b) Intellectual/ Professional Skills and Abilities, and (c) Personal Values Attributes (Global/ Cultural Awareness, Ethics, Curiosity). Graduates of the BScES programme are expected to be able to achieve the following PLOs:

PLO Categories	PLOs Attributes
A. Knowledge and Understanding	A1. Engage actively and critically in the inter-disciplinary discourses of environmental science and its application.
	A2. Understand the uncertainties and boundaries of knowledge and the scientific process of generating new knowledge.
	A3. Demonstrate in-depth and specialist knowledge of current environmental challenges and solutions
B. Intellectual/ Professional Skills and Abilities	B1. Choose and proficiently apply appropriate methods for data collection and analysis, to investigate a range of environmental problems.
	B2. Generate new knowledge through research/ enquiry based learning in the environmental sciences.
	B3. Effectively communicate complex

	ideas and arguments, including the results of your own research, in a variety of formats.
	B4. Propose holistic and creative solutions to human impacts on the environment, and issues challenging environmental sustainability and security.
C. Personal Values Attributes (Global/ Cultural Awareness, Ethics, Curiosity)	C1. Critically appraise aspects of morality, ethics and justice implicit to environmental debates and engage with these challenges in the academic discipline.
	C2. Think independently, understand and justify your opinion, recognising the need to challenge your own thinking and that of others.
	C3. Demonstrate confidence and professionalism as practicing environmental scientists.

4.1.4 The Operator provided the Panel with the following information to show that the BScES programme meets the HKQF standard at Level 5:

- (a) Mappings between the PLOs and PAs of the BScES Programme;
- (b) Mappings of the BScES Programme to the generic level descriptors (GLDs) of the HKQF at Level 5;
- (c) Samples of marked assessments together with the assessment briefs of modules before and after the change of the programme structure due to the UNN's review in July 2020 (refer to Para. 4.3.1);
- (d) External Examiners' (EE) reports from 2020/21 to 2022/23;
- (e) Summary of the Employment Survey of Graduates during the validity period; and
- (f) SHAPE Standard Student Questionnaire for Collaborative Degree Programmes (End of Programme).

4.1.5 Having reviewed the above information and discussed it with representatives of the Operator, the Panel had the following observations and comments:

- (a) The PAs and PLOs are appropriate, and the mappings show that they are aligned and match with the GLDs at HKQF Level 5.
- (b) The sample assessment tasks and graded students' work demonstrated the students' attainment of learning outcomes of HKQF Level 5, though the performance of SHAPE students was comparatively lower than that of the UNN students (see Para 4.4.7).
- (c) Students and graduates are satisfied with the BScES programme.
- (d) The employment rates from 2020/21 to 2021/22 were high, and the jobs secured in the industry were appropriate for the degree qualification.

4.1.6 The Panel noted that one of the Panel's recommendations in the last re-LPA was related to professional recognition. In the *Response to the Summary of the Panel's Initial Comments (the Response Document)*, the Operator indicated that SHAPE graduates are not eligible to apply for Graduate Membership of the Chartered Institute of Ecology and Environmental Management (CIEEM), as the UNN graduates in the UK are, because CIEEM accreditation requires a three-year programme of study, as is the case for the degree of the UK home programme. Nevertheless, since SHAPE students with training in acoustics are eligible to join the Student Branch of the Hong Kong Institute of Acoustics (HKIOA), which is not programme-based, students of the BScES programme can apply to this membership starting from 2023/24. When the Panel expressed concern about the relevancy and importance of this membership to employment, especially if work is not in the field of acoustics, the Operator explained that the HKIOA student membership still could offer insights into the professional world. During the discussion with the students' and graduates' representatives, the Panel noted that students were aware of the HKIOA membership when they were students of the feeder programmes. The student representatives indicated that it would be more relevant if the Operator could provide support to secure memberships of other professional bodies directly related to this BScES programme. To safeguard and increase the

employability of the BScES graduates and due to the professional nature of the BScES programme, the Operator is **recommended** to seek other professional recognitions in addition to HKIOA for students in Hong Kong to enhance their employability and align the professional status of the graduates in Hong Kong with that of the UK graduates. The Operator is also **advised** to encourage students to join relevant professional bodies, while the Operator should provide support to gain recognition by these professional bodies and admission to them where applicable.

- 4.1.7 In consideration of the above information and the discussion with various stakeholders, and notwithstanding the recommendation and advice above, the Panel formed the view that the BScES programme has appropriate PLOs that align with the PAs and correspond to the GLDs at HKQF Level 5.

4.2 **Learner Admission and Selection (LPA-2)**

The minimum admission requirements of the learning programme must be clearly outlined for staff and prospective learners. These requirements and the learner selection processes must be effective for recruitment of learners with the necessary skills and knowledge to undertake the programme.

- 4.2.1 As reported in the accreditation documents and the responses provided by the Operator, the Panel noted that, except for the list of feeder Higher Diploma (HD) programmes, there has been no change to the minimum admission requirements and proposed maximum quota of student intakes for 2024/25 and onwards. The changes in the feeder programmes are as follows:
- (a) the feeder programme of HD in Environmental Science (Green Management, Natural Resources, or Tree Management Streams) has been renamed as HD in Environmental Science;
 - (b) the feeder programme of HD in Environmental Resources Management has been phased out; and
 - (c) for the articulation needs of the students of the feeder programmes, the Operator has planned to include the HD in Environmental Engineering and the HD in Conservation and Tree Management programmes as new feeder programmes.

4.2.2 The proposed minimum admission requirement of the BScES programme effective from 2024/25 is listed in Table 1 below.

Table 1: Target Students and Minimum Admission Requirements of the BScES programme (effective 2024/25)

Target Students	Graduates from relevant VTC HD programmes or equivalent.
Minimum Admission Requirements	<p>1. <u>Accreditation of Prior Learning</u> The following VTC HD programmes are accepted for admission to the BScES top-up programme:</p> <ul style="list-style-type: none"> • HD in Environmental Science* • HD in Environmental Protection and Management*# • HD in Environmental Engineering*^ • HD in Conservation and Tree Management*^ <p>2. <u>English Language Entry Requirements</u></p> <ol style="list-style-type: none"> i. IELTS 6.5 with a minimum score of 5.5 in any component; ii. TOFEL score: 575 (paper based) or 232 (computer based) or 89 (internet based); iii. Pearson Test of English (PTE) 62; or iv. Equivalent qualifications of i, ii or iii. <p>Graduates from feeder programmes are exempted from the English language requirements.</p>
Non-Feeder Programmes/ Special/ Alternative Admission Requirements and Arrangements	<p><u>Admission Requirements</u> Applicants should have successfully completed an award-bearing programme at HKQF Level 4, such as a Higher Diploma or an Associate Degree, and they should satisfy English Language Entry Requirements stated above. (Hong Kong students with HD from Hong Kong's government-funded universities and VTC are considered to have met the English language requirements.)</p>

	<p><u>Admission Arrangements</u></p> <p>For an applicant who satisfies the above admission requirements, the UNN Partnership Leader for the Hong Kong Programme (UNN HK PL) will make the academic decision regarding admission by further considering whether the programme the applicant has successfully completed covers background knowledge and skills equivalent to that covered in the Framework for Higher Education Qualifications (FHEQ) Level 4 and Level 5 of the home programme and appropriate to support learning on the BScES programme at SHAPE. Appropriate topics might include: Ecology, Waste Management, Air Pollution Studies, Water Pollution Studies, Pollution Monitoring and Control, Geographic Information System, Research Design and Implementation, etc.</p>
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Notes:

- * *HD programmes using HKDSE results or equivalent as general admission requirements.*
- # *HD programmes using HKCEE/ HKALE results or equivalent as general admission requirements.*
- ^ *HD feeder programmes introduced starting from 2024/25*

4.2.3 According to the United Kingdom UK National Information Centre for global qualifications and skills (UK ENIC), the related VTC HD programmes, mentioned in Para. 4.2.2 above, are recognised as equivalent qualifications to the UK's Higher National Diploma (HND) in terms of the level and volume of credits, i.e. 240 credits under the Framework for Higher Education Qualification (FHEQ) Levels 4 and 5, and hence acceptable as an entry route to a top-up degree programme. The curricula of these HD programmes were mapped against the first two years of the home programme to ensure that prospective students, having a good foundation from their HD study, would likely be successful in the BScES top-up degree programme. The mapping exercise was undertaken by the UNN Programme Leader for the Hong Kong Programme (UNN HK PL) with support from academic staff and the SHAPE Programme Coordinator (PC). The outcome of the mapping was submitted to the UNN Faculty Education Committee (FEC) for approval. For students from non-

feeder programmes, UNN will also consider whether the programmes they completed cover the background knowledge and skills equivalent to that covered in the FHEQ Level 4 and Level 5 of the home programme.

4.2.4 Apart from reviewing the approval record of the two new feeder programmes, the Panel reviewed the admission statistics and observed the following:

- (a) Student intakes from 2020/21 to 2022/23 were less than half of the approved maximum quota.
- (b) There has been a notable decline in the number of enrolled new students and the number of graduated students compared to the number of offers made in two cycles from 2022/23 to 2023/24.
- (c) All the students admitted from 2020/21 to 2022/23 were graduates of VTC SHAPE feeder programmes: (a) HD in Environmental Science or (b) HD in Environmental Protection and Management.
- (d) Among 23 students admitted to the BScES programme in 2023/24, seven were from non-feeder programmes with equivalent qualifications.

4.2.5 In line with the Government's policy on the yearly quota of non-standard admission for programmes accredited under the Qualifications Framework, for degree programmes operating in the 2023/24 academic year and onwards, the maximum number of non-standard admissions (including mature students) should be capped at a maximum of 10% on programme basis of the actual number of new students of the year. The cap is applied in line with the general expectation on self-financed degree-awarding institutions in safeguarding teaching and learning quality and thereby upholding the credibility and recognition of the qualifications. The percentage is based on the sum of new student numbers of the BScES programme.

4.2.6 Apart from the approval record and mapping tables of these feeder programmes, the Operator also showed the conditional offer emails sent to the admitted students after the mapping exercise undertaken by the UNN Programme Leaders and approval by the UNN Faculty Education Committee (FEC) to the Panel. The seven non-feeder entrance students admitted to the BScES programme in 2023/24

were from HD in Conversation and Tree Management, which is one of the two programmes that UNN has just approved to be feeder programmes, effective from 2024/25. The approval of these students was based on the admission requirement for non-feeder programmes, mentioned in Para. 4.2.3. As such, these students are considered to have met the admission requirement as those from non-feeder programmes that have been reviewed by UNN. Regarding student admission, the Panel noted that while the BScES programme accepts students from non-feeder programmes, all the students are only from the VTC HD programmes. When asked for the rationale for this situation, the Operator explained that one of the purposes of this top-up programme is to meet the articulation needs of the students of the VTC HD feeder programmes. Therefore, SHAPE has not conducted any survey on the interests/ views of the other potential applicants. Understanding that there may be potential demand from graduates of the two new feeder programmes and in view of the constantly low student enrolments since the BScES programme was offered, the Panel **recommended** that the Operator should develop more effective and targeted strategies to expand the student intake, particularly from non-feeder communities, including Higher Diplomas and Associate Degrees offered by other institutions. The Operator is also **advised** to conduct a comprehensive survey exploring the interests/views of potential applicants.

- 4.2.7 In consideration of the above information, notwithstanding the recommendation and advice, the Panel considered that, in general, the minimum admission requirements are effective for recruiting students with the necessary skills and knowledge to undertake the BScES programme.

4.3 **Programme Structure and Content (LPA-3)**

The structure and content of the learning programme must be up-to-date, coherent, balanced and integrated to facilitate progression in order to enable learners to achieve the stated learning outcomes and to meet the programme objectives.

- 4.3.1 The BScES programme, offered in full-time mode, mirrors the final year of study of the home programme in the UK. The design of the BScES Programme follows the QAA Subject Benchmark Statement for Earth Sciences, Environmental Sciences and Environmental Studies. During the validity period, the Operator has applied for

substantial changes in learning and teaching methods and modes of assessment of modules after the UNN review. These changes, summarised in the following table, were approved by HKCAAVQ in August 2021 for implementation effective from 2021/22.

Table 2: Summary of substantial changes effective from 2021/22

Change	Details
Semesterisation	<ul style="list-style-type: none"> • Offering the modules in a semester-based structure
Module: Geography and Environment Dissertation	<ul style="list-style-type: none"> • Reduction of three contact hours • Removal of one assessment component
Module: Environmental Engagement	<ul style="list-style-type: none"> • Change of module title to "Translating Environmental Science into Policy, Outreach and Decision Making" • Fine-tuning of content to emphasise on two areas • Reduction of two contact hours • Redistribution of some lecture hours to project supervision and seminars • Reduction of word counts of assessments to better reflect concise reporting of findings
Module: Applied Ecology and Conservation Management	<ul style="list-style-type: none"> • Reduction of 4 hours for fieldwork • Replacement of the topic for one of the assessments
Module: Environmental Pollution	<ul style="list-style-type: none"> • Change of module title to "Environmental Pollution and Health" • Reduction of 6 hours of seminar work • Change of assessment components
Student independent learning hours	<ul style="list-style-type: none"> • Categorised under tutor guided independent learning hours

4.3.2 Students must complete 120 HKQF credits and pass all modules to gain the degree award. The programme structure of the BScES programme at SHAPE is listed in Table 3 below:

Table 3: Programme Structure of the BScES programme (effective from 2021/22)

Module Title	Core or Elective	Contact Hours	Non-Contact Hours	Notional Learning Hours	HKQF Credits
Geography and Environmental Dissertation	Core	37	363	400	40
Applied Ecology and Conservation Management	Core	56	144	200	20
Translating Environmental Science into policy, outreach and decision making	Core	40	160	200	20
Advanced Geospatial Applications	Core	49	151	200	20
Environmental Pollution and Health	Core	41	159	200	20
Total		223	977	1200	120

4.3.3 The Operator provided the following information for review by the Panel:

- (a) Module Specifications;
- (b) Mapping of modules to the PLOs and GLDS of HKQF at Level 5;
- (c) Samples teaching and learning materials *Environmental Engagement* (2020/21); and *Translating Environmental Science into policy, outreach and decision making* (effective 2021/22 and onwards);
- (d) Module Grade Distribution and Award Classification of SHAPE students in HK and UNN students in the UK (2020/21 to 2022/23); and

(e) Results of Module Evaluation Questionnaires (MEQs) of all modules delivered in 2021/22.

- 4.3.4 The Panel noted that except for the module *Geography and Environment Dissertation*, the delivery of the BScES programme has been changed from a year-long mode to a semester-long mode from 2021/22 and onwards. The Operator explained that this change mirrored the experience in the home programme in the UK in response to the guidance from the Quality Assurance Agency for Higher Education (QAA) in the UK to ensure that any disruption to the studies of students caused by possible future situations such as the COVID-19 would be minimal. The curriculum remains the same while the lessons had been arranged in a more compact manner. The Operator also elaborated that this change of delivery mode allows assessment of student performance for a complete module within one semester without interruptions across semesters.
- 4.3.5 From the information listed in Para. 4.3.2, while considering that the overall programme content is relevant to the environmental industries sector, the Panel expressed concern that (a) since this BScES programme is a top-up degree programme with a teaching-learning load equivalent to only one full-time year, the chance to make up for gaps and inadequacies in students' background knowledge and skills is limited; (b) the absence/ deficiency of foundation knowledge might have contributed to the performance issue of the Hong Kong students reported below (Para. 4.4.7). The Operator is **advised** to review the programme structure and make substantial adjustment, such as having a bridging course, to ensure students acquire the basic essential knowledge required for studying the BScES programme.
- 4.3.6 The Panel noted that the *Advanced Geospatial Applications* module required a pre-requisite module, *Earth Observation and GIS*. The Operator explained that the pre-requisite KE5017 (offered only for UNN students in the UK) provided the foundation of the use of GIS software and supported the learning on the applications of GIS in *Advanced Geospatial Applications*. Since the current feeder programmes at SHAPE mentioned in Table 1 also have relevant GIS modules, students admitted to the BScES programme have acquired basic knowledge. The students the Panel met at the site visit also confirmed their understanding of GIS applications. The Panel noted that pre-course reading and exercise packs, which also highlight those skills needed for *Advanced Geospatial Applications*, are available for students to refresh their skills acquired in previous GIS

modules. However, considering that potential students, mentioned in Para. 4.2.6, may be from non-feeder communities and student representatives whom the Panel met with also considered having a bridging or foundation module as helpful, the Operator is **advised** to consider including a formal intensive foundation module before the commencement of module *Advanced Geospatial Applications* for students who need to acquire the basic knowledge of GIS applications. This should be similar to the pre-requisite module *Earth Observations and GIS* required for the UNN students in the UK for the module *Advanced Geospatial Applications*.

4.4 **Learning, Teaching and Assessment (LPA-4)**

The learning, teaching and assessment activities designed for the learning programme must be effective in delivering the programme content and assessing the attainment of the intended learning outcomes.

- 4.4.1 The maximum class sizes for a lecture, a seminar and a laboratory/workshop/ fieldwork are 120, 25, and 30, respectively. In 2022/23, with 14 students enrolled, eight SHAPE teaching staff and seven UNN teaching staff were recruited for programme delivery. According to the Collaborative Agreement between UNN and SHAPE, among 223 total contact hours, UNN teaching staff will contribute 36 hours of teaching input for the BScES programme. UNN teaching staff will come to Hong Kong for one to two weeks to deliver lectures for three modules.
- 4.4.2 Regarding the supervision of dissertations, the supervision would follow the UNN model. Each SHAPE teaching staff supervises no more than four students, and students meet their supervisors regularly and record the discussion in a standard form after each meeting as part of their "evidence file" together with the dissertation submission.
- 4.4.3 During the COVID-19 pandemic, many teaching and learning activities moved to online delivery. For the practical sessions that required a physical site visit, SHAPE lecturers provided survey data to facilitate the learning process. Instead of monitoring attendance, SHAPE Module Tutors focused on monitoring the students' learning progress by inviting them to ask questions and by providing feedback. Students who met the Panel reflected positive feedback on the arrangement during the pandemic in general.

- 4.4.4 The programme content of the SHAPE provision is contextualised to fit the needs of the local industry by incorporating local examples and using HK cases in projects. The contextualised materials are prepared by SHAPE Tutors and endorsed by the UNN Hong Kong Programme Leader to ensure that the materials align with the module and programme learning outcomes for implementation and delivery. Bidirectional communication between SHAPE and UNN module tutors ensure that any impact of the necessary contextualisation on the assessment quality can be recognised. During the discussion with the student representatives, while students considered the contextualisation of teaching materials to be of high value to keep them up-to-date with the industry, they preferred having more practical laboratory classes and fieldwork. The Panel noted that the Operator had not kept sufficient practical work in the top-up programme. Although the Operator indicated that students had acquired the necessary practical experience scheduled in the feeder programmes, the Panel was of the view that while not all entrances are from these feeder programmes, adding to the curriculum up-to-date practical skills and laboratory experience at the HKQF level 5 is crucial. Considering the enhancement of the practical components is necessary for students with different extents of prior practical experience, the Panel **advised** the Operator to increase the practical experience through, for example, laboratory classes and fieldwork, of the students of the BScES programme.
- 4.4.5 The Operator provided the Panel with the following information to demonstrate how assessments are arranged to assess learners' attainment of the intended learning outcomes.
- (a) A table summarising the assessment methods and their weightings in individual modules;
 - (b) Module Grade Distribution and Award Classification of SHAPE students in HK and UNN students in the UK (2020/21 to 2022/23);
 - (c) Samples of the students' work, assessment brief of coursework of the home programme, the corresponding marking scheme, and assessment criteria;
 - (d) External Examiner reports from 2020/21 to 2022/23;
 - (e) The Programme Enhancement Plan for 2021/22;

(f) The Continuous Programme Performance Review (CPPR) reports for Semester 1 and Semester 2 in 2022/23; and

(g) The Assessment for Learning & Achievement Policy.

4.4.6 The Panel noted that to align with the home programme in the UK, the Operator has also submitted substantial changes to the assessment structure (refer to Table 2 in Para.4.3.1). While there is a range of assessments such as presentations, case studies, tender application, reports, dissertation projects to assess students' attainment of the intended learning outcomes, all modules only have a maximum of two assessments with no examination, effective from 2021/22.

4.4.7 Having reviewed the information listed in Para. 4.4.1, the tabled documents and supplementary information provided at the site visit, the Panel considered that the overall performance in the *Advanced Geospatial Applications* module is relatively poor compared to other modules in HK and the students undertaking the same module in the UK. Indeed, students' achievement was downwardly skewed across degree classifications compared to the home programme from 2020/21 to 2021/22. In the Response Document and the meeting with the Panel, the Operator explained that, in response to the feedback from the External Examiner (EE) Report in 2020/21 on the comparatively lower student performance of the module *Advanced Geospatial Application*, various actions, like provision of learning materials, extra tutoring hours and one-on-one meeting arrangement to discuss feedback with students regarding their tender application, were put in place. Regarding the difference between the student performance at Hong Kong and UNN, the Panel reckoned that a direct comparison is not always valid due to differences in student characteristics. However, when asked if the Operator had conducted any detailed analysis of these issues, the UNN and SHAPE staff responded negatively. The Panel concluded that the root causes that had led to the performance gap are yet to be identified and therefore stipulated the following recommendation:

Recommendation

The Operator should conduct a thorough analysis, identifying factors that have an impact on students' performance, and formulate learning support and a comprehensive action plan with targets and timelines to help the BScES students at SHAPE to improve their performance so that it is comparable to the home programme.

- 4.4.8 The Panel noted that moderation takes place both in setting and marking assessments. Module assessments are prepared by the UNN Module Tutor, moderated internally by an Internal Moderator and then approval is sought from the External Examiner. From the EE's reports, the Panel noted, specifically that EE commented on (a) the wrong briefs given to the students, which required marking adjustments for the module *Geography and Environment Dissertation*, and (b) having "*not consistent nor appropriate' marking and feedback*" for the module *Translating Environmental Science into policy, outreach and decision making*. When asked for the follow-up actions to address these issues, the Operator responded, in the Response Document and at the site visit, that the UK Module Tutors of these two modules had various meetings with the SHAPE teaching staff to discuss the module delivery and assessment details, including relevant learning and assessment materials. During the meeting with the teaching staff, the UK Module Tutor further deliberated on the actions taken to address the EE's comments. The Panel also noted positive feedback from the EE's report on the improvement in addressing this issue and commended the collaboration between the UNN and SHAPE teaching staff and the efforts both parties have taken in handling this issue.
- 4.4.9 The Panel noted that all the student-independent learning hours are replaced by "Tutor Guided Independent Learning" (TGIL) hours, which take up almost 83% of the total Notional Learning Hours. When asked about the status of setting up KPIs to monitor the effectiveness of the programme delivery and the learning progress of students in response to the two recommendations from the last re-LPA in 2020, the Operator informed the Panel that instead of setting up KPIs, they have set up the following milestones to:
- (a) Distribute the assessment schedule for each semester to students at an early stage of the semester;
 - (b) Have Module lecturers monitor the learning progress of students through various class activities and discussions of assessments during tutorial sessions; and
 - (c) Invite students to submit draft assessments of their dissertation project before the assessment submission deadline.

The Panel considered that actual KPIs would ensure the monitoring of the programme delivery's effectiveness and students' learning

progress. Therefore, the Panel stipulated the following recommendation:

Recommendation

The Operator should set up Key Performance Indicators (KPIs) for the BScES programme to

- (a) gauge the effectiveness of the programme delivery and the learning progress of students, and
- (b) monitor BScES programme for improvement and for charting forward.

4.4.10 In view of the information gathered, the Panel concluded that with the learning, teaching and assessment activities designed, the BScES programme is able to deliver the content and assess students' attainment of the intended learning outcomes for achieving the PAs generally. The Panel also proposed its recommendations and advice in support of the Operator's further development of the BScES programme.

4.5 Programme Leadership and Staffing (LPA-5)

The Operator must have adequate programme leader(s), teaching/training and support staff with the qualities, competence, qualifications and experience necessary for effective programme management, i.e. planning, development, delivery and monitoring of the programme. There must be an adequate staff development scheme and activities to ensure that staff are kept updated for the quality delivery of the programme.

4.5.1 The Panel noted that the UNN Hong Kong Programme Leader and the SHAPE Programme Coordinator collaborate to provide academic leadership of the BScES programme to ensure effective programme delivery while the final decisions on programme management rest with UNN. The UNN Module Tutor and the SHAPE Module Tutors collaborate to ensure effective delivery and assessment of modules. The SHAPE Module Tutors are in regular email contact with their counterparts at UNN to ensure that all information is shared and that any problems are quickly identified and resolved.

4.5.2 The Panel reviewed the staffing plan and staff profile of the UNN and SHAPE teaching staff and noted that all staff of SHAPE are recruited in accordance with the recruitment procedures of the VTC. All SHAPE appointees, full-time or part-time, usually have at least a Master's Degree and/or equivalent professional experience and a minimum of 4 years of relevant teaching/working experience. The appointment of a new SHAPE teaching staff for the BScES programme is recommended by SHAPE and approved by UNN. During the discussion with the representatives of the teaching team, the Panel was told that although not all the SHAPE teaching staff hold doctoral degrees like the UNN teaching staff, they possess a combination of academic backgrounds and relevant industrial experience in the environmental sector; they can bring valuable expertise and practical knowledge to the teaching process. The Operator also reassured the Panel that they would continuously monitor the suitability of teaching staff deployed to deliver the BScES programme.

4.5.3 In the Response Document, the Operator indicated that SHAPE and UNN teaching staff shared the workload on Lecture sessions (refer to Para. 4.4.1), and SHAPE teaching staff took up the workload on seminar and laboratory/practical sessions. The Operator explained that this arrangement is to ensure the smooth adoption of contextualisation of the fieldwork and/or practical skills that fit the needs of the local industry (refer to Para. 4.4.4). Also, the Operator told the Panel that since most of the BScES teachers are also teachers of the feeder programmes, they understood the materials that students had learned in the feeder programmes and how these materials could incorporate with the subject areas covered in the BScES programme.

4.5.4 In consideration of the above, the Panel considered the qualifications, experience, and expertise among staff from UNN and SHAPE to be sufficient to support the management and delivery of the BScES programme.

4.6 **Learning, Teaching and Enabling Resources/Services (LPA-6)**

The Operator must be able to provide learning, teaching and enabling resources/services that are appropriate and sufficient for the learning, teaching and assessment activities of the learning programme, regardless of location and mode of delivery.

- 4.6.1 On financial resources, the Operator provided the Panel with information on the actual income and expenditure of the BScES Programme from 2021/22 to 2022/23 and budget documents on the financial projections of the BScES programme from 2023/24 to 2025/26. The Panel noted that an operating surplus is projected for each year. On the basis of the financial information provided, the Panel considered that the BScES programme would be viable financially.
- 4.6.2 The offering site of the BScES programme is the Hong Kong Institute of Vocational Education (IVE) (Sha Tin) at 21 Yuen Wo Road, Sha Tin, New Territories. The Panel had a tour of the Sha Tin campus and visited facilities such as the Environmental Science Laboratory (ESL), Analytical Testing Training Centre and computer laboratories. During the site visit, the Panel was told that students could make use of the inductively coupled plasma mass spectrometer, gas chromatography and liquid chromatography inside the Analytical Testing Training Centre, and air quality monitor for various parameters, water quality monitoring equipment, sound level meters and high volume sampler and equipment inside the ESL for ecological field trips. The student and graduate representatives indicated that they had learned to use the facilities in the Environmental Science Laboratory when they studied the VTC HD programmes. The Panel also noted that the Operator, for enhancement of learning resources and in response to the feedback of EE on student performance in the *Advanced Geospatial Applications* module (refer to Para. 4.4.7), has upgraded the software licences to allow students to install and use some software remotely outside the campus, which helped improve the overall performance of the students.
- 4.6.3 Apart from the specialised teaching and learning facilities mentioned above, the Panel noted that an induction session had been arranged for students where information on the BScES programme (such as the programme aims, learning outcomes, curriculum, and assessment submission practices) and academic regulations are communicated. The induction also discusses academic study skills and introduces the University's online learning, library resources, and UNN's Assessment Regulations and Policies. Students are provided with the SHAPE Student Handbook and the UNN-SHAPE Programme Handbook for the BScES programme. Students also have access to various types of general teaching and learning facilities, such as lecture theatres, classrooms, seminar and tutorial rooms, computer laboratories, language laboratories and education

activity rooms. Supporting facilities include Learning Resources Centres (LRCs), Centre for Independent Language Learning (CILL), gymnasium/sports facilities, and cafes/canteens. Students can also get pastoral support, counselling services and career assistance from the Student Development Office. From the main submission, the Panel noted that no graduates pursue master's degree programmes. Teachers who met with the Panel indicated that students prefer to work immediately after finishing the degree. While some students whom the Panel met with also echoed this view, other students preferred to pursue further studies but did not know the resources. There were also some students who were unaware of the career advice service, including workshops, available to them. The Panel **recommended** that the Operator should provide students with targeted and practical career advice, including the possibility of further studies.

- 4.6.4 Based on the above, and notwithstanding the recommendation, the Panel considered that there are generally adequate resources to support the delivery of the BScES programme. The Panel considered that the support services provided to the students are appropriate.

4.7 **Programme Approval, Review and Quality Assurance (LPA-7)**

The Operator must monitor and review the development and performance of the learning programme on an on-going basis to ensure that the programme remains current and valid and that the learning outcomes, learning and teaching activities and learner assessments are effective to meet the programme objectives.

- 4.7.1 The Operator provided the Panel with the following information to demonstrate that the BScES programme is monitored and reviewed on an on-going basis:

- (a) Minutes of Student Staff Programme Committee (SSPC) Meetings;
- (b) Minutes of the Employer Liaison Committee;
- (c) External Examiners Reports;
- (d) Programme Enhancement Plan for 2021/22;
- (e) Continuous Programme Performance Review (CPPR) reports

for Semesters 1 and 2 in 2022/23;

(f) Results of Module Evaluation Questionnaires (MEQs) of all modules delivered in 2021/22;

(g) SHAPE Student Handbook 2023-24; and

(h) VTC SHAPE BScES 2023-24 Programme Handbook

4.7.2 The Panel noted that the Collaborative Agreement between UNN and SHAPE will expire in 2025, and the Operator confirmed that they would aim to have the new contract signed in late 2024.

4.7.3 For the annual programme review, the Operator indicated that the Continuous Programme Performance Review (CPPR) had replaced the Annual Programme Monitoring (APM) to evaluate the partnership delivery separately from the home delivery from 2022/23 onwards. Information and data collected in the CPPR will be compiled into a programme report. The outcomes and actions will be fed into the Education Committee on Annual Programme Monitoring. The Operator elaborated that since CPPR reports are issued on a semester basis, actions identified in the CPPR reports could be considered responsively and efficiently by the UNN Hong Kong Programme Leader and SHAPE Programme Coordinator.

4.7.4 Regarding general quality assurance matters, including the preparation for this re-accreditation, the Panel noted incorrect information among submitted documents, written responses and supplementary information. They include (a) the wrong number of maximum student quota approved by HKCAAVQ, (b) the assessment arrangement of *Applied Ecology and Conservation Management*, and (c) an identical summary of information and data for two different modules in the same CPPR report. In light of this, the Panel **recommended** that the Operator should review and strengthen its QA procedures through appropriate measures, reporting and checking systems to ensure all documents, including accreditation documents, are up-to-date and have gone through the necessary quality assurance processes.

4.7.5 It was noted that the Panel of the last re-LPA made a recommendation: *For continuous improvement of the BScES programme, the Operator is recommended to employ KPIs in their surveys with stakeholders in order to identify and monitor areas of the programme for improvement and for charting forward.* From the

main submission, the Panel noted that the Operator had used various communication channels to collect feedback from internal and external stakeholders for continuous programme improvement. However, during the site visit, the Panel was informed that employers had not been approached for comments on the quality of this BScES programme and for suggestions to increase the employability of the students of this BScES programme. The Panel, therefore, **recommended** that the Operator should establish a direct and formal channel to collect feedback from external stakeholders, including industry, to improve the quality of the programme delivery and the employability of the BScES students.

4.7.6 In addition, during the meeting with the student and graduate representatives, the Panel was told that they found it beneficial to be able to talk to the teachers about the problems in their studies, more as personal exchanges, and their teachers would try their best to help resolve students' problems. However, when asked about formal communication channels through which they could express their concerns, the students reported very little awareness of the Student Staff Programme Committee (SSPC). Therefore, the Panel **recommended** that the Operator should ensure students are effectively informed of the channels by which they can give feedback on their experience with the BScES programme and that students' views are formally heard and responded to by the Programme Management, as described in the Programme Handbook.

4.7.7 Based on the information provided in the accreditation documents and the discussions with representatives of SHAPE and UNN, the Panel considered that notwithstanding the recommendations above, the Operator has a quality assurance system in place for on-going monitoring and review of the BScES programme.

5. IMPORTANT INFORMATION REGARDING THIS ACCREDITATION REPORT

5.1 Variation and withdrawal of this Accreditation Report

5.1.1 This Accreditation Report is issued pursuant to section 5 of the AAVQO, and contains HKCAAVQ's substantive determination regarding the accreditation, including the validity period as well as any conditions and restrictions subject to which the determination is to have effect.

- 5.1.2 HKCAAVQ may subsequently decide to vary or withdraw this Accreditation Report if it is satisfied that any of the grounds set out in section 5 (2) of the AAVQO apply. This includes where HKCAAVQ is satisfied that the College is no longer competent to achieve the relevant objectives and/or the BScES programme no longer meets the standard to achieve the relevant objectives as claimed by the College (whether by reference to the College's failure to fulfil any conditions and/or comply with any restrictions stipulated in this Accreditation Report or otherwise) or where at any time during the validity period there has/have been substantial change(s) introduced by the College after HKCAAVQ has issued the accreditation report(s) to the College and which has/have not been approved by HKCAAVQ. Please refer to the '*Guidance Notes on Substantial Change to Accreditation Status*' in seeking approval for proposed changes. These Guidance Notes can be downloaded from the HKCAAVQ website.
- 5.1.3 If HKCAAVQ decides to vary or withdraw this Accreditation Report, it will give the College notice of such variation or withdrawal pursuant to section 5(4) of the AAVQO.
- 5.1.4 The accreditation status of the College and/or programme will lapse immediately upon the expiry of the validity period or upon the issuance of a notice of withdrawal of this Accreditation Report.

5.2 Appeals

- 5.2.1 If the College is aggrieved by the determination made in this Accreditation Report, then pursuant to Part 3 of the AAVQO the College has a right of appeal to the Appeal Board. Any appeal must be lodged within 30 days of the receipt of this Accreditation Report.
- 5.2.2 If the College is aggrieved by a decision to vary or withdraw this Accreditation Report, then pursuant to Part 3 of the AAVQO the College has a right of appeal to the Appeal Board. Any appeal must be lodged within 30 days of the receipt of the Notice of Withdrawal.
- 5.2.3 The College should be aware that a notice of variation or withdrawal of this Accreditation Report is not itself an accreditation report and the right to appeal against HKCAAVQ's substantive determination regarding accreditation arises only from this Accreditation Report.

5.2.4 Please refer to Cap. 592A (<http://www.legislation.gov.hk>) for the appeal rules. Details of the appeal procedure are contained in section 13 of the AAVQO and can be accessed from the HKQF website at <http://www.hkqf.gov.hk>.

5.3 **Qualifications Register**

5.3.1 Qualifications accredited by HKCAAVQ are eligible for entry into the Qualifications Register ("QR") at <https://www.hkqr.gov.hk> for recognition under the HKQF. The College should apply separately to have their quality-assured qualifications entered into the QR.

5.3.2 Only learners who commence the study of the named accredited learning programme during the validity period and who have graduated with the named qualification listed in the QR will be considered to have acquired a qualification recognised under the HKQF.

Ref: 100/15/13
03 January 2024
JoH/AnC/AmL/rol

**School for Higher and Professional Education, Vocational Training
Council and University of Northumbria at Newcastle**

**Learning Programme Re-accreditation for
BSc (Hons) Environmental Science (BScES)**

2 - 3 November 2023

Panel Membership

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Emeritus Professor of Bioscience
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* The Panel Secretary is also a member of the Accreditation Panel.

Graduate Profile of BSc (Hons) Environmental Science

Qualification Title (in English and Chinese)	BSc (Hons) Environmental Science
Qualification Type	Bachelor's Degree
HKQF Level	5
HKQF Credits	120
Primary Area of Study and Training	Sciences
Sub-area (Primary Area of Study and Training)	Physical Sciences
Other Area of Study and Training	Not applicable
Sub-area (Other Area of Study and Training)	Not applicable
Programme Objectives	<p>A Northumbria graduate will:</p> <ol style="list-style-type: none">1. Be able to think independently, understand and justify their own opinions, and will recognise the need to challenge their thinking, and the thinking of others;2. Be able to apply their disciplinary knowledge to complex problems in their discipline and its professional or industrial practice in order to identify appropriate solutions which are sustainable and justifiable;3. Value curiosity, collaboration and analysis as keystones in the creation of new knowledge and practice;4. Be able to communicate effectively to diverse audiences utilising a range of formats and media;5. Display the attitudes and skills to engage and work constructively and sensitively in multi-cultural environments and teams and have an awareness of ethical considerations;6. Combine all of the above to support their future employability and long term career prospects.
Programme Intended Learning Outcomes	<p>On completion of the level (UK Level 6 Study), students are expected to achieve the following outcomes:</p> <p><u>Knowledge and Understanding</u></p>

	<ol style="list-style-type: none"> 1. Engage actively and critically in the interdisciplinary discourses of environmental science and its application. 2. Understand the uncertainties and boundaries of knowledge and the scientific process of generating new knowledge. 3. Demonstrate in-depth and specialist knowledge of current environmental challenges and solutions. <p><u>Intellectual/ Professional Skills and Abilities</u></p> <ol style="list-style-type: none"> 1. Choose and proficiently apply appropriate methods for data collection and analysis, to investigate a range of environmental problems. 2. Generate new knowledge through research/enquiry based learning in the environmental sciences. 3. Effectively communicate complex ideas and arguments, including the results of your own research, in a variety of formats. 4. Propose holistic and creative solutions to human impacts on the environment, and issues challenging environmental sustainability and security. <p><u>Personal Values Attributes (Global/Cultural Awareness, Ethics, Curiosity)</u></p> <ol style="list-style-type: none"> 1. Critically appraise aspects of morality, ethics and justice implicit to environmental debates and engage with these challenges in the academic discipline. 2. Think independently, understand and justify your opinion, recognising the need to challenge your own thinking and that of others. 3. Demonstrate confidence and professionalism as practising environmental scientists.
Education Pathways	<p>Graduates of the Programme in Hong Kong may pursue further study in relevant Master’s degree programmes at UNN or postgraduate programmes in areas of Environmental Science, Environmental Health at local or overseas universities. UNN Master’s degree programmes of relevance include:</p> <ul style="list-style-type: none"> • MSc in Disaster Management and Sustainable Development; and

	<ul style="list-style-type: none"> • MSc in Environmental, Monitoring Modelling and Reconstruction.
Employment Pathways	<p>Graduates of BScES may work in related fields of Safety, Health and Environmental Management in job positions such as:</p> <ul style="list-style-type: none"> • Health and Safety Officers; • Environmental Consultants; • Assistant Environmental Officers; and • Laboratory Technicians in the private sectors or government departments.
Minimum Admission Requirements	<p>Graduates from relevant VTC's Higher Diploma (HD) programmes or equivalent are qualified for admission.</p> <ol style="list-style-type: none"> 1. <u>Accreditation of Prior Learning</u> The following VTC's HD programmes are accepted for admission to the BScES top-up programme: <ul style="list-style-type: none"> • HD in Environmental Science* • HD in Environmental Protection and Management*# • HD in Environmental Engineering*^ • HD in Conservation and Tree Management*^ 2. <u>English Language Entry Requirements</u> <ol style="list-style-type: none"> i. IELTS 6.5 with a minimum score of 5.5 in any component; ii. TOFEL score: 575 (paper based) or 232 (computer based) or 89 (internet based); iii. PTE 62; or iv. Equivalent qualifications of i, ii or iii. <p>Graduates from feeder programmes are exempted from the English language requirements.</p> <p><u>Admission Requirements for Non-Feeder Programmes/ Special/ Alternative Admission</u> Applicants should have successfully completed an award-bearing programme at HKQF Level 4, such as a Higher Diploma or an Associate Degree, and they should satisfy English Language Entry Requirements stated above. (Hong Kong students with HD from Hong Kong's government-funded universities and VTC are</p>

	<p>considered to have met the English language requirements.)</p> <p><u>Admission Arrangements for Non-Feeder Programmes/ Special/ Alternative Admission</u></p> <p>For an applicant who satisfies the above admission requirements, the UNN Partnership Leader for the Hong Kong Programme (UNN HK PL) will make the academic decision regarding admission by further considering whether the programme the applicant has successfully completed covers background knowledge and skills equivalent to that covered in the Framework for Higher Education Qualifications (FHEQ) Level 4 and Level 5 of the home programme and appropriate to support learning on the BScES programme at SHAPE. Appropriate topics might include: Ecology, Waste Management, Air Pollution Studies, Water Pollution Studies, Pollution Monitoring and Control, Geographic Information System, Research Design and Implementation, occupational health and hygiene, etc.</p>
<p>Operator (in English and Chinese, if applicable)</p>	<p>School for Higher and Professional Education, Vocational Training Council and University of Northumbria at Newcastle</p>

Notes:

- * *HD programmes using HKDSE results or equivalent as general admission requirements.*
- # *HD programmes using HKCEE/ HKALE results or equivalent as general admission requirements.*
- ^ *HD feeder programmes introduced starting from 2024/25*

