

Assessment report

Bachelor Life Sciences

School of Applied Biosciences and Chemistry,
HAN University of Applied Sciences



Certificate for Quality in Internationalisation



european consortium for accreditation

Assessment report

Life Sciences Programme

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European Consortium for Accreditation in Higher Education



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Glossary

BioCentre	The Centre of Expertise for Biotechnology and Analysis at the HAN University of Applied Sciences in Nijmegen (Research centre related to SABC)
BML	Bachelor Biologie en Medisch Laboratoriumonderzoek (Dutch-language variant)
CEFR B2 level	Common European Framework of Reference for Languages Level B2
CeQuint	Certificate for Quality in Internationalisation
Life Sciences degree programme	Bachelor of Life Sciences (with Dutch BML and English variants)
HAN	HAN University of Applied Sciences (Hogeschool van Arnhem en Nijmegen)
Insite	HAN intranet (for students and staff)
LS	Bachelor of Life Sciences (International English-language variant)
Minor	Flexible choice 30 EC of the degree program; intended for specialisation of differentiation of knowledge and/or skills
NQA	Netherlands Quality Agency, a Dutch QA agency
NVAO	Accreditation Organisation of the Netherlands and Flanders
OnderwijsOnline	HAN student online learning platform
QA	Quality assurance
SABC	School of Applied Biosciences and Chemistry (In Dutch: ATBC: Academie Toegepaste Biowetenschappen en Chemie)
UAS	University of Applied Sciences
Work placement	Internship or Graduation research project within a company or research institute

2. Executive summary

The Life Sciences degree programme was assessed by Netherlands Quality Agency (NQA). NQA convened an assessment panel which studied the self-evaluation report and undertook a site visit September 20th 2022 on location in Nijmegen, Netherlands. The total audit comprised the regular NVAO-accreditation and the accreditation for the Cequint special quality feature Internationalisation.

The panel assesses the Bachelor degree programme Life Sciences of the HAN as **good** with regard to the Quality of Internationalisation. Three of the underlying standards (3, 4 and 5) are assessed with a judgement good. Two standards are assessed as satisfactory (standards 1 and 2).

Standard 1: Intended internationalisation. The degree programme has based its internationalisation goals strongly on the framework, policy and goals developed at a higher level set by SABC and HAN. The degree programme is advised to be more ambitious when setting its own goals and to specify them more clearly in the competences and in the intended learning outcomes of the Life Sciences programme.

Standard 2 International and intercultural learning. The intended international and intercultural learning outcomes correspond partly with the programme's internationalisation goals. From the actual educational practice the degree programme can derive more specific competency descriptions and learning objectives for internationalisation. That will enhance the visibility and monitoring of the international and intercultural learning and teaching. The assessment of intercultural learning outcomes needs attention.

Standard 3 Teaching and learning. The Life Sciences programme has reached a good level of performance on this standard. In fact, the curriculum, the teaching methods and the learning environment consist of relevant elements that contribute to Life Sciences students reaching the international and intercultural learning outcomes of the programme. The panel thinks highly of the content and the structure of the curriculum, and lecturers use a wide variety of teaching methods and tailor these to the specific class/student group composition, specifically in the personal development learning line. It recommends the programme to set higher goals for student mobility and to ensure that every student experiences at least one international component in an international context outside HAN.

Standard 4 Staff. The staff on the Life Sciences programme is properly qualified and sufficiently numerous to deliver the curriculum. Plenty of staff members have relevant internationalisation experience, intercultural competences and language skills. HAN and SABC pay good attention to the professionalisation of the LS staff members in general, and with regard to international and intercultural competences in particular.

Standard 5 Students. The composition of the student body is in line with the degree programme's internationalisation goals; past and current cohorts are truly international. Students in both Dutch and English-language variants enjoy an international education with attention for international and intercultural skills and experiences. International (and local) students are well supported during intake and during their study to reach the international and intercultural learning outcomes. While there is room for more outgoing student mobility, the panel suggests using the positive testimonials of LS graduates on their international experiences to enhance this component of the programme.

The panel concludes that over the years the Life Sciences programme has matured into a good quality programme with distinctly international and intercultural features. The current educational practice in teaching and learning, staff capacity and student guidance and services clearly demonstrate the international character of the LS degree programme. In view of the future development, the panel advises the programme to be more specific in setting internationalisation goals and learning outcomes and be more ambitious in implementing the envisaged goals and outcomes.

3. The assessment procedure

The assessment procedure was organised as laid down in the Frameworks for the Assessment of Quality in Internationalisation (Frameworks) published by the European Consortium for Accreditation (ECA).

A panel of experts was convened and consisted of the following members:

- Dr. Hans Derksen, panel chair, founder and owner of Biorefinery Solutions BV, Biorefinery Royalties, BRS Holding BV and Innostart BV (Netherlands). Former lector Biobased Economy Van Hall Larenstein UAS (Netherlands). Former professor knowledge intensive entrepreneurship, Radboud University Nijmegen (Netherlands).
- Ing. Mieke Demeyere, panel member, Manager Bio- and Paramedical Educational Programmes, Program Coordinator Biomedical Laboratory Technology program and Program coordinator Advanced Bachelor of Bioinformatics, Howest (University of Applied Sciences West-Vlaanderen) (Belgium)
- Dr. Edwin Kellenbach, panel member, Principal Scientist Biochemistry Schering Plough/MSD/Aspen, Member of European Pharmacopoeia and United States Pharmacopoeia expert committees (Netherlands)
- Mark Delmartino, panel member, owner MDM Consultancy, ECA-certified for internationalisation (Belgium)
- Michelle Voss, student panel member, student Bachelor Chemistry, UAS Rotterdam (Netherlands)

The composition of the panel reflects the expertise deemed necessary by the Frameworks. The individual panel members' expertise and experience can be found in [Annex 1: Composition of the assessment panel](#). All panel members signed a statement of independence and confidentiality. These signed statements are available from NQA upon simple request. The procedure was coordinated by ir. Marga Dekker-Joziase, ECA-certified, senior auditor at NQA (Netherlands) and Rogier van de Hoef, Med, senior auditor at NQA (Netherlands).

The assessment panel studied the self-evaluation report and annexed documentation provided by the programme before the site visit ([Annex 2: Documents reviewed](#)) The panel organised a preparatory meeting on Thursday September 8th 2022, on site. The site visit



took place on Tuesday September 20th 2022 at SABC in Nijmegen, Netherlands (*Annex 3: Site visit programme*).

The panel formulated its preliminary assessments per standards immediately after the site visit. These were based on the findings of the site visit which built upon the review of the self-evaluation report and annexed documentation.

The panel finalised the draft report 19 December 2022. It was then send to the [programme OR institution] to review the report for factual mistakes. Some minor issues were reported. The panel amended the report were necessary.

The panel approved the final version of the report on 30 January 2023.

4. Basic information

Qualification:	Bachelor of Science Bachelor Program Biology and Medical Laboratory Research / Life Sciences
Number of credits:	240 ECTS
Specialisations (if any):	– Biomedical Research – Biotechnology – Molecular Plant Biology
ISCED field(s) of study:	42 Life Sciences
Institution:	HAN University of Applied Sciences
Type of institution:	University of Applied Sciences
Status:	Accredited
QA / accreditation agency:	Accreditation Organisation of the Netherlands and Flanders (Nederlands-Vlaams Accreditatie Organisatie, NVAO)
Status period:	Accredited until 1-5-2023

Additional information:

The School of Applied Biosciences and Chemistry (SABC, in Dutch: Academie Toegepaste Biowetenschappen en Chemie) offers three bachelor degree programmes: Bioinformatics, Chemistry, and Life Sciences (LS). The first 2 years of the Life Sciences programme is offered as a Dutch-language and an English-language variant. Students enrolled in these variants are referred to as the Dutch cohort and International cohort respectively. From the 3rd year, these cohorts are combined and offered the same curriculum. The content of the Dutch and English curricula is identical. Didactical methods can vary in correlation to the class composition and the student's backgrounds.

Students of these programmes develop competencies to function as research associates in their respective scientific fields. Therefore, the core activity of these programmes is 'performing scientific research', albeit in different contexts. To face the challenges of today a

global curiosity and international outlook is of increasing importance for contemporary students.

First and foremost, the competencies associated with scientific research follow international, rather than national standards. Research companies and institutions are multinational, and the vast majority collaborate internationally. As a result, this global platform naturally creates internationally and culturally diverse workplaces. Therefore, the educational programme not only teaches students the international standards of performing research, but also includes internationalisation in the classrooms to maximise success of *all* graduates, regardless of having international career ambition or not. The educational programme points out that working according to international standards and practices has also a huge impact on many of the social aspects of working in an international environment. The SABC educational programmes have close connections to lectorates Biobased Innovations and Drug Discovery.

SABC has embraced internationalisation as an instrument to improve the quality of, and enrich the curricula of its educational programmes. SABC is considered a proponent of internationalisation within the HAN. The first international English LS-cohort started in 2002 and comprised of international students only. Nowadays, more students (Dutch and International) enrol in the English LS-variant than in the Dutch BML-variant of the life sciences program. In 2010 and 2016 the Life Sciences program was awarded the Certificate for Quality in Internationalisation (CeQulnt).

The number of students in the Life Sciences program has consistently increased every year. In 2021 and in 2022, the international Life Sciences cohort had 140 and 175 students enrolled in the first year, representing at least 40 different nationalities; 58% are international students and 42% are Dutch students. In comparison, 132 and 150 students enrolled in the Dutch BML cohort. The educational programme is taught by 50 teaching staff members of BML/LS. Most teachers teach in the Dutch BML variant and in the English LS variant.

Life Sciences students are offered the opportunity to participate in international education programs through SABC partnerships with other universities. There is a dual degree programme with the Bonn-Rhein-Sieg (BRS) University of Applied Sciences.

This report is the result of a combined audit, where both the NVAO-accreditation and the Cequent special quality feature on Internationalisation were performed. This report contains

the results of the Cequint audit. The results of the NVAO-audit are presented in a separate report.

5. Assessment scale

The assessment-scale relates to the conclusions of the assessment panel at the level of the standards and is based on the definitions given below. Through the underlying criteria, each of the standards describes the level of quality or attainment required for a satisfactory assessment. The starting point of the assessment scale is however not threshold quality but generic quality. Generic quality is defined as *the quality that can reasonably be expected from an international perspective*.

Unsatisfactory

The programme does not meet the current generic quality for this standard.

The programme does not attain an acceptable level across the standard's entire spectrum. One or more of the underlying criteria shows a meaningful shortcoming.

Satisfactory

The programme meets the current generic quality for this standard.

The programme shows an acceptable level of attainment across the standard's entire spectrum. If any of the underlying criteria show a shortcoming, that shortcoming is not meaningful.

Good

The programme surpasses the current generic quality for this standard.

The programme clearly goes beyond the acceptable level of attainment across the standard's entire spectrum. None of the underlying criteria have any shortcomings.

Excellent

The programme systematically and substantially surpasses the current generic quality for this standard.

The programme excels across the standard's entire spectrum. This extraordinary level of attainment is explicitly demonstrated through exemplary or good practices in all the underlying criteria. The programme can be regarded as an international example for this standard.

6. Assessment criteria

Standard 1: Intended internationalisation

Criterion 1a: Supported goals

The internationalisation goals for the programme are documented and these are shared and supported by stakeholders within and outside the programme.

The internationalisation goals of the Life Sciences programme are equal to those of SABC. The predominant objective is to deliver students who are competent in the internationalisation aspects of their profession (*SABC Internationalisation Plan 2018-2022*) and to offer all students (Biologie en Medisch Laboratoriumonderzoek and Life Sciences) an international oriented learning environment. The main goals are:

1. Internationalisation of the curriculum.
2. International education programs.
3. Mobility through internship and study.
4. Knowledge of foreign languages and cultures among students.
5. International recruitment, branding and communications.

The panel establishes that these goals are relevant and reasonable in the sense that both international and intercultural aspects are addressed and that the goals aim at the realisation of a rich 'international' skills set for all students. A new SABC Internationalisation Plan is under construction. It will be presented after the publication of a new SABC strategic Institutional Plan. The advice and results from this current CeQuint accreditation will be integrated in the new SABC plan.

The internationalisation goals are derived from and in line with the internationalisation policy of HAN (*HAN Strategic Policies 2016-2020 and 2022-2028*). Herein emphasis is set on the curriculum, research, mobility, the development of international programmes/joint degrees and on strategic partner choices:

“developing students into global citizens who approach the world with an open mind and a borderless and intercultural perspective”. “We explicitly include internationalisation in all our objectives and activities. We firmly establish foreign languages and intercultural skills in the curriculum, develop mutual education and

research programs with foreign partners, create diversity in our teaching and offer students the option to participate in socially relevant international projects”.

Therefor “all curricula cover the broader international context and intercultural skills, with an awareness for diversity and inclusiveness, guided by the needs of the professional field”.

SABC has the freedom to position the HAN goals in its educational programmes. Therefor the stakeholders from the professional field and partner institutions, the alumni and the students and staff haven been consulted. In order to check if the curriculum is in line with the requirements of the professional field, internationalisation is becoming a regular topic in discussions with the professional advisory board. Professional field representatives and international contacts are actively involved in internationalisation by giving guest lectures and by providing recommendations and feedback on the curriculum. Teaching staff, internship coordinator, professional field, students, alumni, committees and support staff are supportive for the internationalisation goals. International and intercultural aspects are considered important for the current and future work of life science professionals and are supportive to the graduate’s career opportunities.

SABC regularly consults its stakeholders. Students, staff members and alumni are consulted by means of surveys and discussions. External stakeholders are consulted in the professional field committee where five preferred partner companies are represented. Furthermore, feedback is gained from the company mentors that guide students during the internship and (graduation) projects. External professional stakeholders appreciate the chosen international and intercultural goals and specifically emphasise a correct use of English as the most important international qualification to be acquired. The feedback from the international external examiners, who are present at every graduation session, is helpful as they check whether final year students are on the right track and level in internationalisation.

The panel derived from the conversations with various stakeholders and from evaluation results that the programme’s internationalisation goals are widely supported.

Considerations

SABC has a tradition in terms of internationalisation and has been a frontrunner on internationalisation within the HAN, which in turn is increasingly focusing on internationalisation. The panel establishes that the internationalisation policy and goals of

the Life Sciences programme are derived from – and concur with - the internationalisation goals at central level. The programme's internationalisation goals are documented, contain both international and intercultural aspects, and are widely supported by internal and external stakeholders. In view of the future development of the programme, the panel encourages the Life Sciences programme team to further specify the internationalisation goals, possibly at competency level. Such adaptations would do even more justice to the specific features of the Life Sciences programme.

Conclusion and recommendations

The panel concludes that the internationalisation goals of the Life Sciences programme are based on the goals set by SABC and HAN. These goals are documented, shared and supported by internal and external stakeholders. The panel encourages the programme to further specify the internationalisation goals and sees room for such adaptation at the level of the competencies Life Science students should acquire throughout their study..

Criterion 1b: Verifiable objectives

Verifiable objectives have been formulated that allow monitoring the achievement of the programme's internationalisation goals.

The internationalisation objectives are described in several documents at different organisation levels. The internationalisation objectives are described at SABC level in an Activity Plan (*SABC Internationalisation Plan 2018-2022*). This plan mentions 22 objectives with a wide range from support activities, curriculum activities, the training activities for students, the recruitment of international staff to research activities in an international context. The objectives are concrete and verifiable, such as:

- the organisation of support for international students via the international office;
- every programme offers at least one minor in English;
- all teachers who teach in the English language master the language at C1 level and have taken a course in intercultural awareness;
- SABC and bachelor programmes seek 1 – 2 foreign strategic partners for education and research;
- Foreign and Dutch students know how to find each other and are offered various joint guidance and educational programs (joint projects, excursions and mixed classes);
- SABC aims at a workforce of at least 10% of lecturers and researchers from abroad.

The panel establishes that these objectives correspond with the internationalisation goals. The objectives often have a qualitative or quantitative element that make them verifiable. The Activity Plan states when the objectives are or should be realised. More than half of the objectives are realised before 2022. Some are still work in progress.

At degree programme level the internationalisation objectives are intertwined in the competences from the national professional competency profile, which makes them less visible. The objectives become more distinctive in the learning outcomes at course level. Qualitative or quantitative elements are mentioned in the test matrices.

In an internal internationalisation review (December 2020) SABC notes that the internationalisation goals and objectives are described in several documents at university, school and education programme level. In documentation more emphasis seems to be given to the use and mastery of the English language, in accordance with the feedback from the professional field. In the conversations the panel has held with all stakeholders it became more clear that aspects of intercultural awareness are intertwined in the curriculum, learning outcomes and student guidance activities.

The panel notices that SABC received concrete advise from the internal review to distinguish more clearly the three dimensions that are important to the LS-programme:

- * the nature of LS as an international field and its basis in science;
- * the use of the English language as a means of instruction and communication (oral and written);
- * the awareness of students and lecturers of cultural differences in the workplace, conventions and regulations, and the ability to analyse these and deal with them constructively.

Considerations

Having established that there are several descriptions of the objectives for internationalisation, the panel considers that there is room for aligning the different documents on internationalisation. This will clarify the central concepts of internationalisation and interculturalisation to all stakeholders involved and provide a clearer framework for monitoring and verification at the degree programme level. According to the panel, the fact that SABC is working on a new internationalisation plan for the upcoming years, creates a natural momentum to create more unity in the internationalisation concept.

The panel considers that SABC and the degree programme could formulate a clearer connection and alignment of the internationalisation goals from the level of the more general SABC-objectives to the set of competences at degree programme level and through to the learning outcomes at course level. In this respect, the Life Sciences degree programme might consider to add a specific competency for internationalisation, with specific objectives on international and intercultural activities.

Conclusion and recommendations

The panel concludes that the current internationalisation goals contain verifiable objectives. However, as mentioned before, there is room for more programme-specific goals and objectives. These internationalisation goals and objectives should be embedded in the overall framework and activity plan but at the same time do justice to the specific features of the Life Sciences programme.

The panel recommends to align the described goals and objectives in the documents at the different organisational levels. In this way the connection between the general (SABC) objectives and the specific (Life Sciences programme) objectives can be made more visible. This, in turn, will improve the monitoring of goals and objectives at all organisational levels. Moreover, the degree programme may want to add a specific competency for internationalisation.

Criterion 1c: Impact on education

The internationalisation goals explicitly include measures that contribute to the overall quality of teaching and learning.

In the *Self Evaluation Report* the LS degree programme has specified in detail per goal what the contribution is to the quality of teaching and learning. The panel understands from the interviews with stakeholders that there is a shared vision on the international and intercultural dimension of teaching and learning in the Life Sciences programme.

In general, the degree programme aims at educating students as professionals according to the internationally accepted principals of scientific research in culturally diverse environments (both the Dutch and the English programme). The five goals are more specified In the *Degree Statute and Education and Examination regulations of the degree course Life Sciences*. The international and intercultural indicators are described at three levels in relation to the four professional profile competencies 'Design of experimental

setup', 'Reporting and presenting', 'Teamwork' and 'Professional development'. This is fully present in all four study years. The panel recognises the three earlier described dimensions in the overview in the Degree Statute.

The context of SABC and the experience of the international Life Sciences degree programme sustain the internationalisation goals. SABC is investing in two international education programmes: a dual degree with Bonn-Rhein-Sieg University of Applied Sciences and a joint bachelor program with the University of Dundee. This offers opportunities for BML and LS students to go abroad for part of their studies; the exchange of external examiners provides SABC with an instrument to compare the level of degree programmes and the level that graduates obtain. Furthermore, new elective courses have been developed recently and are offered in English.

The Life Sciences programme is offered in Dutch and in English. Dutch students can opt for the English trajectory together with foreign students. After two study years the entire student body (Dutch and international cohorts) is intentionally mixed throughout all the specialisations and most of the elective courses. The panel gathers from the written materials and the discussions on site that the English Life Sciences variant is an enrichment to the Dutch variant Biologie en Medisch Laboratoriumonderzoek (BML). The internationalisation and interculturalisation goals contribute positively to the quality of teaching and learning in both the English and Dutch variant of the degree programme. In the last six years both variants have intertwined more and more, resulting in combined representation in the class representation, growing international staff and better information provision in both languages. The panel acknowledges that the goals and activities are embedded into the functions of the existing participation and organisation bodies (e.g. Academic Council, Curriculum Committee, Program Committee, Exam Committee and Quality Control).

Considerations

The panel considers that the internationalisation goals and underlying activities and learning outcomes relate to teaching and learning. Moreover, the assurance of teaching and learning quality is embedded in the policy, curriculum outlines and in the supervision by the organisational bodies. Hence the internationalisation activities do contribute to the overall quality of teaching and learning

Although a growing number of students participate in the international classroom and courses, the panel considers that not all students are currently exposed to international and/or intercultural activities, let alone that they would benefit from explicitly international and intercultural experiences.

Conclusion and recommendations

The panel concludes that the internationalisation goals include measures that contribute to the overall quality of teaching and learning. These measures are fine and while they potentially address both BMS and LS variants, they do not yet reach all BMS/LS students. The panel recommends that clearer definitions are set for international and intercultural skills and experiences and that the degree programme extends its international/intercultural offer to all students.

Overall conclusion regarding Standard 1. Intended internationalisation

The panel concludes that the degree programme can rely on a framework of internationalisation goals and indicators in the domain of teaching and learning. This framework however, is described at the level of the school (SABC) and the institution (HAN). The panel recommends to adjust the internationalisation goals and indicators to the specificity of the Life Sciences programme, for instance by incorporating them more explicitly at competency level. The panel observes furthermore that the existing international and intercultural activities contribute to the quality of teaching and learning but do not yet reach all Life Sciences students.

The panel deems the underlying criteria of this standard to be met at basic level. The panel therefore assesses *Standard 1. Intended internationalisation* as **satisfactory**.

Standard 2: International and intercultural learning

Criterion 2a: Intended learning outcomes

The intended international and intercultural learning outcomes defined by the programme are a clear reflection of its internationalisation goals.

Internationalisation is not specifically addressed in the national competency profile or in the Dublin level indicators. Therefore, new learning outcomes were formulated to address international and intercultural aspects of the profession. Students have to show that they

can function professionally in international settings, whether they go abroad during their studies or stay in an international setting in the Netherlands. The international and intercultural learning outcomes are described in the *Degree Statute*. The learning outcomes are integrated into four (of in total eleven) competencies of the existing professional competency profile:

- Design of experimental set up
- Reporting and presenting
- Teamwork
- Professional Development

For each competency the learning outcomes are defined at three levels. These together form a leaning line for internationalisation. With the first two competencies more emphasis is given to English language proficiency in the context of scientific research (CEFR level B2 for the international cohort). In the third and fourth competency more focus is set on intercultural skills, cultural diversity and how to function effectively in teams in a cross-cultural situations in a professional community. The internationalisation learning outcomes are published on the HAN student information website 'Insite' and on the online learning platform 'OnderwijsOnline'. The learning outcomes and accompanying study activities are fully present throughout the entire four study years of the curriculum.

Students confirm in internal SABC audits that they benefit from the internationalisation goals in the sense that they experience exposure to active usage of English and gain confidence in working in internationally diverse teams. Correct usage of English is of great importance to the Professional Stakeholder Committee. The intercultural skills and awareness of intercultural differences within professional communities are key features in the Professional Development learning line in the curriculum. This is confirmed in the course descriptions and the learning outcomes and acknowledged in the sessions the panel held with students and teachers.

Considerations

The panel establishes that the internationalisation learning outcomes of the Life Sciences programme fit with the overall internationalisation goals regarding curriculum, language and intercultural skills. The other goals - international programmes, mobility and recruitment - are addressed but not to the same extent: the panel acknowledges that there is growing attention for international cooperation at school level and for international study/internship periods at programme level.

Moreover, the panel considers that the intended learning outcomes can be described more ambitiously in so far as internationalisation is concerned: more sharply defined learning outcomes and indicators will offer a clearer reflection of the internationalisation goals. According to the panel, the educational activities and content of the curriculum already contain essential elements for this. In fact, the panel thinks that the attention for internationalisation is more present in the educational practice than what is shown in the framework of learning goals. Hence, the Life Sciences programme can describe more distinctively what is being done in the teaching and learning environment to reach internationalisation and link that with the learning objectives and goals (see also standard 3).

Conclusion and recommendations

The panel concludes that the intended international and intercultural learning outcomes correspond to a large extent with the programme's internationalisation goals. The learning outcomes for the four chosen 'internationalisation' competencies at course level are clear and benefit the aims and goals at SABC and programme level. Based on the written materials and the discussions, the panel recommends to compare the educational practice with all eleven competencies to investigate if there are more possible indicators for internationalisation. This might lead to more specific competencies and learning objectives for internationalisation, which in turn will make the internationalisation goals and learning outcomes more visible and measurable in all study years.

Criterion 2b: Student assessment

The methods used for the assessment of students are suitable for measuring the achievement of the intended international and intercultural learning outcomes.

The programme presents an overview of the assessment methods used to assess the international and intercultural learning outcomes (annex 15 with the self-evaluation report). The international and intercultural learning outcomes are explicitly described in the assessment forms of the internship and the graduation project (Annex 16 and 17). The panel observed a broad variety of assessment methods, e.g. written tasks, oral presentations, reflection reports, language tests, attendance and participation in tutor assignments and meetings, literature reports et cetera.

International learning outcomes are assessed through performance-oriented assessment

of various professional products. The international learning outcomes focus on correct use of the English language and integration of literature. All the scientific literature used is in English. From the third year onwards, the Dutch and International cohorts are combined and work together in international groups. Therefore, all students will have to communicate in English and write professional products in English. Most graduation reports (85 %) are written in English. This indicates that also students from the Dutch language variant choose to report in English, often because they perform their graduation in an international work environment. For the graduation reports written in Dutch ($\pm 15\%$) it is required to include an English summary. To support the development of English speaking skills formative assessments are held, especially for the Dutch cohort students to encourage progress in speaking English.

The programme has specified the performance descriptors for language proficiency. The Dutch cohort students are tested if they have acquired a CEFR B2 level of writing and speaking in the second year. SABC has designed an online assessment platform (QMP) with questions in a Life Sciences context using the Cambridge English Exam B2 level as reference. A vast majority ($> 95\%$) are assessed with at least B2 level by the end of the second year. In the following years this is linked to more complex use of the English language in a Life Sciences professional context. In the higher study years the Dutch students more often choose to do examinations in English.

Intercultural learning outcomes are assessed in the mandatory activities in the Professional Development skills learning line. These activities involve intercultural awareness and the performance of different internationalisation activities in tutor and project team meetings. For example, students discuss the intercultural aspects in the professional field through identifying the international character of the profession in different job offer descriptions. The programme mentions that most intercultural skills are assessed formatively. An inclusivity workgroup is seeking for more specific expertise within the HAN (International School of Business) to assess the intercultural skills in internship and graduation projects as of the study year 2022-2023. Student and graduate evaluations show that students feel they become more interculturally aware.

Considerations

The panel sees a correspondence between the internationalisation learning goals and the learning outcomes in the assessment documentation. The panel establishes that methods used for the assessment of students are in place in so far as the international learning

outcomes are concerned. In this regard the panel is positive regarding the fact that Dutch students in the higher study year choose to do examinations in English. This proves that students from the Dutch cohort do benefit from the internationalisation activities.

In so far as the assessment of intercultural competences are concerned, the panel agrees with the programme that there is room for development and improvement. As it is clear that students develop these skills and become more confident during their studies, the panel encourages the programme to enhance the assessment of intercultural learning outcomes in more formal and formative ways.

Conclusion and recommendations

The panel concludes that the assessment methods are partially suitable for measuring the achievement of the international and intercultural learning outcomes. While good progress has been made in assessing international learning outcomes, there is still some work to do regarding the assessment of the intercultural aspects.

Criterion 2c: Graduate achievement

The achievement of the intended international and intercultural learning outcomes by the programme's graduates can be demonstrated.

The graduate level is assessed by a final graduation examination with four components: a reflective portfolio, a practical performance, a research report and an oral examination interview. The international and intercultural learning outcomes are integrated in these assessments. The end level is the same for the Dutch-language and the English-language cohorts. The graduation assessment form contains criteria on awareness of intercultural differences in the professional field, awareness of international codes of scientific conduct, use of international scientific literature and English communication skills (verbal and writing). The majority of graduation reports is written in English and a growing number of students hold their end presentation in English.

The panel has reviewed a representative selection of fifteen graduate reports: it is clear that several students do their graduation project in companies abroad or in the Netherlands in international companies/institutes. These reports and the discussions with students, graduates, supervisors and examiners show that Life Sciences students and graduates have developed a good set of internationalisation and intercultural skills. They are aware of

the extra value and know how to put it to good use in the practice of the LS professional context. Five international external examiners (2 from RBS and three from Dundee) participate in the final graduation sessions and speak highly of the quality of the students and graduate reports and of their achievement regarding international and intercultural learning outcomes.

A review undertaken among external stakeholders demonstrates that students also have a good reputation with international work placement supervisors. The external stakeholders confirm that the HAN LS students are more internationally skilled and are quicker in adapting and performing in an international working environment than students from other universities of applied sciences. They also mention that a good command of the English language is an important positive feature of the HAN graduates.

Finally, the panel was informed that many LS graduates are successful in local and international master programs; some graduates even pursue international academic (PhD) positions.

Consideration

The panel establishes from the graduate reports and the interviews that students from both programme variants LS and BML demonstrably achieve the intended international and intercultural learning outcomes upon graduation. This finding is confirmed by alumni, external examiners and representatives from the professional work field.

Conclusion and recommendations

The panel concludes that internationalisation elements are in place throughout the four-year study programme, that LS students of both programme variants develop the desired international and intercultural skills and that they demonstrate their achievement in the final graduation examination.

Overall conclusion regarding Standard 2. International and intercultural learning

The panel concludes that the Life Sciences programme can rely on international and intercultural learning outcomes which cover a considerable part of the overall internationalisation goals and are implemented and assessed properly in the curriculum. The panel has seen good quality examples of how international and intercultural learning outcomes are implemented and tested, not in the least through the graduate reports.

These positive findings and considerations became evident to the panel rather through the students' performance and the graduation end products than by screening the learning outcomes and the assessment indicators. In this regard, the panel advises the Life Sciences programme to enhance its ambitions (e.g. regarding student mobility) and to define more clearly how it assesses the intercultural skills throughout the curriculum.

The panel deems the underlying criteria of this standard to be sufficiently met. The panel therefore assesses *Standard 2. International and intercultural learning* as **satisfactory**.

Standard 3: Teaching and Learning

Criterion 3a: Curriculum

The content and structure of the curriculum provide the necessary means for achieving the intended international and intercultural learning outcomes.

A general overview of the curriculum is given in the *Degree Statute*. The *Unit of Study Catalogue: Life Sciences* gives a detailed description of the education course units. This shows coverage of the intended learning outcomes. The curriculum offers the students (both Dutch and international) ample opportunities to attain the international and intercultural skills. In the first years of the curriculum there is a rich exposure to usage of English for both the international and Dutch cohorts. All textbooks and scientific publications used are international publications in English. Students actively use English in student-led meetings and practical classes, specifically in the third and fourth year where Dutch and international students mix in assignment groups in the specialisation phase. All specialisations (Biotechnology, Molecular Plant Biology, Biomedical Research and as of Spring 2023 Molecular Pathogenesis) are offered completely in English for all students. The new specialisation is developed in collaboration with research groups from the University of Oxford (UK) and Vanderbilt University (USA). The joined programmes with Bonn and Dundee also offer opportunities for international student mobility.

During their study the students can choose from fourteen minors within SABC. Eleven minors are offered in English of which three are newly developed since 2016. Furthermore students are encouraged to follow minors at one of the fourteen partner universities of SABC or at another university in the Netherlands. Students have the ability to spend up to three semesters (minor, internship and graduation phase) abroad in the last two study years.

The programme has decided not to follow up on the recommendation from the 2016 CeQuint audit: 'to ensure that all students encounter international experience by doing part of their study abroad'. The programme chose to focus more on internationalisation at home, because study abroad is not always possible or financially accessible for all students. The programme has invested in good partnerships and in assurance of the necessary international context and experience throughout the curriculum and in the work placement locations (Dutch companies and universities). Many student supervisors from the work field have an international background or ample experience with internationalisation. During internships a compulsory peer coaching day is organized with focus on internationalisation aspects at the workplace.

In the Personal Development (PD) learning line attention is given to the development of the necessary soft skills, including intercultural development. First year students visit senior students at their internship location ('mini-internship') and discuss the international / intercultural aspects of the workplace. Specific PD-workshops are organised on topics like communication styles, conflict management, cultural differences, teamwork and (research)ethics. The PD-activities are highly valued by the students. A positive point is the fact that the Professional Learning Environment classes are given by both a Dutch and an international lecturer, using real-life and scientifically relevant examples and interactions. From the internal internationalisation review and the interview with students it became clear that students recognise and acknowledge the attention that is given to soft skills and teamwork. They find those skills very useful for solving problems in their future job and they appreciate the opportunities to practice these different kind of situations during their study. Students mention teamwork as a necessary basis for good and efficient research. The panel was somewhat surprised by this positive feedback because the documentation provided was less explicit on how much attention was given to the skills training: the panel therefore establishes with satisfaction that more is done and achieved than what was shown in the programme materials.

In the third year students from the Dutch and English language programme variants work together on various assignments. Outside the study and assignments, the two cohorts hardly integrate. Apparently, there is a difference in working attitude. Dutch students – notably those on the BML variant - are perceived by the lecturers and by international students as being less ambitious and less mature in their working attitude, which can make collaboration unsatisfactory for the international students.

Considerations

The panel considers that LS students from both programme variants have plenty of opportunities to practice international and intercultural skills in the courses, the specific Personal Development line and in the last semesters of the study programme. The panel thinks highly of these activities as they seem to have a positive impact on the participating students.

The panel acknowledges with satisfaction that PD-activities play an important role in strengthening the abilities and awareness of students for dealing with international and intercultural challenges. Hence, students and graduates feel well prepared for working in an international context.

Among all positive findings and considerations and in view of the further development of the programme in the future, the panel sees room for improvement in two ways: one, to be more explicit in challenging all students to undertake some kind of external activity in the framework of their LS curriculum – while lengthy periods abroad may not be feasible for all students, shorter (and financially more viable) alternatives can be envisaged: if not abroad, then at least outside of HAN. Second, to pay even more attention to the cultural differences between Dutch and international students and ensure that both groups continue to mingle, irrespective of their (perceived) differences in maturity and ambition.

Conclusion and recommendations

The panel concludes that the content and the structure of the curriculum provide plenty of opportunities for all Life Science students to achieve the intended international and intercultural learning outcomes. While very many students indeed make use of these opportunities, the panel recommends to set higher goals for student mobility and to let every student experience at least one international / intercultural component in an international context outside the HAN University during the last four semesters of the curriculum.

Criterion 3b: Teaching methods

The teaching methods are suitable for achieving the intended international and intercultural learning outcomes.

The teaching methods are designed around the basic learning goal 'performing and developing scientific investigations'. The core activities and teaching methods are described in the *Unit of Study Catalogue Life Sciences*, which is part of the *Education and Examination Regulations*. The panel notices that this study unit catalogue is more directed at the description of the exams, and less explicit in presenting the teaching methods used.

The international and intercultural skills are integrated in the existing curriculum. Key aspect is learning through professional tasks in case-based assignments. Students obtain knowledge and skills through realistic of real-life case-studies, which are often submitted by professional companies and therefore realistic for the required professional research tasks. In every course students have to deliver professional products (in a team setting). The tasks must be mastered in their full complexity and can call on several different competencies. The complexity and the self-management of the students increases during the study. Key teaching methods are the student-led meetings (tutor) and expert-supervised teamwork. From year three onwards the teams combine students from both BML and LS variants. For speaking and writing skills students can opt for extra support in tailor-made education. The alignment of the case-based education with the international character of the professional work field is a strong feature according to the panel.

Furthermore, the panel gathers from the interviews that the lecturers use different teaching techniques in different student groups and adjust their teaching methods to the composition of the student groups. The theoretical basis is similar, but the methods, the examples used and the way of interaction are connected to what each student group needs. In international classes the examples are connected to the students and make use of the student's own experience and previous gained knowledge. In other words: the teaching methods are tailored to composition of the audience. This is highly appreciated by the students.

During the internship and graduation project the students perform their tasks within a company or research institute, i.e. in an authentic professional learning environment. Tutoring is provided in peer coaching sessions during the internships period. In these sessions attention is given to international and intercultural aspects.

Considerations

The panel considers that the LS programme is using a great variety of teaching methods to enhance the international and intercultural competences of all students. The mingling of BML and LS students in groups in the third and fourth year of the study ensures that all students have ample opportunities to acquire the intended international and intercultural competencies. Moreover, the tutor sessions and the elements of the Personal Development learning line are beneficial for students to obtain the internationalisation skills. The panel has heard many good examples during the interviews and is of the opinion that in the PD-line directed attention is given to cultural differences and their effect on educational and professional performance.

While it is convinced that a broad array of teaching methods is in place, the panel considers that the LS programme should describe more clearly (and proudly) what is being done in terms of international and intercultural teaching methods within the curriculum, how well that is performed by the lecturers and how positive this is perceived by the students.

Conclusion and recommendations

The panel concludes that the teaching methods are suitable for achieving the intended international and intercultural learning outcomes. The lecturers use a wide variety of teaching methods and tailor these to the specific class/student group composition. Life Sciences students from both programme variants appreciate the methods used, as well as the efforts put in by the lecturers. As a point for attention in the future, the degree programme may want to describe the teaching methods used in more detail.

Criterion 3c: Learning environment

The learning environment is suitable for achieving the intended international and intercultural learning outcomes.

The panel gathers from the written materials and the discussions on site that SABC and the LS degree programme provide an international learning environment. Students in the LS cohort study in an international classroom from the start of their study. The student body has representation from 40 countries. Students from the BML cohort mix with LS students in the third and fourth year for at least one semester, but often more. BML students are prepared for this by activities that create awareness of the international nature of research. At individual level, students are prepared for intercultural and international cooperation; in this

way their awareness is raised that learning and working styles can differ with different cultural backgrounds.

Students acknowledge in surveys – and confirmed during the interview with the panel - that they profit from the rich and international learning environment at SABC and the LS/BML programme. They learn to approach cases and issues from different perspectives. They appreciate the opportunities to go abroad for part of the study. The students state that the international interaction resembles the international character in the professional work field. Thus they feel well prepared to enter the international work field. The fact that the majority of the graduation reports is written in English is proof that a majority of the Dutch students master the English language well and feel confident to work in international contexts and give presentations in English.

Students acknowledge in internship and graduation surveys that they are encouraged to do a minor and/or work placements abroad. The LS degree programme has many contacts with partner universities the UK (Dundee), Germany (BRS), Australia, Belgium, Denmark and Spain. This offers students ample possibilities to study abroad. Representatives from these partners are very positive regarding the international and cultural skills of the HAN students, together with their self-management skills and the use of the English language. Students that want to go abroad are offered support by the Life Sciences Internship Office, in cooperation with the SABC Exchange Coordinator and the HAN International Office

For international students that do not have the capacity or finances to go abroad, the BioCentre at SABC offers research facility and guidance by international staff. The BioCentre also offers positions to exchange students from other countries who follow part of their studies at SABC. Thus the BioCentre facilitates internationalisation, without explicitly addressing this in its mission statement.

International staff exchange also brings enrichment to the education. The set-up and performance of the dual BRS programme resulted in close collaboration between staff, regular reciprocal visits to foster research, study exchange, participation at graduation examinations and guest lecturing.

In recent years the programme and SABC have clearly invested in information provision in English and representation of international students in the different committees. The notes of the program committee and class representative meetings are all in English or bilingual.

There is international student representation at class, programme and SABC level. In follow up on a recommendation from the internal review (2020) there have been investments in creating earlier connections between the Dutch and International cohorts. This is done by activities with the student club.

Consideration

The panel establishes that over the years SABC and the LS degree programme have been paying good attention to creating a suitable international learning environment, both in study choice options and in information provision. The number of international students is adequate to build a rich international learning environment. The panel thinks highly of the fact that opportunities for international and intercultural exposure is not limited to the Life Sciences variant of the programme, on the contrary: a majority of LS and BML students profit from the international focus in the learning environment and consequently develop the desired internationalisation skills.

Conclusion and recommendations

The panel concludes that the learning environment is highly suitable for achieving the intended international and intercultural learning outcomes of all students in the LS degree programme.

Overall conclusion regarding Standard 3: Teaching and Learning

The panel concludes that the Life Sciences degree programme has reached a good level in all aspects of this standard. In fact, the content and the structure of the curriculum, the teaching methods and also the learning environment are all beneficial for achieving the intended international and intercultural learning outcomes. The alignment of the case-based education with the international character of the professional work field is a strong feature and possibly an international example of practice. The panel therefore assesses *Standard 3: Teaching and Learning* as **good**.

Standard 4: Staff

Criterion 4a: Composition

The composition of the staff (in quality and quantity) facilitates the achievement of the intended international and intercultural learning outcomes.

For more than 25 years, the SABC has embraced internationalisation as an instrument to improve the quality of its programmes and enrich the curricula. SABC is seen as a proponent of internationalisation within HAN. SABC states that the strength to uphold this lies within the staff. SABC aims to reflect the student body diversity in the staff and is working on increasing the number of international staff. This is in line with the recommendation from the 2016 previous audit.

The educational programme is offered by approximately 75 staff members (60 units), 50 lecturers and 15 supporting staff (educational or practical instructors). 16% of the lecturers have an international background (born, raised or educated abroad). That surpasses the SABC target, which is set at 10%. There are two native English speakers and more than half of all staff master English at CEFR level C1 or C2. Almost all staff members have international study or work experience. The recruitment policy targets at master qualification level and international experience. Since the previous CeQuint visit SABC has been successful in recruiting more international staff members.

Students appreciate the mixed composition of the staff. Lecturers offer different perspectives and are very passionate about internationalisation. Students recognise that lecturer's proficiency in English has improved overall because of Cambridge certifications.

Consideration

The panel establishes that the staff team is sufficiently numerous and invariably has adequate professional and didactical skills to deliver the Life Sciences programme. Moreover, the panel considers that the current staff team has the appropriate background to support LS and BML students in achieving the envisaged international and intercultural learning outcomes. Similarly, the staff's proficiency in English is largely sufficient. According to the panel, the recruitment policy of SABC is not only adequate on paper, but also effective in reality.

Conclusion and recommendations

The panel concludes that the staff in the Life Sciences programme is adequate and the composition of the team facilitates the achievement of the intended international and intercultural learning outcomes.

Criterion 4b: Experience

Staff members have sufficient internationalisation experience, intercultural competences and language skills.

The panel notes from a matrix document with staff properties that a majority of staff has clear international and intercultural experiences through work and/or study. A vast majority is competent in working according to the international scientific set standards for the life sciences domain, often in an international/intercultural working environment. All lecturers teaching theory courses are obliged to hold CEFR C1 level in English. In the staff body there are two fully-trained counsellors who provide curricular and extra-curricular guidance for the international students. Three lecturers, specialised in social communication, specifically focus on the attainment of international learning outcomes.

The broad experience of the staff is appreciated by students who state that they feel comfortable to speak to lecturers and counsellors for extra support of explanations. During recruitment attention is given to a good representation of the staff in terms of nationality, experience and cultural diversity.

The international network and connections of the lecturers is supportive for students who want to go abroad. Internships are often found through the professional contacts of staff. Staff members also keep in contact with work placement supervisors from all over the world.

The degree programme has close relations with fourteen partners universities resulting in activities like staff exchange, regular reciprocal visits to foster research, study exchange and guest lecturing and contributions to each other graduation exams as external examiners.

The panel finds it positive that within SABC there is awareness that internationalisation of staff also brings challenges with inclusion and representation. There is attention to facilitate further inclusion for all staff.

Considerations

The panel considers that the staff team at the Life Sciences programme has adequate international experience, intercultural competences and good quality English language skills. Moreover, the international contacts of the school and the individual staff members contribute to the mirroring of desired staff experience, leads to teacher mobility and offers a broader view to the students. According to the panel, the staff is well under way to mirror the geographical and cultural diversity of the LS student body.

Conclusion and recommendations

The panel concludes that taken altogether, staff members on the Life Sciences programme have the required internationalisation experience, intercultural competences and language skills.

Criterion 4c: Services

The services provided to the staff (e.g. training, facilities, staff exchanges) are consistent with the staff composition and facilitate international experiences, intercultural competences and language skills.

The panel establishes from the documentation and the interviews that suitable staff services are provided to the staff to expand international experiences, intercultural competences and language skills. SABC offers appropriate funding and training possibilities to staff members both within and outside the institution. This is partly accomplished by directed training, voluntary (on the job, peer-) training and encouragement to participate in conferences, exchanges and mobility. A clear overview of all staff experience is presented in a dedicated annex to the self-evaluation report. During the yearly staff appraisal interviews the management lists the necessity and or wishes to follow extra professionalisation. This can vary from specific (language) courses, performing research at the BioCentre to attending conferences. Language proficiency at C1 level is obligatory for all lecturers, as well as the basic educational and examination qualifications. Dutch languages lessons are offered to international staff members at the HAN Talencentrum. This is stimulated by the management.

Staff can participate in professional development activities organised by SABC or the HAN Academy during workshops, lunch-meetings or study days. In recent years special focus was given to assessing and appraising of tests and theses and on intercultural awareness.

An internationalisation project manager position and workgroup were created to advocate and coordinate all curricular and extracurricular internationalisation activities at SABC. SABC has allocated time and budget for staff positions to advance the internationalisation goals and encourage international exchange.

For more practical issues like housing, assurances, visa, working permits et cetera the staff members can seek support with the human resources department. Staff meetings and meetings from organisational bodies and news letters are in English, which in turn enhances the inclusion of all staff members and increases their language skills.

Consideration

The services provided to staff are of good quality and consistent with the staff composition and the school's education policy. The panel considers that there are ample opportunities for staff to participate in professionalisation activities and in the formation of the international contacts network. The panel thinks highly of the efforts of the school and the programme to continue expanding the network of contacts (university partnerships, external examiners) during the COVID-19 pandemic.

Conclusion and recommendations

The panel concludes that the services provided to the staff are in line with the current staff composition. These services adequately facilitate the acquisition of international experiences, intercultural competences and language skills.

Overall conclusion regarding Standard 4: Staff

The panel concludes that the staff on the Life Sciences programme is properly qualified and sufficiently numerous to deliver the curriculum. The composition of the team is such that altogether they largely fulfil the requirements in terms of international background, intercultural experience and English-language proficiency. Hence, the team is well underway to mirror the composition of the increasingly diverse student body. The composition and experience of the staff and the support/services they receive from SABC and HAN contribute to the quality of their educational delivery in terms of international and intercultural learning outcomes. The panel deems all the underlying criteria of this standard to be widely met. The panel therefore assesses *Standard 4: Staff* as **good**.

Standard 5: Students

Criterion 5a: Composition

The composition of the student group (national and cultural backgrounds) is in line with the programme's internationalisation goals.

SABC and the degree programme have a culturally diverse student body. From the interview the panel establishes that SABC holds a clear view on the minimum number of international students that is necessary to secure the international character of the educational programme.

The total student body (BML and LS cohorts combined) comprises 25% international students from approximately 40 different countries; in the international LS variant there is fair balance between Dutch and non-Dutch students. The enrolment of international students has continued to increase from 169 students in 2016 to 344 students in 2021. The enrolment of Dutch students has also risen from 471 to 537 students. The countries of origin are divers, with no single country representing more than 8 percent of the total student body. This offers good circumstances for students to develop the international/intercultural skills; this certainly applies to the students in the third and fourth year, when the Dutch and international cohorts are mixed.

In recent years the programme has had experience with exchange students (notably from BRS in Bonn) who participate via online courses and international collaborative activities. Every year about 10 students from international partner universities follow some courses of the LS-curriculum.

Consideration

The panel welcomes the success of the degree programme in terms of student intake, as well as the specific multinational composition of the LS cohort. The composition of the student body in both BML and LS variants is in line with the internationalisation goals of the programme. While it is obvious that the Dutch-language variant focuses first and foremost on its own local population, the panel considers that there are good opportunities for BML and LS students to mix within and outside the curriculum.

Conclusion and recommendations

The panel concludes that the composition of the Life Sciences student body is in line with the degree programme's goals on internationalisation. The number and share of

international students in the degree programme allows to deliver a curriculum that is truly international and intercultural.

Criterion 5b: Experience

The internationalisation experience gained by students is adequate and corresponds to the programme's internationalisation goals.

The two programme variants offer ample opportunities for LS students to gain international and intercultural experiences during their four-year study programme. International exposure entails both study periods abroad and internationalisation at home, for example within a company in the Netherlands that offers an international working environment. The international classroom in the final years facilitates intercultural development for all students. Lecturers mentioned to the panel that it is rewarding to notice that Dutch students become more confident and show personal growth, specifically after having followed the challenges of the international classroom.

In several surveys in recent years the students and graduates confirm that they benefit from the internationalisation activities throughout the curriculum and that they notice the impact of the international learning outcomes they achieve. External supervisors and exchange partners acknowledge that students can adapt to and function well in international contexts. The success of graduates in English taught pre-master courses supports this statement. As a point for attention in the future, graduates mention that the development of intercultural skills can be addressed more explicitly in the various courses and teaching activities; this, in turn, will enhance the intercultural awareness among all students.

Another point for attention is that the Covid pandemic has not been beneficial for the interaction between students from different cultural backgrounds. This interaction is picking up now, especially in the extra-curricular activities where LS and BML cohorts mix.

Students are actively motivated to go abroad for exchange or internships. The mobility of the LS cohorts is higher than the BML cohorts. However, the actual number (and share) of students going abroad is still below the set target (7.5%), which in itself is too low according to the panel for a programme that wants to be distinctive for its quality of internationalisation.

Consideration

The panel considers that all BML/LS students enjoy good quality education with proper attention for international and intercultural skills and experiences. LS students have ample

opportunities to gain international and intercultural experiences in the international classroom. Such learning environment is the result of the composition of the staff and the student body, the diverse teaching methods addressing intercultural awareness and the possibilities for exchange and mobility. Moreover, the policies and priorities of SABC (and HAN) are conducive to realising such international and intercultural environment. Amidst all positive considerations, the panel considers that too few LS students go abroad and that the target for international internships and other curriculum activities is set far too low. In fact, many other bachelor degree programmes – even those that do not apply for a distinctive feature internationalisation – set a higher target. Hence, the panel advises the programme/SABC to enhance its goal for international activities and mobility. With the growing number of partner institutes and the ending of the Covid restrictions internationally, there might be more opportunities available for students to go abroad. The testimonials of graduates on their positive experiences abroad might help to enhance the outgoing mobility of students.

Conclusion and recommendations

The panel concludes that students on both BML and LS variants are likely to gain an adequate international and intercultural experience that is fully in line with the goals for internationalisation set by the university, the school and the programme. In order to make the degree programme even more international and intercultural, the panel strongly recommends the school and the programme to set (and aspire to reach) a higher target for LMB/LS students undertaking international activities.

Criterion 5c: Services

The services provided to the students (e.g. information provision, counselling, guidance, accommodation, Diploma Supplement) are adequate and correspond to the composition of the student group.

During the intake and enrolment phase students are provided with support from associated International Recruitment Agencies and the HAN International Office and HAN Admissions Office. The International Office helps students for example with housing, visa procedures for non-EU students. It also organises Practical Information and an International Introduction and an internal contact with the chosen study programme. For outgoing students specific trainings are offered and a network of contacts and partners is available. Students from outside the EU are offered student housing for one year and support to find housing by

themselves. At HAN level many information, students services and products are available in English. Graduates are issued with an international diploma supplement.

Social cohesion and inclusion with the Dutch students are enhanced by the activities organises by the International Student Club, the SABC student union 't Reactievat, and the Erasmus Student Network. International students appreciate these activities; students from the student union function as a buddy to international students.

The student guidance and tutoring and specific support by the international coaches is highly appreciated by the students. Students perceive a low threshold to ask for information and support. In the first year special attention is given by study career coaches to typical Dutch subjects, like public transport, insurance, etcetera.

The panel gathers from the interviews that students are satisfied with the support in finding suitable international internships and graduation projects. The quality of this guidance and information service has reportedly improved over the years.

All information regarding the education and curriculum are presented in bilingual form. Recently the News Letter is also published in two languages. It seems that the recommendation of the internal review (2020) to enhance the provision of essential information in English is addressed properly. Students indicate that all instructions in the laboratory and the common areas are now presented bilingual.

Finally, the growing attention for bilingual information has led to international students and staff taking up positions in representative bodies. An international student in the SABC Academic Council confirmed that meetings and documents at SABC level have changed to English.

Consideration

The panel establishes from the written materials and the discussions that international students are well supported before and during their study. Moreover, SABC has recently improved its information provision to all students and staff by using more bilingual information. This in turn has increased the representation of students and staff in formal bodies, such as the Degree Committee and the School Council.

Conclusion and recommendations

The panel concludes that the services provided to all students are adequate and correspond to the composition of the student group. International students are well supported and the recent efforts to provide all information in two languages has increased the involvement and representation of international students (and staff) in formal education bodies.

Overall conclusion regarding Standard 5: Students

The panel found that the students constitute an important part of the overall quality of internationalisation of this Life Sciences programme: the composition of the student body, the international and intercultural experiences during the programme, and the support services they are offered contribute to attaining the internationalisation goals of the school and the international and intercultural learning outcomes of the programme. The panel deems all the underlying criteria of this standard to be widely met. The panel therefore assesses *Standard 5: Students* as **good**.

7. Overview of assessments

Standard	Criterion	Level of fulfilment for each standard unsatisfactory/satisfactory/good/excellent (see descriptions in chapter 4)
1. Intended internationalisation	1a. Supported goals	Satisfactory
	1b. Verifiable objectives	
	1c. Impact on education	
2. International and intercultural learning	2a. Intended learning outcomes	Satisfactory
	2b. Student assessment	
	2c. Graduate achievement	
3. Teaching and learning	3a. Curriculum	Good
	3b. Teaching methods	
	3c. Learning environment	
4. Staff	4a. Composition	Good
	4b. Experience	
	4c. Services	
5. Students	5a. Composition	Good
	5b. Experience	
	5c. Services	

Annex 1. Composition of the panel

Overview panel requirements

<i>Panel member</i>	<i>Subject</i>	<i>Internat.</i>	<i>Educat.</i>	<i>QA</i>	<i>Student</i>
• dr. J.T.P. (Hans) Derksen	X		X	X	
• ing. M. (Mieke) Demeyere	X	X	X	X	
• dr. E.R. (Edwin) Kellenbach	X		X		
• M. (Mark) Delmartino, MA		X	X	X	
• Michelle Voss, 3 rd year student Hanzehogeschool					X

Subject: Subject- or discipline-specific expertise;
 Internat.: International expertise, preferably expertise in internationalisation;
 Educat.: Relevant experience in teaching or educational development;
 QA: Relevant experience in quality assurance or auditing; or experience as student auditor;
 Student: Student with international or internationalisation experience;

Chair: dr. J.T.P. (Hans) Derksen, Co-founder and DGA Biorefinery Solutions BV, Biorefinery Royalties BV and BRS Holding BV (Netherlands).

Mr Derksen is an experienced biochemical expert, holds a PhD in Biochemistry/Celbiology RU Groningen. Mr Derksen held a lector Biobased Economy position at VHL UAS. He is the owner of several companies that perform research in the subject of biorefinery and sustainable biomass use. Mr Derksen has previous experience with audits in higher education, as chair of several audit panels. As lector at VHL mr Derksen developed and performed educational courses in biobased economy at bachelor level. He also held a professorate Knowledge entrepreneurship at Radboud University Nijmegen.

ing. M. (Mieke) Demeyere, Lead-lector and manager Bio- and Paramedical Educational Programmes, Hogeschool West-Vlaanderen (Belgium).

Mrs Demeyere has ample experience in the field of bio- and paramedical sciences as well as bioinformatics. She is a regular speaker at international congresses. Mrs Demeyere is a lecturer in several bachelor programmes at Howest. She has developed the Biomedical Laboratory Technology programme and the Bio Informatics programme. Mrs Demeyere can compare the Dutch programme with similar Bachelor programmes in Belgium. She has

broad QA experience as panel member/-chair in audits of Bio-informatics and Forensic Laboratory programmes in the Netherlands and Belgium.

dr. E.R. (Edwin) Kellenbach, Principal Scientist Biochemistry Schering Plough/MSD/Aspen (Netherlands).

Dr. Kellenbach is a biochemical expert and publishes regularly internationally. Mr Kellenbach is member of the European Pharmacopee and of the United States Pharmacopoeia expert committees. He regularly gives guest lectures at Avans UAS.

M. (Mark) Delmartino, MA, Owner MDM Consultancy – advisory agency in project management, monitoring & evaluation, and accreditations in higher education (Belgium). Mr Delmartino is a NVAO and ECA-certified auditor and secretary. He guides accreditations of educational programmes in higher education in the Netherlands, Belgium and Luxemburg. He has experience with four CeQuint audits in the Netherlands in the previous years. He also has QA-experience with NVAO audits and audits with other QA-agencies.

Michelle Voss, student panel member, 3rd year student Bachelor Chemistry, UAS Rotterdam (Netherlands).

Coordinators: ir. M. (Marga) Dekker-Joziassse, NVAO- and ECA-certified senior auditor, NQA (Netherlands) and R.H.W. (Rogier) van de Hoef Med, NVAO-certified senior auditor NQA (Netherlands)

Annex 2. Documents reviewed

- CeQuint ATBC LS Self-evaluation report
- HAN Ambitions for 2016-2020 and HAN Internationalisation Agenda 2016-2020
- HAN 2022-2028 Institutional Plan Charing our Course
- CeQuint Self-Evaluation Report and Assessment Report 2015-2016
- SABC Internationalisation Activity Plan 2018-2022
- Life Sciences Student Enrolment, Composition & Outgoing Mobility 2016-2022
- Argumentation Dual Degree LS – Applied Biology H BRS, January 2019
- Joint Degree Program with the University of Dundee
- HAN International Marketing Recruitment 2016-2020
- SABC Competency Profile Life Sciences 2019-2020
- Degree Statute and Education and Examination Regulations
- LS Internal Internationalisation Audit 2020
- Alumni Internationalisation Evaluation 2022
- Internationalisation learning outcomes x Assessment Matrix
- Life Sciences Internship Assessment Form 2022
- Life Sciences Graduation Project Assessment Form 2022
- Competency Card
- Study Abroad Compilation of LS Student Testimonials
- Life Sciences Alumni Monitor 2017-2021
- Unit of Study Catalogue Life Sciences
- Overview of the curriculum in diagrammatic form
- National Student Satisfaction Survey Life Sciences 2017-2022
- Life Sciences Internship Evaluation 2020
- Proposed Minor Exchange Coordinator tasks
- CVs and internationalisation Experiences of Life Sciences staff
- HAN International Office Incoming Mobility Support and Outgoing Mobility Support
- Life Sciences Diploma Supplement
- Retaining talent in NL
- 15 Life Sciences graduation files with final assessments, students products and the assessment forms.
- Diploma Supplement 2022 Example

Annex 3. Site visit programme

Overview

Date:	Tuesday 20 September 2022
Institution:	Hogeschool van Arnhem en Nijmegen (HAN University of Applied Sciences)
Programme:	Chemistry
Location:	Laan van Scheut 2, Nijmegen

Programme

Thursday September 8, 2022

9.00 - 13.45: Preparatory meeting of the panel and possibility to review additional documentation and student work. Tour of facilities

Tuesday September 20 2022

09.00 - 09.45: Arrival of the panel, internal meeting and short presentation/pitch by Management team of the programme, coordinators and internationalisation committee

10.00 - 11.00: Meeting with students

Full name, study programme, year

Robin ten Have, BML cohort 2018/2019

Bas Emaus, BML cohort 2021/2022

Pascal Rieswijk, LS cohort 2020/2021

Stefan Harthoorn, Chemie cohort 2020/2021

Dyon Pieters, Chemie cohort 2019/2020

Melanie van den Bungelaar, Chemistry cohort 2019/2020 – Student member Programme Committee

Vera Helmonds, Chemistry cohort 2019/2020

Lieke Meussen, Chemie parttime cohort 2020/2021

11.15 - 12.15: Meeting with teaching staff

<i>Full name</i>	<i>Study programme</i>
Judith Tuininga	teacher BML/LS
Carlien Verberne - van de Laak	teacher/researcher BML/LS
Jean Paul Entingh	teacher BML/LS
Anne von Bergh	teacher BML/LS
Annelies Jeronimus-Klaasen	practice teacher BML/LS
Karin Lagendijk	teacher Chemie/Chemistry
Karin Struijs	teacher/researcher Chemie/Chemistry
Jos van der Graaff	teacher Chemie/Chemistry
Dennis van Grunsven	practice teacher Chemie/Chemistry
Maria Baltussen	teacher Chemie/Chemistry, full- and parttime

12.15 – 13.00: Lunch, including internal meeting

13.00 - 13.45: Meeting on the topic final qualifications, with alumni, assessors, supervisor and external examiners

Full name and position

Rik Schelbergen, internship coordinator BML/LS
Carin Dietz, internship coordinator Chemie/Chemistry
Ingrid Zeelenberg, exam committee ATBC
Jannie Peters, external examiner BML/LS
Koen van den Dries, external examiner BML/LS
Eva Reingruber, external examiner, company supervisor Chemie/Chemistry
Danny Samson, company supervisor Chemie/Chemistry
Sanne van den Dikkenberg, alumnus Chemie 2018
Bram Cremer, alumnus LS 2019

14.00-14.30: Meeting on the topic of quality assurance

Full name and position, all committees function at ATBC level

Carien Booijink, quality assurance committee
Henry Dijkman, curriculum committee
René Brinkhuis, curriculum committee
Wendy Broeders, chair programme committee
Stefan van Rootselaar, programme committee
Niels Smit, chair examen committee
Maria Baltussen, testing committee
Mark van Eldijk, external member advisory board Chemie/Chemistry
Koen Dechering, external member advisory board BML/LS

14.45-15.15: Meeting in English with students and teachers of the international programs of BML/LS, on the special feature internationalisation

Full name and position

Cristina Bursuc, student LS cohort 2019/2020

Sofia Aparicio González, student LS cohort 2020/2021, vicechair ATBC board

Kaylie Poels, student BML cohort 2018/2019

Remko Bosch, teacher Ba/Ma and coordinator Internationalisation

Lorenzo Rella, teacher BML/LS

Kelly Vellinga-Chan, teacher BML/LS

Jolanda Scheffer, teacher BML/LS

Dory Jagers, teacher BML/LS

15.15-15.45: Meeting in English with students and teachers of the international programs of Chemie/Chemistry, on the special feature internationalisation

Full name and position

Lukas Joost, student Chemistry cohort 2020/2021

Asha Ahmed, student Chemistry cohort 2020/2021

Ruben Basten, student Chemie cohort 2019/2020

Remko Bosch, teacher Bachelor/Master, coordinator Internationalisation

Frank Rutten, teacher Chemie/Chemistry

Erik van de Ven, teacher Chemie/Chemistry

René Brinkhuis, teacher Chemie/Chemistry

Jeroen Kraan, teacher Chemie/Chemistry

16.00 - 16.30: Meeting with management of the programme

Full name and position

Patricia Cramers, Academy manager BML/LS

Martijn van der Bruggen Academy manager Chemie/Chemistry and Bio-informatics

Harmen Neidig, Academy director

Pedro Hermkens, Lector Drug Discovery

16.30-17.15: Panel discussion on the outcomes of the assessment

17.15- Presentation of outcomes

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