

Bachelor programme Forensic Science
Amsterdam University of Applied Sciences
Assessment report

26 januari 2023



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1. SUMMARY

This document reports on the programme assessment of the Bachelor programme Forensic Science (FS) offered by the Amsterdam University of Applied Sciences (AUAS). The Forensic Science programme is a four-year full-time bachelor programme. The programme has a professional orientation, amounting to 240 ECTS and aims to educate forensic generalists who can oversee the entire forensic chain. The assessment visit took place on the 10th of November 2022. The panel judges that the programme meets all standards of the NVAO framework for Limited Programme Assessment.

Intended learning outcomes

The Forensic Science programme has formulated ILOs that meet the national and international frameworks and requirements. The learning outcomes appear to be designed to produce well-rounded generalist forensic scientists. The programme has established a stable connection with the professional field. In the panel discussion with the working field, it noticed that the programme could improve the soft skills objectives. The panel appreciates the international accreditation of the Chartered Society of Forensic Science, which the programme holds as one of the few programmes outside the United Kingdom.

Curriculum

The Forensic Science programme has a curriculum that reflects the intended learning outcomes. The ILOs are adequately translated into module learning outcomes. During the past years, the programme redesigned the curriculum to educate more all-round Forensic Scientist, who will be able to work not only in the primary forensic science chain, but also in other adjacent working fields. This broadening of the programme is reflected in the cases used in the courses and projects. The teaching-learning environment of the programme is open and student friendly. The lecturers are qualified and have a clear commitment to the programme. There is a strong connection between education and research, mainly because of close ties between the programme management and the lectorate.

The programme has a numerus fixus in place and gets many more applications than there are places available (600 applications and 100 admissions). The panel advises to extend the selection procedure to better meet the expectations within the programme and the work field, where soft skills are increasingly important.

Assessment

The programme has an adequate assessment system. The test cycle is rounded, and safeguarding principles such as test matrices, test evaluations, the four-eye principle and calibration sessions are in place. The roles and responsibilities of the Examination Board, Test Committee and Curriculum Committee are clear. Two development points are already under the attention of programme

management and the Examination Board: the continuity of the calibration sessions and the differences in feedback between examiners. Examiners will receive support from AUAS to align their feedback. For the new curriculum, the panel recommends to give priority to the development of an assessment plan (according to holistic testing).

Achieved learning outcomes

In order to establish the quality of the achieved learning outcomes, the panel has reviewed a representative sample of graduation projects. The panel concludes that the level of graduates meets the requirements for a higher education bachelor's programme in Forensic Science. The work field finds the graduates adequately prepared for the professional field.

Based on the information provided and the discussions during the site visit, the panel considers that the Bachelor programme Forensic Science meets the quality requirements set by the NVAO's Assessment Framework for the Higher Education Accreditation System of the Netherlands. Hence, the panel issues a positive recommendation to NVAO for the accreditation of Forensic Science at Amsterdam University of Applied Sciences.

The chair and the secretary of the panel hereby declare that all panel members have studied this report and agree with the judgements laid down in the report. They confirm that the assessment has been conducted by the demands relating to independence.

Utrecht, 26 januari 2023



Drs. Josephine Rutten
(chair)



Drs. Suzanne den Tuinder
(Secretary)

2. INTRODUCTION

This report describes the assessment of the existing professional (HBO) bachelor's programme Forensic Sciences at the Amsterdam University of Applied Sciences (AUAS). Amsterdam University of Applied Sciences assigned Odion Onderzoek to perform the quality assessment of Forensic Science. The assessment was performed according to the four standards of the 2018 NVAO assessment framework for limited programme assessment.

Panel composition

The programme composed a panel of peers (assessment panel) that performed the underlying assessment. In September 2022, the NVAO approved the composition of the panel. The following panel assessed the bachelor's programme Forensic Science:

- Drs. J. Rutten (chair), member of the supervisory board Gooise Scholen Federatie, member of the supervisory board Stichting VO Kennemerland;
- Dr. A. Lindenbergh (panel member), Lecturer Biological and Medical Lab Research, Avans University of Applied Sciences;
- Dr. E.J.M. Geertman (panel member), Lecturer and intern coordinator, Fontys University of Applied Sciences;
- Dr. M.J.G. Kroesenbrink (panel member), Manager of Chemistry, Digital Forensics, University of Applied Sciences Leiden;
- Drs. P. Misrielaal (panel member), Forensic advisor, National Police Assen;
- R. Bucht PhD (panel member), Head of CSI services, National Bureau of Investigation, Finland;
- P. Huisman (student-member), 3rd-year student Forensic Science, Saxion University of Applied Sciences.

The panel was supported by Suzanne den Tuinder from Odion Onderzoek as NVAO-certified secretary.

All panel members and the secretary have signed a declaration of independence and confidentiality. In this declaration, they declare not to have had any business or personal ties with the institution in question, i.e. the Amsterdam University of Applied Sciences, for at least five years prior to the review.

The panel chair has substantial experience in chairing accreditations/ site visits according to the NVAO framework, so no (additional) training was required. The chair and secretary instructed the panel members about the assessment framework and procedure before and during the preparatory meeting.

Procedure

In the run-up to the site visit, the panel studied the self-evaluation report prepared by Forensic Science, as well as several supporting documents that were made available online. The secretary and the panel chair selected fifteen final graduation projects from a list of graduates in the years 2020-2021 and 2021-2022. In this selection, consideration was given to a variation in grades. Forensic Science made these graduation projects, including the assessment forms, digitally available to the panel. A list of all documents examined by the panel is available in Annex 3.

The panel members shared their first impressions of the documentation with the secretary before the site visit. The secretary compiled these first impressions and shared them with the panel members. During a preparatory meeting on 4th November 2022, the panel members discussed these first impressions, the division of roles, and working methods for the visitation visit and identified key points for discussion. Opinions on the selected graduation projects were also shared. The discussion of preliminary findings led to a request from the panel to the programme to provide additional information on several aspects to clarify the panel's view. The secretary made an overview of questions and findings from the preliminary meeting for the site visit.

On 10th November 2022, the panel visited Forensic Science in Amsterdam. It conducted interviews with management, teaching staff, committees, students, alumni and representatives of the professional field. It also visited the facilities of Forensic Science. At the end of the visit, the chair presented the initial findings to all participants, stakeholders and interested parties, including the dean of the faculty of Technology, programme manager and faculty members. The programme of the site visit is described in Annex 2.

As required by the 2018 NVAO assessment framework, the staff and students of Forensic Science were given the opportunity to address and discuss issues with the panel in confidence. They were notified in an email by AUAS. In order to address an issue, staff/students were asked to contact the secretary prior to the site visit. During the site visit, an 'open hour' was scheduled to allow for the panel to meet with staff/students who responded. No responses were received in the present programme assessment, so no meetings were held during the open hour.

After the site visit, the secretary drafted a report based on the panel's findings, considerations and conclusions and distributed this draft among the panel members for feedback. The draft report was then edited based on the panel's comments and subsequently endorsed by the chair. After that, the report was sent to AUAS to review any factual inaccuracies. Upon their response, the chair has finalised and endorsed this report.

Institution

The AUAS has a wide range of vocational education in various knowledge areas. In addition to 51 bachelor's programmes, the AUAS offers practice-oriented masters, associate degree programmes and courses. By linking education, practice-oriented research, and the professional field, AUAS aims to contribute to the renewal of professional practice and society in and around an internationally oriented Amsterdam. In close collaboration with organisations and companies, the AUAS wants to develop new knowledge about sustainability, digitisation and diversity.

At the Faculty of Technology, with 6.400 students, the AUAS offers eight bachelor's degree programmes: Aviation, Built Environment, Engineering, Forensic Research, Logistics & Economics, Logistics Engineering, Maritime Officer and Applied Mathematics.

Programme

The AUAS has been offering the full-time Forensic Science programme since 2007. The programme aims to educate forensic generalists who have an understanding of the entire forensic chain, from the crime scene to the courtroom. Their added value is that they can establish a link between the crime scene, the examinations to be carried out in specialised laboratories and expert reporting in court. The Forensic Science programme has a numerus fixus of 100 students.

The administrative data on the programme and the institution are provided in Annex 1 of this report.

Developments since the previous accreditation

The programme was previously accredited in 2016. It was then assessed as positive. The forensic science programme has undergone developments since this previous accreditation. In the academic year 2020-2021, the numerus fixus has been raised from 70 to 100 students. Furthermore, the programme has moved to a new lab in South-East Amsterdam. Also, the programme redesigned the first-year curriculum in 2021-2022. All these developments will be looked at in more detail in chapter 3. The panel included the recommendations from the 2016 report and their follow-up in its assessment. The relevant findings are discussed at the respective standard.

3. PROGRAMME ASSESSMENT

Standard 1: intended learning outcomes

The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline, and international requirements.

Conclusion

Based on the interviews and examination of the underlying documentation, the panel concludes that the programme **meets standard 1**, intended learning outcomes. The panel notes that the Forensic Sciences programme has formulated ILOs that meet the national and international frameworks and requirements. According to the panel, the learning outcomes appear to be designed to produce well-rounded generalist forensic scientists. The panel thinks this addresses the needs of the industry. The panel values that the AUAS programme holds the international accreditation of the Chartered Society of Forensic Science as one of the few programmes outside the UK. The panel observed that the programme has established a stable connection with the professional field.

Findings and considerations

Profile and description of the intended learning outcomes

The educational profile of the Forensic Science (FS) programme is well-defined within the Domain of Applied Science (DAS). In the DAS, the eight competencies central to a Bachelor of Applied Science are linked to levels with specific indicators. In addition to the competencies, the Body of Knowledge and Skills (BoKS) is part of the national training profile. The panel notes that this national profile underpins the ILOs of the AUAS programme. The panel finds that the programme demonstrates an understanding of what the professional bachelor level entails and regards it commendable that the work field advisory board has also approved the levels of the DAS of the programme.

The panel sees that the programme holds a clear vision of the profession of the forensic scientist. The working field and internship supervisors confirm that the ILOs fit the job requirements of the professional domain. According to the panel, the soft skills that are incorporated in the programme could be revised, given the expectations of the professional field. For example, the working field wonders whether graduates are sufficiently prepared to cope with a crime scene. They would value skills regarding resilience but also on report writing and working independently.

Regarding internationalisation, the panel establishes that the AUAS FS programme holds the international accreditation of the Chartered Society of Forensic Science as one of the few programmes outside the United Kingdom. The panel believes that meeting these international requirements makes the programme well-placed.

Broadening of the graduation profile

In the last few years, Forensic Sciences has increased the numerus fixus from 70 to 100 students. The panel understood this was a choice made by the AUAS board. Given the small labour market for FS, the increase in students does not appear logical to the panel. Furthermore, it has emerged that 22% of the alumni of the FS programme work in the 'primary forensic chain'. A larger part of the alumni (between 22% and 40%) work in another forensic field. The programme clarified to the panel that employment in the primary forensic chain is too scarce to provide all these students with a job after graduation. This was confirmed during discussions with students/alumni and the professional field.

Given the limited demand for graduates in the primary forensic chain labour market, the programme has broadened the graduation profile during the last academic year, which the panel appreciates. With the broadening of the profile, the curriculum has also been reassessed (see standard 2). The current profile of the Forensic Science programme is as follows:

"The Forensic Science programme at the AUAS educates a (forensic) researcher who, with thorough knowledge of natural science research and trained in scenario thinking, can reconstruct events, incidents and crimes with awareness of the chain in which they operate."

Relation to the professional field

The panel learned from the documentation and the site visit that the programme has ongoing contact with external stakeholders. The working field is consulted on the ILOs and is actively solicited for input. The programme furthermore has created knowledge exchange with the work field through seminars and guest lectures. During the internships, there is regular contact about the wishes, demands and expectations of the professional field and the findings about the student's performance. In the panel discussion with the working field, the panel noticed that there is room to improve the alignment of the soft skills objectives. To the panel, the working field expressed soft skills they find important for a forensic scientist. The panel noticed that these soft skills differ from the ones that the FS programme incorporated in the programme.

Standard 2: teaching-learning environment

The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.

Conclusion

Based on the interviews and examination of the underlying documentation, the panel concludes that the programme **meets standard 2**, teaching-learning environment. The panel concludes that the programme learning outcomes of the Forensic Science programme are adequately translated into module learning outcomes of the new curriculum. The programme has become broader, updated, and pays more

attention to soft skills. The teaching-learning environment is open and student friendly. The lecturers are qualified and dedicated to the programme. According to the panel, implementing the new curriculum is ambitious and challenging, especially in years 3 and 4.

Findings and considerations

Curriculum

In 2020-2021, the Forensic Science programme initiated a curriculum review. The main reason for this was the broadening of the graduation profile, which was necessary given the increasing influx of students and the limited demand for graduates in the primary forensic chain. In addition, the panel understood from the discussions that the program needed to be updated; projects had remained the same for numerous years, and more recent topics, like digital forensics, needed to be included. Also, based on signals from the field, the programme envisaged to integrate more attention to soft skills, self-management, and professional skills in the projects. The programme redesigned the first-year curriculum in 2021-2022 and introduced the new curriculum in 2022-2023. Currently, the programme works on the recalibration of year 2. This new 2nd year will be introduced in the academic year 2023-2024.

The panel finds that ILOs are adequately translated into the curriculum. The new first year curriculum is already very well adjusted to the broader profile, while also meeting the needs of forensic science and broader work field. The panel regards the current years 2, 3 and 4 of the curriculum as appropriate for reaching the ILOs, but does understand that the programme is revising and updating. The broadening of the profile is mainly reflected in the cases used in the courses and projects. The panel feels that the curriculum is flexible in adapting relevant subjects to projects. The major developments within the reassessment of the curriculum are bigger courses (5 or 10 ECTS), developing learning lines (Scenario thinking and Self-management), a multidisciplinary approach in every project and more digital forensics. With enlarging the courses to 5 or 10 EC, the programme believes this better facilitates integrating both skills and knowledge into courses. The programme also changed the way lectures are conducted and now extensively uses blended learning, in line with the educational vision of AUAS. Teachers and students are positive about this.

With the move of the programme to a different building of AUAS, two other developments impacted the teaching-learning environment. One of these developments is that the new lab facilities are in place now. This allows the program to include sufficient practical education in the curriculum. The equipment used is suitable for the purpose. The panel understands from the various stakeholders that they regard this as a major improvement. In addition, the new spaces are arranged for smaller groups, which leads to a smaller group size (of 16 students), leading to a more personal approach. The panel learned that students and staff highly appreciate this.

The panel regards the programme to be student-centred, encouraging the students to take responsibility for their learning. Self-management is stimulated in the new learning line, and there are lessons focussing

on the development of soft skills integrated into the projects. The panel learned that the programme is genuinely invested in continuous improvement and addressing student needs.

Connection with research

The Forensic Science programme invests in the connection between education and research. Although the education and research pillars are separate in most of AUAS, FS's programme management ensures a strong connection, which the panel appreciates. Lectors are included in all management decisions and the lectorate is well-informed about developments in education. Teachers and students are very involved with research projects and connected to the needs of the industry. Research is strongly anchored in practice and the lectorates have a role in the education. The panel believes that the programme has a top-of-the-line lectorate. The facility of the atelier is a strength of the programme, mainly the interaction between master students, PhDs and lecturers doing research.

Internship

In the programme, students take two internships: in year 3 and year 4. Although all students can find an internship, the panel learned that many students don't get the internship they prefer. From the discussion with students, the panel remarks that students struggle with finding a place due to their primary ambition of wanting to work for a Police Department. Since the work field of the primary forensic chain does not have a large capacity for interns, the panel thinks it would be helpful to manage the expectations of students and closely guide them in the process of finding a suitable assignment.

Teaching staff

The Forensic Science team consists of 19 lecturers, 3 lab instructors, 2 professors, 2 PhD students and several staff members. The documentation and the interviews with faculty members showed the panel that the teaching staff is engaged and enthusiastic. The staff involved in the programmes is considered qualified for teaching in the FS programme. There are guest lectures from Police Departments, the NFI and prosecutors. All lecturers have a didactic certificate of competence. Students value their teachers; their feedback on the teachers is positive. The panel also experienced very involved programme management and got the impression that teachers find the management approachable and experience an open and safe environment to share their thoughts and ideas. Teachers are involved in the redesign of the curriculum and some teachers (the Curriculum Committee) are given a dedicated weekly moment to work together on the curriculum. They receive support from AUAS in designing the curriculum and assessment. In the larger 5 or 10 EC courses, there can be up to 5 different teachers involved in a single course. Teachers tell the panel that coordination turns out to be very smooth, as it is evident who is in the lead for each course. Teachers feel that working in these multidisciplinary teams also helps in smoothing out the workload better.

Internationalisation

The Forensic Science programme has been enthusiastic about internationalising the programme. Although larger projects have been put on hold because of the covid pandemic, the programme did start with an International Guest Lecture series. The panel notes that these guest lectures open the doors to more collaborations. The panel thinks that in the context of internationalisation, it may be beneficial if lecturers connect to other well-known universities with FS programs, such as Kings College London, the University of Lausanne and Tampere University.

The panel learned that the programme aims to increase the number of international internships and that it encourages students to take an international placement. The AUAS has collaborated with the Wild Life Academy in South Africa, and six students will do their third-year internship in Cape Town in 2022-2023. Students also have work placements in Italy, Aruba, and South Korea. In addition, the programme stimulates exchange by promoting an international minor to other (forensic) programmes.

Selection of students

The programme has a numerus fixus in place and gets many more applications than there are places available (600 applications and 100 admissions). The panel learned that during the selection procedure, students are tested on their knowledge and the application of knowledge, resulting in a selection of the 100 students with the highest score. The panel noticed from the documentation and the interviews that the work field finds 'soft skills' of potential interns and future employees increasingly important. Although the panel is aware that it is difficult to design a selection procedure that does justice to all the expectations of the programme and the work field, this focus on soft skills could be a reason to develop the assessment methods used in the selection procedure in a more holistic direction. It also advises to remain aware of the high number of female students and integrate gender diversity into selection policy.

Standard 3: student assessment

The programme has an adequate system of student assessment in place.

Conclusion

Based on the interviews and examination of the underlying documentation, the panel concludes that the programme **meets standard 3**, student assessment. According to the panel, the testing quality, the test cycle, roles and responsibilities in testing are clearly described in the Assessment Plan. The quality assurance in assessing is organised well. The roles and responsibilities of the Examination Board, Test Committee and Curriculum Committee are clear. The test cycle is rounded, and safeguarding principles such as test matrices, test evaluations, the four-eye principle and calibration sessions are in place. The students are well informed about the testing programme.

The panel would like to highlight two points: the continued focus on calibration sessions and the differences in feedback between teachers. Both aspects already have the attention of the programme

management and the examination board, and the panel believes these points will receive continued attention.

For the new curriculum, the panel believes that the development of an assessment plan (according to holistic testing) should have priority from the programme management and the Curriculum Committee. The panel notices that the programme management sees the Examination Board and Test Committee as solid partners. It advises the programme management to make good use of them for the further implementation of assessments in the renewed curriculum.

Findings and considerations

Assessment policy

AUAS has a school-wide assessment policy, laid out in the “Education and Assessment Policy”. This policy was renewed in January 2022 and states that assessments will increasingly be a learning experience; therefore, AUAS programmes need to increasingly use formative assessment and feedback in their education.

The panel confirms that the programme, in line with the assessment policy, has an Assessment Plan. In the Assessment Plan, the programme provides information about the assessment, for instance, the vision of the assessment, the assessment programme, and the quality assurance regarding the assessment.

Transparency, validity & reliability

The panel observes that the programme follows the official AUAS procedures to ensure assessment transparency, validity, and reliability. A peer review system is used when exams or assignments are prepared. The programme informs students about the assessment methods, the assessment criteria and the assessment procedure in advance in the study guide, the module manuals, and the digital learning environment. Also, the Teaching and Examination Regulations include regulations regarding assessment.

Assessment methods

The Forensic Science programme uses various assessment methods, including knowledge tests with multiple choice and/or open questions, essays and papers, presentations, group assignments and practicals.

During the curriculum review, the new testing policy of the AUAS was introduced. The panel notes that assessment is not yet incorporated into the curriculum design. Reducing the number of summative tests into one integral assessment has yet to be achieved. The programme’s focus has mainly been on developing a good curriculum and teaching programme, and a clear vision of assessment methods still needs to be formulated. This is an important development point for the coming years, and the panel emphasises that this will require quite a lot of investment from the Curriculum Committee. The panel thinks it’s appropriate for the Curriculum Committee to work together with the examination board in

this regard. Since not all developers within the Curriculum Committee have exam qualifications, the panel advises providing more support for them in working on holistic and integrated assignments.

The first step that has been made in the new curriculum is the use of more formative assessment and feedback. Knowledge tests are used less, and vocational assignments and behavioural assessments occur more often.

Feedback

The panel learned from the documentation and discussions that teachers may apply different standards to some subject and give different focus in their feedback. Students indicate that the assessment criteria are not always clear and cause a lack of clarity. The programme is aware of this improvement point and is hiring an expert to clarify the feedback process and instruct lecturers on giving proper feedback. The panel welcomes this development.

Assessment of final projects

The programme informs students on the final project and guidelines via a graduation manual. The graduation report is assessed independently by the supervisor and a second assessor, and an external assessor also gives an advisory assessment for the report using an assessment form. The programme considers it important that a field expert is also involved in the assessment. Because the assessors of the final projects must be registered examiners, the assessment of the external assessor remains an expert advice and is not regarded as a formal examiner. Reports assessed by the examiners with a mark between 5.5 and 5.9 are submitted to the Examination Board for a second opinion.

The programme indicates that the graduation process is time-consuming and leads to a peak workload at the end of the year. The programme will research how the graduation process can be streamlined in the coming years.

It struck the panel that the result of the practical work, such as a mark for internship, is not on the diploma nor on all final assessment forms. The panel thinks it is useful for students and future employers to make this part of the diploma.

The panel is pleased to learn about the regular calibration sessions to test the extent to which the examiners have a shared view of the final level. The external member is involved in the calibrations.

Examination Board

Forensic Science has a joint examination board with other programmes of the Faculty of Technology of AUAS (Logistics Management, Logistics Engineering and Aviation). Based on their competencies, lecturers are appointed as examiners by the Examination Board. The lecturer members of the

Examination Board are SKE certified. The members of the Examination Board have regular formal and informal contact with the programme manager.

The Test Committee, consisting of 4 members from different programmes, resides under the Examination Board and is responsible for analyzing the quality of the tests (mandated). The chair of the Test Committee is also a member of the Examination Board and reports to the Examination Board. The panel noticed that the Test Committee is positive about testing quality at all programmes involved.

The panel finds it positive that the Examination Board gives a second opinion on the graduation projects with a mark between 5.5 and 5.9. The panel also appreciates the possible development that the Board points out, such as the use of a transparent correction model. The panel thinks there is room for improvement regarding the role of the Board in the new curriculum. The panel recommends that the Examination Board take a more proactive role to be more involved in developing the new curriculum assessments and safeguarding the process.

Standard 4: achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Conclusion

Based on the interviews and examination of the underlying documentation, the panel concludes that the programme **meets standard 4**, achieved learning outcomes. Based on the sample of graduation products, the panel concludes that the level of graduates meets the requirements for a higher education bachelor's programme in Forensic Science. The work field finds the graduates adequately prepared for the professional field.

Findings and considerations

Quality of graduation projects

Students complete an independent graduation project of 20 weeks in the programme's final phase. Students need to find a suitable internship and graduation project where they carry out applied research, write a graduation report and present and defend the research.

The panel reviewed fifteen graduation projects and found that all projects were properly assessed. The panel recognised the grades and the bachelor level. The panel learned from the documentation and discussions that the forensic work field is content with the graduates of this programme. The work field representatives explicitly mentioned that they are very content with the final papers of FS AUAS graduates. Finding work in the forensic field can be difficult. By broadening the profile, the programme

tries to create awareness among students and provide examples of how to use the FS skills in other professions.

Alumni

The Forensic Science programme has some insight into the perspective of alumni and how alumni function in the professional field. The programme gathers information from national student evaluations, curriculum evaluations of recent alumni, and labour market research amongst employers. The panel, for example, read the 'Alumni research Results' of FS that describes the results of a survey sent to alumni to get insight into which sectors forensic science graduates are employed in after their studies and which competencies/knowledge and skills have contributed to this. The panel recommends to monitor whether the broadening of the programme will also lead to graduates finding work in other adjoining professions.

Overall conclusion

The panel has assessed the programme along four standards. The panel concludes that the programme meets all standards (intended learning outcomes, teaching-learning environment, student assessment and achieved learning outcomes) and subsequently assesses the overall quality of the programme as positive.

Standard	Judgement
Intended learning outcomes <i>Standard 1: The intended learning outcomes tie in with the level and orientation of the programme; they are geared to the expectations of the professional field, the discipline, and international requirements.</i>	Meets
Teaching-learning environment <i>Standard 2: The curriculum, the teaching-learning environment and the quality of the teaching staff enable the incoming students to achieve the intended learning outcomes.</i>	Meets
Student assessment <i>Standard 3: The programme has an adequate system of student assessment in place.</i>	Meets
Achieved learning outcomes <i>Standard 4: The programme demonstrates that the intended learning outcomes are achieved.</i>	Meets
Overall conclusion	Positive

The panel has evidenced and articulated positive considerations about the programme per standard in the previous sections. It established that:

- the programme has a strong link to the professional field;
- the programme establishes a good link between education and research;
- education and research are well-connected;
- the new curriculum offers good opportunities to integrate and apply knowledge and skills in different situations (broader than the primary forensic science chain);
- the Examination Board and Test Committee are well-positioned;
- a lot of expertise is available from AUAS.

In addition to the positive considerations, the panel considers there is (still) room for improvement on several aspects of the programme. It, therefore, suggests the University of Applied Sciences Amsterdam to:

- evaluate which soft skills are suitable for a forensic science graduate and, if necessary, incorporate new soft skills into the programme;
- evaluate and possibly adjust the selection procedure;
- develop an assessment plan for the new curriculum and include a more proactive role for the Examination Board;
- train the teaching staff in holistic assessment and the examiners in giving feedback,. Give priority to calibrating in order to give comparable feedback to students.

4. ANNEXES

Annex 1: Administrative data

Information on the institution

Name: Hogeschool van Amsterdam/Amsterdam University of Applied Sciences
Status: publicly funded
Result ITK: positive (2019)
Address: Postbus 1025, 1000 BA Amsterdam
Faculty: Faculteit Techniek/Faculty of Technology, Postbus 1209, 1000 BE Amsterdam

Information on the programme

Name: B Forensisch Onderzoek/B Forensic Science
CROHO: 34112
Level: bachelor
Orientation: professional
Credits: 240 ECTS
Mode of study: full-time
Language: Dutch
Majors/tracks: -
Location: Nicolaes Tulphuis, Tafelbergweg 51, 1105 BD Amsterdam

Annex 2: Site visit programme

Date: Thursday 10 November 2022

Venue: AUAS, Nicolaes Tulphuis, Tafelbergweg 51, Amsterdam

08h30 – 09h00	Internal meeting panel
09h00 – 09h30	Tour
09h30 – 10h15	Management
10h30 – 11h15	Curriculum Development
11h30 – 12h00	Examination Board
12h15 – 13h00	Teachers
14h00 – 14h30	Students & alumni
14h45 – 15h15	Experts (online meeting)
15h30 – 16h00	Pending issues (optional)
16h00 – 17h30	Internal discussion panel
17h30 – 18h00	Feedback

Annex 3: Documents

Materials studied by the panel:

- Critical Self Reflection
- Annexes:
 - Mapes, Anna – Rapid DNA Technologies at the Crime Scene
 - Report Workfield Session 2022
 - DAS Competence tables
 - DAS Profile description 2020
 - Education and research vision FT
 - Skills Overview VAK-modules Year 1
 - Skills Overview Projects Year 1
 - CLOTS FO 22-23
 - Curriculum Matrix FO 22-23
 - Faculty Plan FR 2021-2026
 - Picture Booklet FO
 - Education and assessment policy 2022
 - Teaching and Examination Regulations 22-23
 - Annual report Examinations Board 20-21
 - Report Calibration Session
 - Alumniresearch Results
 - NSE Factsheet
 - Graduation Manual 21-22
 - Annual Report Programme Committee 20-21
 - Quality Assurance Plan 21-22
 - OER bachelor FO 20-21
- Assessment form Practice graduation FO 22-23
- Accreditation NVAO 2022: Actions and Responses
- Accreditation NVAO 2022: Additional Questions

The fifteen graduation projects (with assessment forms) that the panel has studied are known to the panel's secretary.