

Assessment report
Limited Framework Programme Assessment

Bachelor Environmental Sciences

Wageningen University

Contents of the report

1. Executive summary	2
2. Assessment process	4
3. Programme administrative information.....	6
4. Findings, considerations and assessments per standard	7
4.1 Standard 1: Intended learning outcomes	7
4.2 Standard 2: Teaching-learning environment	9
4.3 Standard 3: Student assessment.....	12
4.4 Standard 4: Achieved learning outcomes	14
5. Overview of assessments.....	15
6. Recommendations	16

1. Executive summary

In this executive summary, the panel presents the main considerations which led to the assessment of the quality of the Bachelor Environmental Sciences programme of Wageningen University. The programme was assessed according to the standards of the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands, published on 20 December 2016 (Staatscourant nr. 69458).

The panel considers the programme objectives to be sound and relevant. The programme distinguishes itself by educating students to be able to address, analyse and solve environment and sustainability issues and problems from natural, social and technological sciences perspectives. Although the programme is strongly natural sciences based, the social sciences are adequately covered in the objectives. The programme may be considered to be genuinely interdisciplinary, which is applauded by the panel.

The programme objectives have been well translated into the intended learning outcomes. They are formulated in rather precise terms. The panel proposes to phrase the academic skills and self-directed learning competencies more clearly. The intended learning outcomes conform to the bachelor level.

The programme objectives are within the boundaries of the domain-specific reference framework for academic programmes in Environment and Sustainability Sciences. The panel is very positive about the effort by the joint academic programmes in Environment and Sustainability Sciences in the Netherlands to draft this framework and regards this to be a sound and up-to-date description of this domain.

The panel welcomes the discussions by programme management with the External Advisory Committee to align the programme with the professional field requirements. The panel appreciates the programme objectives to train students to continue their studies in this domain at master level.

The panel regards the organisation of the programme to be appropriate, but recommends to prepare the organisation for growing student numbers and for growing diversity among students.

The curriculum matches the intended learning outcomes of the programme. The panel is very positive about the contents and the coherence of the curriculum. The pathways going through the curriculum ensure the clear organisation and the coherence of the curriculum. The courses are solid. The natural and social sciences perspectives in the curriculum are balanced. The integration courses are designed well and add to the coherence, as chair groups collaborate in these courses. The panel recommends to state the contents and the goals of the skills training and self-directed learning pathways more clearly.

The lecturers in the programme are very motivated and are appreciated by students. They are practically all PhDs and intensively engaged in current, relevant research. Their educational capabilities are regarded by the panel to be up to standard as well. The panel advises to promote SKO-certification among lecturers. Although lecturers within chair groups and across chair groups meet regularly, the attendance of lecturers to the teaching days should be promoted.

The programme admissions requirements and procedures are appropriate. The panel advises to specify entry requirements for international students, as the programme will admit these students.

The educational concept and the study methods of the programme are adequate and promote student-activating learning. Study methods and teaching approaches being different across chair groups, the panel proposes to align these, in case of inconsistencies. Students identify with the programme, although they may be in classes with students from other programmes. The panel encourages programme management to investigate new, ICT-based study methods. The students-to-staff ratio and the number of hours of face-to-face education are adequate. The study guidance in the programme is appropriate, as is the system for designing individual study plans. The panel recommends to introduce a tracking system to monitor student study progress. The panel advises to balance the study load, making the programme more demanding and distributing the study load more evenly over the curriculum. The student success rates are adequate.

The panel considers the examination and assessment policies for the programme to be appropriate. The Examining Board is in control of the examinations and assessments of the programme.

The panel approves of the examination methods adopted in the programme, as these are consistent with the goals and the contents of the courses. The panel considers the measures taken to counter free riding to be adequate. The panel proposes to test the academic skills and self-directed learning competencies more clearly, and to consider adding formative assessments for these.

The supervision and assessment procedures of the Bachelor thesis are adequate. Students are offered appropriate supervision. The assessment processes are up to standard, involving two examiners and being conducted using elaborate scoring forms. The panel advises to add more extensive written comments to the assessment forms to substantiate the grades. The panel suggests to organise calibration sessions across chair groups.

The measures taken to ensure the validity and transparency of examinations and reliability of assessments are adequate. The panel appreciates the chair groups inviting external experts to review the examinations and the Examining Board inspecting the quality of the examinations and assessments of the chair groups. The fraud and plagiarism formalities are up to standard.

The panel regards the course examinations to be up to standard. The panel considers the theses to be very solid, having good problem statements and research questions and demonstrating strong theoretical and methodological design and very appropriate analyses and conclusions. The panel supports the grades awarded to the Bachelor theses.

The panel regards the programme graduates to be well prepared to continue their studies at master level in this domain. The panel is positive about the wide range of master programmes graduates are admitted to.

The panel that conducted the assessment of the Bachelor Environmental Sciences programme of Wageningen University assesses this programme to meet the standards of the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands, judging the programme to be good. Therefore, the panel recommends NVAO to accredit this programme.

Rotterdam, 3 September 2018

Prof. dr. W.A. Hafkamp
(panel chair)

drs. W. Vercouteren
(panel secretary)

2. Assessment process

The evaluation agency Certiked VBI received the request by Wageningen University to support the limited framework programme assessment process for the Bachelor Environmental Sciences programme of this University. The objective of the programme assessment process was to assess whether the programme would conform to the standards of the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands, published on 20 December 2016 (Staatscourant nr. 69458).

Management of the programmes in the assessment cluster Environment and Sustainability Sciences convened to discuss the composition of the assessment panel and to draft the list of candidates.

Having conferred with management of the Bachelor Environmental Sciences programme of Wageningen University, Certiked invited candidate panel members to sit on the assessment panel. The panel members agreed to do so. The panel composition was as follows:

- Prof. dr. W.A. Hafkamp, full professor of Environmental Sciences, Erasmus University Rotterdam (panel chair);
- Prof. dr. M.C.E. van Dam-Mieras, emeritus professor Sustainable Development and Educational Innovation, Leiden University (panel member);
- Prof. dr. L. Hordijk, emeritus professor Environmental Systems Analysis, Wageningen University (panel member);
- P. Aarts BSc, student Master Biological Sciences, University of Amsterdam (student member).

On behalf of Certiked, drs. W. Vercoouteren served as the process coordinator and secretary in the assessment process.

All panel members and the secretary confirmed in writing being impartial with regard to the programme to be assessed and observing the rules of confidentiality. Having obtained the authorisation by the University, Certiked requested the approval of NVAO of the proposed panel to conduct the assessment. NVAO have given their approval.

To prepare the assessment process, the process coordinator convened with management of the programme to discuss the outline of the self-assessment report, the subjects to be addressed in this report and the site visit schedule. In addition, the planning of the activities in preparation of the site visit were discussed. In the course of the process preparing for the site visit, programme management and the Certiked process coordinator regularly had contact to fine-tune the process. The activities prior to the site visit have been performed as planned. Programme management approved of the site visit schedule.

Well in advance of the site visit date, programme management sent the list of final projects of graduates of the programme of the most recent years. Acting on behalf of the assessment panel, the process coordinator selected the final projects of 15 graduates from the last two years. The grade distribution in the selection was ensured to conform to the grade distribution in the list, sent by programme management. In the selection, the even distribution across the majors of the programme was taken into account.

The panel chair and the panel members were sent the self-assessment report of the programme, including appendices. In the self-assessment report, the student chapter was included. In addition, the expert panel members were forwarded a number of final projects of the programme graduates, these final projects being part of the selection made by the process coordinator.

A number of weeks before the site visit date, the assessment panel chair and the process coordinator met to discuss the self-assessment report provided by programme management, the procedures regarding the assessment process and the site visit schedule. In this meeting, the profile of panel chairs of NVAO was discussed as well. The panel chair was informed about the competencies, listed in the profile. Documents pertaining to a number of these competencies were presented to the panel chair. The meeting between the panel chair and the process coordinator served as the briefing for panel chairs, as meant in the NVAO profile of panel chairs.

Prior to the date of the site visit, all panel members sent in their preliminary findings, based on the self-assessment report and the final projects studied, and a number of questions to be put to the programme representatives on the day of the site visit. The panel secretary summarised this information, compiling a list of questions, which served as a starting point for the discussions with the programme representatives during the site visit.

Shortly before the site visit date, the complete panel met to go over the preliminary findings concerning the quality of the programme. During this preliminary meeting, the preliminary findings of the panel members, including those about the final projects were discussed. The procedures to be adopted during the site visit, including the questions to be put to the programme representatives on the basis of the list compiled, were discussed as well.

On 11 and 12 April 2018, the panel conducted the site visit on the Wageningen University campus. The site visit schedule was as planned. In a number of separate sessions, the panel was given the opportunity to meet with Board of Education representatives, programme management, Examining Board members, lecturers and final projects examiners, and students and alumni.

In a closed session at the end of the site visit, the panel considered every one of the findings, weighed the considerations and arrived at conclusions with regard to the quality of the programme. At the end of the site visit, the panel chair presented a broad outline of the considerations and conclusions to programme representatives.

Clearly separated from the process of the programme assessment, the assessment panel members and programme representatives met to conduct the development dialogue, with the objective to discuss future developments of the programme.

The assessment draft report was finalised by the secretary, having taken into account the findings and considerations of the panel. The draft report was sent to the panel members, who studied it and made a number of changes. Thereupon, the secretary edited the final report. This report was presented to programme management to be corrected for factual inaccuracies. Programme management were given two weeks to respond. Having been corrected for these factual inaccuracies, the Certiked bureau sent the report to the University Board to accompany their request for re-accreditation of this programme.

3. Programme administrative information

Name programme in CROHO: B Environmental Sciences
Orientation, level programme: Academic Bachelor
Grade: BSc
Number of credits: 180 EC
Majors: Environmental Policy and Economics
Environmental Quality and Systems Analysis
Environmental Technology
Location: Wageningen
Mode of study: Full-time (language of instruction Dutch, English as of September 2018)
Registration in CROHO: 21PI-56283
Name of institution: Wageningen University
Status of institution: Government-funded University
Institution's quality assurance: Approved

4. Findings, considerations and assessments per standard

4.1 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.

Findings

The programme is a three-year, research-based, interdisciplinary Bachelor programme in the environment and sustainability sciences domain.

The programme objectives are to educate students to address, analyse and solve complex environmental and sustainability problems. Since these problems have natural, technological and social dimensions, students are educated in these three domains. The programme may, therefore, be regarded as an interdisciplinary programme, aimed at integrating knowledge and understanding of these domains to address these problems.

The programme offers three majors. The major Environmental Policy and Economics is geared to the social sciences perspective whereas the major Environmental Quality and Systems Analysis focuses on the natural sciences perspective and the major Environmental Technology is directed towards the technological sciences perspective. In selecting these majors, students may specialise in any of these sciences' perspectives. In addition, students may take the educational minor, allowing them to qualify for secondary education teacher positions.

The programme objectives have been translated into the intended learning outcomes of the programme. The intended learning outcomes specify knowledge and understanding of the natural, social and technological sciences in this domain, interdisciplinary approaches to address environmental and sustainability issues, knowledge and skills to do research in the domain, and communication skills and self-directed learning skills. Students acquire more specialised knowledge and understanding in the domain of their major.

Programme management drafted a table from which the correspondence of the intended learning outcomes to the Dublin descriptors for bachelor programmes may be inferred.

The objectives of the programme conform to the domain-specific reference framework for academic programmes in Environment and Sustainability Sciences, which has been drafted by the joint programmes in the Netherlands. In this domain-specific reference framework, reference has been made to international frameworks and benchmark statements. This programme may be regarded to be positioned in the *Understanding and Solving Problems for Sustainability* part, being at the intersection of the *Natural Systems Emphasis* and *Social Systems Emphasis* parts of the Environment and Sustainability Sciences domain.

Programme management discusses on a regular basis the programme objectives and curriculum with the External Advisory Committee to adjust the programme to the professional field requirements. Programme management and the External Advisory Committee do not see the Bachelor programme preparing for the professional field. Programme graduates are predominantly educated to proceed to Master programmes in this field.

Considerations

The panel considers the programme objectives to be sound and relevant. The programme distinguishes itself by educating students to be able to address, analyse and solve environment and sustainability issues and problems from natural, social and technological sciences perspectives. Although the programme is strongly natural sciences based, the social sciences are adequately covered in the objectives. The programme may be considered to be genuinely interdisciplinary, which is applauded by the panel.

The objectives have been well translated into the intended learning outcomes of the programme. They cover the programme objectives appropriately. They are generally well articulated and are formulated in rather precise terms. The panel proposes to phrase the academic skills and self-directed learning competencies more clearly.

The intended learning outcomes conform to the bachelor level. This is exemplified by the Dublin descriptors criteria for bachelor level programmes matching the intended learning outcomes.

The programme objectives are within the boundaries of the domain-specific reference framework for academic programmes in Environment and Sustainability Sciences, this programme having a clear profile within this framework. The panel is very positive about the effort by the joint academic programmes in Environment and Sustainability Sciences in the Netherlands to draft this framework and regards this to be a sound and up-to-date description of this domain.

The panel welcomes the discussions by programme management with the External Advisory Committee to align the programme with the professional field requirements. The panel appreciates the programme objectives to train students to continue their studies in this domain at master level.

Assessment of this standard

These considerations have led the assessment panel to assess standard 1, Intended learning outcomes, to be satisfactory.

4.2 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.

Findings

Wageningen University is a one-faculty University. The Rector is assisted by the Dean of Research and the Dean of Education. The Dean of Education is the technical chair of the Board of Education. This Board, being composed of four professors and four students, is responsible for all programmes of the Faculty. The Dean of Education is also the head of the Department of Education and Student Affairs, being in this capacity responsible for facilitating education within the University. For this programme as for all other programmes of the Faculty, the Programme Committee is responsible for the contents and the quality of the programme. The Programme Committee is composed of an equal number of staff members and students. This responsibility is subject to the approval of the Board of Education. For each of the programmes, the programme director is responsible for the day-to-day management and support activities of the programme. Courses within the programme are part of the programme curriculum, but all of the courses are taught by chair groups within the University. Chair groups are part of one of the five Science Groups of the University. In chair groups, expertise on specific subjects is clustered. The programme director maintains contacts with chair groups regarding design, contents and quality of the courses they deliver. The learning goals, contents, teaching methods and assessment methods are subject to the approval of the Programme Committee and the Board of Education. Each year, in the Education Modification Cycle, these are discussed. For all of the programmes of the University, four Examining Boards are in place. For this programme, four other Bachelor programmes and nine Master programmes, the Examining Board Environment and Landscape has the authority to ensure the quality of examinations and assessments.

The number of incoming students in the programme has risen considerably, going from about 20 students per year in 2010 and 2011 via little over 30 students per year from 2012 to 2015 to nearly 60 students per year in 2016 and 2017. Students tend predominantly to opt for the major Environmental Quality and Systems Analysis (natural sciences perspective) or the major Environmental Technology (technological sciences perspective) and less for the major Environmental Policy and Economics (social sciences perspective). The programme will become English-taught and will admit international students.

Programme management presented a table, mapping the intended learning outcomes to the curriculum components. The curriculum has a study load of 180 EC and takes three years to complete. The curriculum has been organised along separate learning lines or pathways, being the foundation courses and the domain and specialisation, integration, skills training and self-directed learning pathways. The foundation courses (33 EC) are scheduled in the first year and go into the disciplines mathematics, physics, chemistry, microbiology and biochemistry and ecology. The domain and specialisation pathway (84 EC) consists of the common part (42 EC) and the major specialisation part of the curriculum (42 EC). In the courses of this pathway, the natural, social and technological sciences perspectives on environment and sustainability issues are offered to all students. The courses of the major specialisations go more in-depth into either one of these perspectives. The integration pathway (33 EC) is composed of mandatory courses, integrating the three perspectives. These courses may be offered by lecturers from different chair groups. In these courses, students work in small groups on complex environment and sustainability problems, some of which are real-life problems. In some of the more advanced integration courses, excursions to sites abroad are included. In addressing these problems, students are required to reflect on the societal and ethical dimensions of their research.

The skills training and self-directed learning pathways train students in academic skills, such as project management, group dynamics, presentation and academic writing skills and in shaping students' study plans. The skills trainings are part of the courses, mentioned. At the end of the curriculum, students are given 30 EC time for electives. They may also take a minor or spend part of the curriculum at other Universities or abroad. About 40 % of the students go abroad.

About 58 lecturers are involved in the programme. As has been indicated, courses are offered by chair groups. Lecturers in the programme are active researchers, doing research within their chair group. Most lecturers are members of the Wageningen Institute for Environment and Climate Research, which was evaluated very good to excellent on the assessment criteria in the recent research assessment. Lecturers indicated to include their research in their lectures. About 93 % of the lecturers in the programme are PhDs. The proportion of lecturers being BKO-certified is 71 %. Lecturers within chair groups meet very regularly. Lecturers of different chair groups may teach in courses together. Teacher days are scheduled by programme management, but these are not intensively attended. Students expressed before the panel and in the student chapter to be very appreciative of the teaching qualities of the lecturers and their being easily contacted.

The entry requirements are secondary school for higher education (vwo) diploma, having completed either the Nature & Health, including Physics, or the Nature & Technology profiles. In the curriculum, students are introduced to the social sciences perspectives on environment and sustainability issues.

The programme educational concept is to promote active learning on the part of the students. The study methods adopted in the programme are selected in line with this concept and include lectures, small-group tutorials, lab sessions, excursions and practical field work. Lectures, tutorials and lab sessions dominate and each take about 30 % of the total number of contact hours. Courses in the programme may be offered to joint groups of students of different programmes. Programme-specific tutorials are, however, scheduled. This applies, among others, to the courses in mathematics. The number of hours of face-to-face education in the programme is very appropriate. The students-to-staff ratio is 11 : 1. Students regard the study load of the programme sometimes maybe too low, but find the periods at the end of semesters rather demanding. In the first year, students have to report 36 EC. If they do not succeed, they will have to leave the programme. Students are guided through the programme by the study advisor, who meets with them individually at least twice in the first year. The study advisor monitors the students' study progress and advises them on the choices to be made in the programme, among which their major choice. Being advised by the study advisor, the Examining Board approves the individual study programmes of students. The student success rates are on average 53 % after three years (figures for 2012 to 2014 cohorts) and on average 83 % after four years (figures for 2011 to 2013 cohorts).

Considerations

The panel regards the organisation of the programme to be appropriate. The panel recommends to prepare the organisation for increasing student numbers and for growing diversity among students. One of the ways may be to offer more international cases.

The curriculum matches the intended learning outcomes of the programme. The panel is very positive about the contents and the coherence of the curriculum. The pathways going through the curriculum ensure the clear organisation and the coherence of the curriculum. The courses are solid. The natural and social sciences perspectives in the curriculum are balanced. The integration courses are designed well and add to the coherence, as chair groups collaborate in these courses. The panel recommends to state the contents and the goals of the skills training and self-directed learning pathways more clearly.

The panel regards the lecturers in the programme to be very motivated and to be appreciated by the students. They are practically all PhDs and they are intensively engaged in current, relevant research, referring to their research in their lectures. Their educational capabilities are regarded by the panel to be up to standard as well, although the proportion of BKO-certified lecturers may be increased. The panel advises to promote SKO-certification among lecturers. Although lecturers within chair groups and across chair groups meet regularly, the teaching days organisation should be improved to attract more lecturers.

The entry requirements and admission procedures of the programme are appropriate. The panel advises to specify entry requirements for international students, as the programme will become English-taught and will admit international students.

The panel finds the educational concept and the study methods of the programme adequate, promoting student-activating learning. Study methods and teaching approaches being different across chair groups, the panel proposes to align these, in case of inconsistencies. Students identify with the programme, although they may be in classes with students from other programmes. The panel encourages programme management to investigate new, ICT-based study methods. The students-to-staff ratio and the number of hours of face-to-face education are adequate. The study guidance by the lecturers and the study advisor is appropriate, as is the system for designing individual study plans. The panel recommends to introduce a tracking system to monitor and improve student study progress. The panel advises to balance the study load, making the programme more demanding and distributing the study load more evenly over the curriculum. The student success rates are appropriate.

Assessment of this standard

These considerations have led the assessment panel to assess standard 2, Teaching-learning environment, to be good.

4.3 Standard 3: Student assessment

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

Findings

The examinations and assessments in the programme are governed by the Education and Examination Regulations of Wageningen University and the Rules and Regulations of the Examining Boards of the University. As has been indicated, the Examining Board Environment and Landscape has the authority to ensure the quality of examinations and assessments of the programme.

Examination methods in the programme include written examinations, individual and group assignments, reports of practical exercises and field work. Examination methods are selected to conform to the course goals. In most courses, multiple examinations are scheduled, to allow for different course goals to be adequately assessed. In case of group assignments, peer review among students is taken into account to counter free-riding effects. The Examining Board checks the peer review reports and ensures group work not to have too much weight in the final grades for the courses.

The Bachelor thesis is an empirical study in the student's major field. Chair groups organise thesis markets to allow students to orientate on thesis subjects. Thesis processes are monitored by thesis coordinators in chair groups. The thesis has been composed of the design phase (3 EC) and the thesis writing phase (9 EC). In the thesis process, students are guided by their supervisor. The theses are assessed on the basis of research competencies (30 % to 40 %), the written report (50 % to 65 %), the colloquium (5 %) and the final discussion (5 %). The thesis is assessed by the supervisor and the second reader, using both a scoring form and a rubrics form. The supervisor and second reader may add comments. Theses assessments are calibrated within chair groups, but as a rule not in calibration sessions across chair groups.

In the programme, measures are taken to ensure the validity, reliability and transparency of examinations and assessments. The Examining Board appoints the examiners, who should be involved in the courses as lecturers or coordinators and who should be BKO-certified. Every four to five years, the Examining Board reviews the examinations and assessments of each of the chair groups, contributing to the programme, to verify if these meet quality requirements. Every two to three years, each of the chair groups invites external experts to review the course contents and the course examinations. The grade distributions of examinations and theses are submitted to the Examining Board. The Board will inspect the examinations in more detail in case of deviant distributions. Examiners are required to present model answers, assessment criteria and rubrics to substantiate the assessments and grades given. Students may inspect their own work and may request feedback on their work. The Examining Board handles cases of fraud or plagiarism and imposes sanctions. The number of cases in this programme has been very low.

Considerations

The panel considers the examination and assessment policies for the programme to be appropriate, these being in line with the Wageningen University rules and regulations. The position and authority of the Examining Board for this programme are appropriate, the Board being in control of the examinations and assessments of the programme.

The panel approves of the examination methods adopted in the programme, as these are consistent with the goals and the contents of the courses. Skills are part of the examinations. The panel considers the measures taken to counter free riding to be adequate. The panel proposes to test the academic skills and self-directed learning competencies more explicitly and to add formative assessments, such as portfolios.

The supervision and assessment procedures of the Bachelor thesis are adequate. Students are offered appropriate supervision. The assessment processes are up to standard, involving two examiners and being conducted using elaborate scoring forms. The panel advises to add more extensive written comments to the assessment forms to substantiate the grades. The panel suggests to organise calibration sessions across chair groups.

The measures taken to ensure the validity and transparency of examinations and reliability of assessments are adequate. The panel appreciates the chair groups inviting external experts to review the examinations and the Examining Board inspecting the quality of the examinations and assessments of the chair groups. The fraud and plagiarism formalities are up to standard.

Assessment of this standard

The considerations have led the assessment panel to assess standard 3, Student assessment, to be satisfactory.

4.4 Standard 4: Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Findings

The panel studied the examinations of a number of courses of the programme.

The panel also reviewed the Bachelor theses of fifteen graduates of the programme with different grades. All majors were evenly represented in this sample.

In the Bachelor thesis, students have to demonstrate being able to design, plan and execute research in their major field. The entire empirical research cycle is to be covered. The average grade for the Bachelor theses is 7.6 (figure for all graduates from 2015 to 2017).

Students are admitted to a wide range of master programmes, within Wageningen University or in other Universities in the Netherlands.

Considerations

The panel regards the course examinations, which were reviewed by the panel members, to be up to standard.

The panel supports the grades awarded to the Bachelor theses. The theses certainly were not graded too high. The panel considers the theses to be very solid, having good problem statements and research questions and demonstrating strong theoretical and methodological design and very appropriate analyses and conclusions.

The panel is convinced the students completing the programme have reached the intended learning outcomes and regards the graduates of this programme to be well prepared to continue their studies at master level in this domain. The panel is positive about the wide range of master programmes graduates are admitted to.

Assessment of this standard

The considerations have led the assessment panel to assess standard 4, Achieved learning outcomes, to be good.

5. Overview of assessments

Standard	Assessment
Standard 1. Intended learning outcomes	Satisfactory
Standard 2: Teaching-learning environment	Good
Standard 3: Student assessment	Satisfactory
Standard 4: Achieved learning outcomes	Good
Programme	Good

6. Recommendations

In this report, a number of recommendations by the panel have been listed. For the sake of clarity, these have been brought together below.

- To phrase the academic skills and self-directed learning competencies more clearly in the intended learning outcomes, to state the contents and the goals of these skills and competencies more clearly in the curriculum and to test them more explicitly.
- To prepare the organisation for growing student numbers and for growing diversity among students.
- To promote SKO-certification among lecturers.
- To promote attendance by lecturers to the programme teaching days.
- To specify entry requirements for international students, as the programme will become English-taught and will admit international students.
- To align study methods and teaching approaches in the programme across chair groups, in case of inconsistencies.
- To investigate new, ICT-based study methods.
- To balance the study load, making the programme more demanding and distributing the study load more evenly across the curriculum.
- To introduce a system to track and monitor students' study progress.
- To add more extensive written comments to the assessment forms of Bachelor theses to substantiate the grades.
- To organise calibration sessions about thesis assessments across chair groups.