

Assessment report
Limited Framework Programme Assessment

Bachelor Information Science

Open University of The Netherlands

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1. Executive summary

In this executive summary, the panel presents the main considerations which led to the assessment of the quality of the Bachelor Information Science programme of Open University of The Netherlands, which has been 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, as published on 20 December 2016 (Staatscourant nr. 69458).

The panel considers the objectives of the programme to train students in the design and implementation of information systems to be solid. The intended learning outcomes meet the programme objectives, although the former seem to be directed too strongly towards automation. The panel recommends to formulate the intended learning outcomes more broadly, in information science terms, aligning these better with the objectives of the programme and to rephrase the term *computerisation of processes* in the intended learning outcomes to allow for this broader approach. The intended learning outcomes meet the ACM/AIS Information Systems model curriculum and to the European e-Competence Framework. They therefore match the international requirements for this domain. The intended learning outcomes conform to the bachelor level, as exemplified by the Dublin descriptors. The panel proposes to address the positioning of the programme vis-à-vis other programmes in The Netherlands and abroad more elaborately.

In the panel's opinion, the relations of the programme with the professional field are appropriate.

The panel regards the organisation of the programme to be solid.

The curriculum of the programme meets the intended learning outcomes. The panel suggests, however, to present the alignment of the course goals with the intended learning outcomes more clearly.

The panel considers the curriculum to be up to standard, but would like to make some suggestions to improve the curriculum. As the number of dedicated information science courses is rather limited, the panel advises to raise the proportion of these courses in the curriculum and to address information science in a more comprehensive way. In addition, the panel proposes to strengthen the theoretical and the research components of the curriculum. The research knowledge and skills addressed in the curriculum refer mainly to case studies and surveys. The panel advises to include the design science methodology strongly in the curriculum, as this research methodology is more fitting for the programme domain.

The panel is positive about the lecturers in the programme. They are experts in their fields and qualified for lecturing, as exhibited by the substantial proportion of them being BKO-certified. The panel is also positive about the permanent education policies for the programme. The panel advises to raise the number of lecturers having PhD's in the programme. In this respect the panel looks favourably upon the plans of programme management to do so.

The panel considers the admission requirements and the admission procedures of the programme to be adequate. The panel does not doubt the exemptions policy, but suggests to investigate the exemptions procedures to avoid allowing students too many exemptions, especially when courses have been taken a long time ago.

The course materials in the programme are appropriate, allowing students to complete the programme. The panel is also positive about the learning system and the virtual and face-to-face meetings for students. In addition, the panel is positive about the study advisors roles in guiding the students through the programme. The panel, however, advises to monitor the time students take to complete the programme, as the lead times are very long.

The panel considers the examination and assessment policies for the programme to be up to standard. The position and the authority of the Examination Board are adequate as well.

The panel regards the choice of examination methods to be appropriate, these examination methods meeting the course contents. The panel observed six courses or 20 % of the courses to have multiple-choice examinations as the examination method and finds this proportion satisfactory.

The measures taken by programme management to ensure the validity of the examinations and the reliability of the assessments are considered by the panel to be appropriate. To improve the system further, the panel suggests to adopt test matrices for all of the courses.

The design and the assessment of the Bachelor Project are adequate, but the panel proposes to introduce assessment forms or rubrics for the assessment of these Projects.

Although the Examination Board has the authority to ensure the quality of examinations and assessments, the panel feels the Board may supervise the examination and assessment regulations more strictly. The panel also recommends the Examination Board to inspect examinations on a regular basis in order to verify their quality.

The panel noted no final projects of graduates of the programme were yet available. As a consequence, the panel was not in a position to assess the fourth standard of the limited framework.

The panel which conducted the assessment of the Bachelor Information Science programme of Open University of The Netherlands assesses this programme to meet the first three 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 satisfactory with regard to those three standards. The panel is not in a position to recommend NVAO to accredit this programme, as the fourth standard could not be assessed by the panel.

Rotterdam, 3 April 2018

Prof. dr. ir. M.F.W.H.A. Janssen
(panel chair)

drs. W. Vercouteren
(panel secretary)

2. Assessment process

The evaluation agency Certiked VBI received the request by Open University of The Netherlands to manage the limited framework programme assessment process for the Bachelor Information Science programme of this University. This 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 Information Sciences convened to discuss the composition of the assessment panel and to draft the list of candidates.

Having conferred with management of the Open University programme, 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. ir. M.F.W.H.A. Janssen, full professor ICT and Governance, head of Information and Communication Technology research group, Faculty Technology, Policy and Management, Delft University of Technology (panel chair);
- Prof. dr. G. Poels, full professor Management Information Systems, director Business Informatics research unit, Department of Business Informatics and Operations Management, Ghent University (panel member);
- Prof. dr. U. Frank, full professor of Information Systems and Enterprise Modelling, Institute of Computer Science and Business Information Systems, University of Duisburg-Essen (panel member);
- E.E.M. Leo BSc, student Master Educational Sciences, University of Amsterdam, (student member).

On behalf of Certiked, drs. W. Vercouteren 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.

At the time of the preparation of the site visit nor at the time of the site visit itself, no final projects of graduates of the programme were yet available. Therefore, no final projects were selected and panel members did not review any final projects.

The panel chair and the panel members were sent timely the self-assessment report of the programme, including appendices. In the self-assessment report, the student chapter was included.

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 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 panel considered the preliminary findings concerning the quality of the programme. 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 3 November 2017, the panel conducted a site visit on the Open University of The Netherlands campus. The site visit schedule was in accordance with the schedule as planned. In a number of separate sessions, panel members were given the opportunity to meet with Faculty Board representatives, programme management, Examination Board representatives, lecturers and final projects examiners, students and representatives of the professional field.

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. As no final project of graduates of the programme were available, the panel abstained from assessing the fourth standard of the limited framework.

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.

Due to an unfortunate misunderstanding, panel member prof. dr. Frank was unable to be present during the site visit nor could he attend the preliminary meeting of the panel. Having been informed about the absence of prof. Frank, programme management agreed to proceed with the site visit as planned. The panel chair and the panel members also were in agreement to proceed with the site visit. Prof. Frank did, however, participate fully in the preparations of the panel for the site visit, sending in a list of preliminary findings and submitting a number of questions to be put to the programme representatives. In addition, prof. Frank through a skype connection took part in the closed session of the panel at the end of the site visit, being informed about the site visit discussions with the programme representatives and giving his views and assessments regarding the programme quality. Prof. Frank also fully participated in commenting on the draft assessment report. At the completion of the assessment process, the panel agreed this process to have been conducted in a sound way.

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 Information Science
Orientation, level programme: Academic Bachelor
Grade: BSc
Number of credits: 180 EC
Specialisations: not applicable
Location: Heerlen
Mode of study: Part-time (instruction in Dutch and in some courses English material)
Registration in CROHO: 56842

Name of institution: Open University of The Netherlands
Status of institution: Government-funded University
Institution's quality assurance: Approved

Open University of The Netherlands adopted a new educational model, with the main objective to lower student drop-out rates and to raise student success rates. The model includes, among others, more strictly organised study guidance, study periods of fixed duration, blended learning and the introduction of a new online learning system. This educational model was implemented in the Bachelor Information Science programme in the year 2016/2017. In the same year, the programme curriculum was redesigned. Since the results of the new educational model and the curriculum redesign are not yet known, the panel found it advisable to assess the current curriculum and the current educational model.

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 main objectives of the Bachelor Information Science programme of Open University are to educate and train students to become professionals with an academic education, who can contribute to the design and implementation of information systems in an organisational and societal context.

The objectives of the programme are both to educate students to enrol in master programmes in this domain at Open University or other universities and to prepare students for the labour market. Positions open to graduates of this programme include those of business analyst, systems analyst or IT consultant.

Programme management translated the objectives into a series of intended learning outcomes, specifying domain-specific knowledge and skills, academic and research skills, professional skills, communication skills and societal and ethical awareness.

Programme management presented a table to show the intended learning outcomes to correspond to the Dublin descriptors for bachelor level programmes.

Programme management presented tables demonstrating the programme intended learning outcomes to conform to the international Information Systems model curriculum of ACM/AIS of 2010 and to the European e-Competence Framework.

For the programme, an Advisory Board is in place, with members representing industry. Programme management regularly discusses the programme requirements from the perspective of the professional field in order to adjust the programme to these requirements.

Considerations

The panel regards the objectives of the programme to train students in the design and implementation of information systems as solid.

The intended learning outcomes meet the programme objectives, although the latter seem to be directed too strongly towards automation. The panel recommends to formulate the intended learning outcomes more broadly, in information science terms, aligning these better with the objectives of the programme and to rephrase the term *computerisation of processes* in the intended learning outcomes to allow for this broader approach.

The programme intended learning outcomes correspond to the ACM/AIS Information Systems model curriculum and to the European e-Competence Framework and as a consequence match the international requirements for this domain.

The intended learning outcomes conform to the bachelor level, as exemplified by the Dublin descriptors.

The panel proposes to address the positioning of the programme vis-à-vis other programmes in The Netherlands and abroad more elaborately.

The relations of the programme with the professional field are appropriate.

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

The Bachelor Information Science programme is a programme of the Faculty of Management, Science & Technology of Open University of The Netherlands. This Faculty is the merger of the former Faculties of Management Science, Computer Science and Environmental Science. On behalf of the Dean, the Director of Education is responsible for the quality of this and three other Bachelor programmes of the Faculty. The programme leader of the Bachelor programme supervises programme contents and quality on a day-to-day basis. The programme leader may consult the Curriculum Committee in case of adjustments in the curriculum. Courses and examinations are evaluated regularly by students and lecturers. The Examination Board is responsible for overseeing the examination processes and the examinations and assessments.

Incoming students may register for separate courses or may enrol to complete the programme as a whole. When entering, students should indicate whether they enrol to take separate courses or to complete the programme. The programme started in September 2012. Since that year, little over 300 students enrolled with the goal of completing the entire programme.

Programme management presented a table to demonstrate the curriculum meeting the intended learning outcomes of the programme.

The current curriculum consists of about 30 courses, including the Bachelor Project. A number of courses in the curriculum is shared by this programme and the Bachelor Computer Science programme. In the first, introductory course, students may opt for either the Computer Science programme or Information Science programme. The curriculum is structured in learning trajectories, which address programming and technology, modelling and system development, data and information management, project management, management and organisation and academic and research skills. Three courses are specifically designed to address information science subjects. Six courses in the curriculum, including the Bachelor Project, (total credits of nearly 40 EC) are meant to train students in academic and research skills. Included in the curriculum is a course on ethics. All courses are updated regularly. Currently, the curriculum is undergoing major changes to, among others, increase the proportion of information science courses.

Programme management designed the curriculum in terms of the preferred order of courses and in terms of the number of credits per period and suggests students to take courses in this order. Students may, however, design their own study plan, which may deviate from this order and which may also deviate in terms of the number of credits per period. Students are assisted in designing their study plan by the study advisors of the programme. The study advisors validate study plans in terms of compliance with the programme Teaching and Examination Regulations.

The number of lecturers teaching in the programme is 42 lecturers in total. About 57 % of these lecturers obtained their PhD. Newly recruited lecturers are required to be PhD's. Research targets for staff are introduced. About 93 % of these lecturers are University Teaching Qualification (BKO)-certified. In line with permanent education policies of Open University, lecturers are allotted 40 hours per year to take teaching courses and improve their teaching skills. Lecturers in the programme meet every two months to discuss the programme. Meetings of lecturers are scheduled in between these regular sessions.

As has been indicated, about 300 students enrolled in the programme. From this number, 150 students or 50 % are still active. The remainder of the students either are inactive or actually left the programme. No students completed the programme yet. Anyone of 18 years or older is admitted to the programme without restrictions. Prospective students are informed about the programme through the Open University website. In addition, applicants may take part in introductory sessions or so-called start days.

Students may apply for exemptions. Requests for exemptions are handled by the Committee for Admissions and Exemptions, working under the authority of the Examination Board.

The educational concept of the programme is designed for distant learning and self-study by students. The student-to-staff ratio in the programme is 48.3 to 1, meaning one full-time equivalent of teaching capacity for little over 48 students. Course materials are drafted to allow students to study the course contents largely on their own. To that effect, study materials include, among others, learning goals, study suggestions, exercises, assignments, solutions to assignments and feedback. For each of the components in the study material, the study load has been calculated and is presented to the students. To support their learning processes, students have access to the Open University on-line learning system. Through this system, students may communicate with their teachers and with fellow-students. Students may either work alone or in groups or in class. In case of group work, students may come together in face-to-face meetings. In some courses, lectures are scheduled. These are recorded for students who could not be present. The number of group meetings, either face-to-face or on-line may be two to three in about 50 % of the courses. The programme study advisors monitor the study pace of the students.

Considerations

The panel regards the organisation of the programme to be solid.

The panel has established the curriculum of the programme to meet the intended learning outcomes. The panel suggests, however, to present the alignment of the course goals with the intended learning outcomes more clearly.

The panel considers the curriculum to be up to standard, but would like to make some suggestions to improve it. As the number of dedicated information science courses is rather limited, the panel advises to raise the proportion of these courses in the curriculum and to address information science in a more comprehensive way. In addition, the panel proposes to strengthen the theoretical and the research components of the curriculum. The research knowledge and skills addressed in the curriculum refer mainly to case studies and surveys. The panel advises to include the design science methodology strongly in the curriculum, as this research methodology is more fitting for the programme domain.

The panel is positive about the lecturers in the programme. They are experts in their fields and qualified for lecturing, as exhibited by the substantial proportion of them being BKO-certified. The panel is also positive about the permanent education policies for the programme. The panel advises to raise the number of lecturers having PhD's in the programme. In this respect the panel looks favourably upon the plans of programme management to do so.

The panel considers the admission requirements and the admission procedures of the programme to be adequate. The panel does not doubt the exemptions policy, but suggests to investigate the exemptions procedures to avoid allowing students too many exemptions, especially when courses have been taken a long time ago.

The course materials in the programme are considered by the panel to be appropriate, allowing students to complete the programme. The panel is also positive about the learning system and the virtual and face-to-face meetings for students. In addition, the panel is positive about the study advisors roles in guiding the students through the programme. The panel, however, advises to monitor the time students take to complete the programme, as the lead times are too long.

Assessment of this standard

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

4.3 Standard 3: Student assessment

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

Findings

The programme examination and assessment regulations correspond to the Open University examination framework. This framework is in line with applicable legal and formal rules in The Netherlands. The Faculty of Management, Science & Technology Examination Board has the authority to ensure and monitor the quality of the examinations and assessments processes and results of this programme. The chair of the Board has an independent position vis-à-vis the Faculty.

In the courses, multiple-choice examinations, written examinations with open questions, assignments and oral examinations are used. Courses in the beginning of the curriculum are directed towards knowledge acquisition and tend to be assessed by means of multiple-choice or open questions examinations. The number of multiple-choice examinations is limited. Courses later in the curriculum tend to have assignments as examinations methods, as application of knowledge is more central to these courses.

In all courses, two examiners are responsible for drafting the examinations. These examiners have to be BKO-certified and have to be appointed by the Examination Board. For some of the course examinations, test matrices are adopted, aligning course learning goals and the examination questions. Multiple-choice examinations are generated automatically from a large database of questions. These examinations are assessed automatically as well. For open questions examinations and assignments, scoring models are drafted. Oral examinations are assessed by two examiners. Fraud and plagiarism procedures for the programme are strict.

The course plan for the Bachelor Project specifies the steps to be taken by students. These steps include, among others, formulating the research question, developing the conceptual model and selecting the research methodology. Bachelor theses may be written within companies, but should always include scientific research questions. Students are supervised by one of the lecturers in the programme. The Bachelor Project is assessed by two examiners, being the supervisor and the second reader.

Considerations

The panel considers the examination and assessment policies for the programme to be up to standard. The position and the authority of the Examination Board are adequate as well.

The panel regards the choice of examination methods to be appropriate, these examination methods meeting the course contents. The panel observed six courses or 20 % of the courses to have multiple-choice examinations as the examination method and finds this proportion permissible.

The measures taken by programme management to ensure the validity of the examinations and the reliability of the assessments are considered by the panel to be appropriate. To improve the system further, the panel suggests to adopt test matrices for all of the courses.

The design and the assessment of the Bachelor Project are adequate, but the panel proposes to introduce assessment forms or rubrics for the assessment of these Projects.

Although the Examination Board has been given the authority to ensure the quality of examinations and assessments, the panel feels the Board may supervise the examination and assessment regulations more strictly. The panel also recommends the Examination Board to inspect examinations on a regular basis in order to verify their quality.

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

As has been indicated, the panel did not review any final projects or Bachelor Projects of graduates of the programme, as these are not yet available.

Considerations

Not having been able to review any Bachelor Projects, the panel abstains from expressing any considerations regarding this standard.

Assessment of this standard

The assessment panel was not in the position to assess standard 4, Achieved learning outcomes.

5. Overview of assessments

Standard	Assessment
Standard 1. Intended learning outcomes	Satisfactory
Standard 2: Teaching-learning environment	Satisfactory
Standard 3: Assessment	Satisfactory
Standard 4: Achieved learning outcomes	Not Assessed
Programme	First three standards satisfactory

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. These panel recommendations are the following.

- To align the intended learning outcomes more with the programme objectives, to formulate them in more broad terms and to rephrase the terms of *automation* and *computerisation of processes* in the intended learning outcomes.
- To address the positioning of the programme vis-à-vis other programmes in The Netherlands and abroad more elaborately.
- To present the alignment of the course goals to the intended learning outcomes more clearly.
- To raise the proportion of these courses in the curriculum and to address information science in a more comprehensive way.
- To strengthen the theoretical and the research components of the curriculum.
- To include the design science methodology strongly in the curriculum, as this research methodology is more fitting for the programme domain than social/behavioral research paradigms that aim for description and explanation through surveys and case-study research.
- To raise the number of lecturers having PhD's in the programme.
- To investigate the exemptions procedures to avoid allowing students too many exemptions, especially when courses have been taken a long time ago.
- To monitor the time students take to complete the programme, as the lead times are too long.
- To reconsider the duration of examinations being valid, as courses and examinations may become outdated.
- To introduce test matrices for all of the courses.
- To introduce assessment forms or rubrics for the assessment of the Bachelor Projects.
- To have the Examination Board supervise the examination and assessment rules and regulations more strictly.
- To have the Examination Board inspect examinations on a regular basis in order to verify their quality.

**Assessment report
Limited Framework Programme Assessment**

Bachelor Information Science

Open University of the Netherlands

K.P. van der Mandelelaan 41a

Postbus 701, 3000 AS Rotterdam

T 010 - 201 42 43

E info@certiked-vbi.nl

www.certiked-vbi.nl

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1. Executive summary

In this executive summary, the panel presents the main considerations with regard to the assessment of the achieved learning outcomes of the Bachelor Information Science programme of Open University of the Netherlands. The panel assessed the achieved learning outcomes of the programme in line with standard 4 of the limited framework, as laid down in the NVAO Assessment framework for the higher education accreditation system of the Netherlands, as published on 20 December 2016.

This assessment is intended to complete the assessment of the Bachelor Information Science programme of 3 November 2017. On 3 November 2017, the first three standards of the NVAO limited assessment framework were assessed by the panel. The achieved learning outcomes could at that time not be evaluated, as no final projects of students were yet available.

The panel studied the one Bachelor Project that was available as well as the goals, contents, examinations and assignments of eight courses in the programme. These courses were selected, to cover all of the intended learning outcomes of the programme.

The panel has established the courses meeting the intended learning outcomes as well as the examinations of the courses being aligned with the course goals and contents. Consequently, the examinations reflect the programme intended learning outcomes. The examinations address both domain-specific knowledge and skills and academic and professional competencies.

The panel regards the contents and the level of the examinations of the courses selected to be up to standard. In the panel's view, the grades given by the programme examiners meet the quality of the examinations and assignments, as completed by students. The panel proposes to ensure a consistent course contents and examinations update strategy to ensure courses and examinations being up-to-date.

The Bachelor Project, reviewed by the panel, is appropriate and merits the grade given by the programme examiners. In the panel's view, the project report was well written and complied with the requirements of final projects in this domain at bachelor level. The problem in the Bachelor Project was of a practical nature, but was approached from an academic perspective with the student making use of academic research methods.

While the Design Science research methodology fits the profile of the programme very well, the panel proposes for Bachelor Projects in general to allow the use of other research methods, too. The panel recommends for both examiners to fill out and document their assessments of the Bachelor Project separately.

The panel regards the programme to be valuable, as it allows students to proceed in their work and to foster their careers.

The panel considers the students upon completion of the programme to reach the intended learning outcomes of the programme. The examinations of the courses selected and the Bachelor Project meet the intended learning outcomes, have adequate contents and are of appropriate level.

The panel which has assessed the achieved learning outcomes of the Bachelor Information Science programme of Open University of the Netherlands according the NVAO Assessment framework judges the programme to be satisfactory with regard to standard 4 of this framework. As this standard is assessed to be satisfactory and the first three standards were found to be satisfactory in the 3 November 2017 assessment, the panel recommends NVAO to accredit this programme.

Rotterdam, 5 February 2020

Prof. dr. ir. M.F.W.H.A. Janssen
(panel chair)

drs. W. Vercooteren
(panel secretary)

2. Assessment process

Evaluation agency Certiked VBI received the request by Open University of the Netherlands to organise the process to assess the achieved learning outcomes of the Bachelor Information Science programme of this University. The objective of this assessment is to establish whether the programme would conform to the requirements of standard 4 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).

This assessment of the achieved learning outcomes of the programme is intended to complete the programme assessment of 3 November 2017, in which the first three standards of the NVAO limited framework were assessed. In this prior assessment, the panel was unable to obtain a clear view on the achieved learning outcomes. The reason for this was no final projects of students were yet available. In the letter to Open University of the Netherlands of 26 September 2018, NVAO specified the procedures for this additional assessment.

The panel which has assessed the achieved learning outcomes of the Bachelor Information Science programme of Open University of the Netherlands was to a large extent the same as the panel which assessed the panel on 3 November 2017. Only the student member was replaced. The composition of the panel was as follows:

- Prof. dr. ir. M.F.W.H.A. Janssen, full professor ICT and Governance, head of Information and Communication Technology research group, Faculty Technology, Policy and Management, Delft University of Technology (panel chair);
- Prof. dr. G. Poels, full professor Management Information Systems, director Business Informatics research unit, Department of Business Informatics and Operations Management, Ghent University (panel member);
- Prof. dr. U. Frank, full professor of Information Systems and Enterprise Modelling, Institute of Computer Science and Business Information Systems, University of Duisburg-Essen (panel member);
- L. van Laar MA, student MSc Public Administration and Organisations Science: Public Management, Utrecht University (student member).

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

All panel members and the secretary confirmed in writing to be impartial with regard to the programme to be assessed and to observe the rules of confidentiality. Having obtained the authorisation by the University, evaluation agency 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 discussed with programme management the outline of the self-assessment report on the achieved learning outcomes, the subjects to be addressed in this report and the site visit schedule. The planning of the activities in preparation of the site visit were discussed as well. In the course of the process preparing for the site visit, programme management and the Certiked process coordinator had contact to fine-tune the process. The activities prior to the site visit have been performed as planned. Programme management approved the site visit schedule.

The panel chair and the panel members were sent the self-assessment report of the programme, including appendices in time. In addition, panel members were provided the final Bachelor Project which was available and the examinations of a range of courses of the programme. Thus far, only one Bachelor Project has been completed by students of the programme. Panel members were sent the Trained Eye document of evaluation agency Certiked as the elaboration of the NVAO Assessment framework.

Prior to the assessment of 3 November 2017, the panel chair in the present assessment was informed about the competencies, listed in the NVAO profile for panel chairs.

Before the date of the site visit, all panel members submitted their preliminary findings, based on the programme self-assessment report. They also sent in 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 the starting point for the discussions with programme representatives on the day of the site visit.

Prior to the meetings with programme representatives on the day of the site visit, the assessment panel met to consider the preliminary findings concerning the achieved learning outcomes of the programme, the procedures to be adopted during the site visit, and the questions to be put to the representatives of the programme.

On 28 January 2020, the panel conducted the site visit on the campus of the Open University of the Netherlands. The site visit schedule was in accordance with the schedule as planned. In a number of separate sessions, panel members were given the opportunity to meet with Faculty Board representatives, programme management, lecturers and examiners, and students. On the day of the site visit, the panel was provided with additional information, among which course material of the courses selected and examinations and assignments of these courses, completed by students and covering a range of grades.

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

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 Information Science
Orientation, level programme: Academic Bachelor
Grade: BSc
Number of credits: 180 EC
Specialisations: not applicable
Location: Heerlen (distant learning)
Mode of study: Part-time (instruction in Dutch and in some courses English material)
Registration in CROHO: 22NC-56842

Name of institution: Open University of the Netherlands
Status of institution: Government-funded University
Institution's quality assurance: Approved

4. Findings, considerations and assessments standard 4

4.1 Standard 4: Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Findings

The number of graduates of the programme is one at this moment. As students work and study in parallel, the programme may be considered to be very challenging to complete. At this moment, four students are in the Bachelor Project drafting process. Due to the change in the educational design of this and other programmes of Open University, the number of graduates may be expected to rise.

To substantiate the judgment about the achieved learning outcomes of the programme, the panel not only reviewed the final Bachelor Project available, but also extensively studied the examinations of the courses which together with the Bachelor Project cover the intended learning outcomes of the programme. As the panel considered one Bachelor Project to be too low a number of final projects to base the assessment of the achieved learning outcomes upon, the panel decided to take into account the examinations of eight of the courses in the programme.

The courses of which the examinations were studied by the panel, were Business Process Modelling (4.3 EC), Model-Driven Development (4.3 EC), Information Systems Requirements (4.3 EC), Information Science Practical (4.3 EC), Project Management: Implementing ERP (4.3 EC), Methodological Literature Review – Academic Skills 3 (4.3 EC), Research for Business and Management – Academic Skills 5 (4.3 EC), and Problem Statement and Research Steps – Academic Skills 6 (4.3 EC). The final Bachelor Project Information Science comprises 17.2 EC. All these courses are obligatory courses in the programme and are, therefore, taken by all students. These courses, including the Bachelor Project, comprise more than 30 percent of all obligatory courses in the curriculum, this figure being calculated on the basis of study load. The courses selected and studied by the panel are curriculum components of the programme assessed, but will also be part of the renewed, updated curriculum.

Programme management drafted lists of crucial elements of the programme as well as of overviews of relations within the programme. From these lists and overviews, the following has been derived by the panel. The programme intended learning outcomes specify knowledge and skills in the domain of information science, academic and research skills, professional skills, communication skills and societal and ethical awareness. Ten intended learning outcomes have been specified for the programme. The courses selected cover all of the programme intended learning outcomes. With the exception of the intended learning outcome on ethical awareness, all intended learning outcomes of the programme are addressed in at least two of the courses selected. For each of the courses, multiple learning goals have been listed. The learning goals of the courses selected address all programme intended learning outcomes.

One of the intended learning outcomes addresses skills to collaborate in multi-disciplinary teams. In the Academic Skills 3 course, students work in groups of two students, reflecting on each other's work. In the Bachelor Project, students may meet and comment on each other's work. The new programme will allow for more group work.

Programme management provided detailed course descriptions of the courses selected, including the course examinations. Examinations have to meet the course learning goals. For the examinations in the courses, test matrices have been designed. These test matrices show all of the course learning goals to be reflected in the examinations of each of the courses. All draft course examinations are reviewed by two examiners. The examinations of the courses selected are multiple-choice examinations, written examinations with open questions, case-based written examinations, and assignments. Academic and research knowledge and skills are mainly assessed by assignments, such as reading, critically reflecting upon and summarising academic articles. In the Project Management: Implementing ERP course, students read and analyse articles, compiled in the course reader.

The Bachelor Project is assessed by both the supervisor and the second reader. The assessment of the Project takes the form of checking the assessment criteria and adding written comments to Bachelor Project assessment forms. The oral defence by students is an obligatory component of the Project. Both examiners review the theses separately. Both examiners fill out assessment forms. One common form is filled out on the basis of both assessors' assessments. The assessment rubrics form is fitted to the Design Science research methodology. The Design Science research methodology allows capitalizing on the working experience of students.

Most students in the programme work in the professional field. Students studying in the programme do so to become more fully equipped to gain positions in the professional field, to perform the tasks connected to their current positions or to have the opportunity to be promoted. The programme intends to educate students to become *scientific professionals*, being able to approach problems in the professional field from an academic perspective and on a methodological basis. Students with whom the panel met, expressed course contents, examinations and assignments to go together well with their professional experiences.

Considerations

The panel has verified the alignment of the courses to the intended learning outcomes of the programme to be consistent and convincing. The examinations are also well-aligned to the course contents and course goals. Consequently, the course examinations reflect the intended learning outcomes of the programme. The examinations address both domain-specific knowledge and skills and academic and research competencies. As one recommendation, the panel proposes to incorporate in the examinations and assignments not only reflections on team efforts, but also reflections on student's own activities.

The panel regards both the contents and the level of the examinations of the courses selected to be up to standard. Especially, the case-based written examinations and assignments are considered by the panel to be challenging. In the panel's view, the grades awarded by the examiners in the programme meet the quality of the examinations and assignments, as completed by students. The panel proposes to have a consistent course contents and course examinations update strategy to ensure courses and examinations being up-to-date.

The panel assesses the Bachelor Project, reviewed by the panel, to be appropriate and to merit the grade, which was given by the programme examiners. In the panel's view, the project was well written and complied with the requirements of final projects in this domain at bachelor level. As a minor point for further improvement, the panel suggests to relate the results of the interviews more clearly to the theory, derived from the literature studied by the student. The problem addressed in the Bachelor Project was of a practical nature, but was approached from an academic perspective and by using academic research

methods. The panel notes the student having benefitted from the Bachelor Project in the student's professional careers, testifying to the notion of training students to become scientific professionals.

While the design science method fits the profile of the programme very well, the panel proposes for Bachelor Projects in general to allow the use of other research methods, too. The panel recommends for both examiners to fill out and document their assessments of the Bachelor Project separately.

The panel considers the programme to be valuable, as it allows students to gain suitable positions or to progress in their work and to foster their careers. The panel was impressed in this respect by the students with whom the panel had the opportunity to meet.

The panel considers the students upon completion of the programme to reach the intended learning outcomes of the programme. The examinations of the courses selected and the Bachelor Project meet the intended learning outcomes, have adequate contents in terms of the programme domain and in terms of academic and research knowledge and skills and are of appropriate level.

Assessment of this standard

The assessment panel assesses standard 4, Achieved learning outcomes, to be satisfactory.

5. Overview of assessments

Standard	Assessment
Standard 4: Achieved learning outcomes	Satisfactory
Programme	Satisfactory

The programme is assessed as satisfactory on the basis of the outcomes of the current assessment and the assessment of 3 November 2017 with regard to the first three standards of the NVAO limited assessment framework.

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. These panel recommendations are the following.

- To incorporate in the examinations and assignments not only reflections on team efforts, but also reflections on student's own activities.
- To ensure a consistent course contents and course examinations update strategy to ensure course contents and course examinations being up-to-date.
- To align competencies in applying the Design Science research methodology with other academic and research competencies.
- To raise the transparency of the Bachelor Project assessment by having both examiners fill out and document their assessments separately.