

Assessment report
Limited Framework Programme Assessment

MA Construction Management Engineering
University of Twente

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	11
4.4 Standard 4: Achieved learning outcomes	13
5. Overview of assessments	14
6. Recommendations	15

1. Executive summary

In this executive summary, the panel presents the main considerations, which led to the assessment of the quality of the Master Programme Construction Management and Engineering of the University of Twente in Enschede. 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, as published on 20 December 2016 (Staatscourant nr. 69458).

Developments in the field of Engineering (such as globalization, new technology, digital innovation, increasing complexity and multi-disciplinarity) have led to the need of graduates who are able to combine knowledge about (project) management with profound technical knowledge so as to steer and manage complex problems in Construction Engineering. The panel established that the programme's intended learning outcomes are drafted according to the Meijers criteria and match with level 7 of the Netherlands Qualification Framework. The learning outcomes are similar to the learning outcomes of the Msc. programme in Civil Engineering and Management, also offered by TU Twente, the panel recommends the programme strongly to distinguish the learning outcomes of these programmes.

The programme offers two specializations, one on Digital Technologies in Construction Management and the other on Markets and Organization of Construction Management. The programme benchmarked its learning outcomes against other programmes in Construction Management and Engineering in the Netherlands. The programme's connections to the research departments of the University and to professional practice allow the programme to stay up to speed with academic developments and developments in the practical field of engineering. The intended learning outcomes are assessed as satisfactory.

Within their specialisation students choose from a variety of courses. The programme has several formal and informal instruments in place to ensure that students obtain all learning outcomes, however, the relation between learning outcomes of the programme as a whole and the individual study path of a student could be improved. The programme uses a varied set of educational methods, which suit the programme's ambitions and is adapted to the student population for each course. The programme allows students to obtain competency in conducting research. After completion of their coursework, students develop a proposal for their thesis project, which is carried out either at a company or organisation or in one of the research groups of the University of Twente. Although there are various reasons for students not to finish their studies within time, the panel encourages the programme to improve the success rates. The staff members involved in the programme are experts on their subject as well as qualified teachers. The panel encourages the programme to attract a diversity of nationalities among its staff members. The teaching and learning environment allows students to obtain the learning outcomes and is assessed as satisfactory.

The programme's system of assessment is based on the university-wide policies. These policies rest on constructive alignment as a basic principle through which education can be organized. The quality assurance system ensures revision and improvement of assessment. The examination board has the responsibility to safeguard the quality of assessment and performs its tasks according to the policies. The panel discussed the thesis assessment form and suggests improvements can be made in order to clarify the grade given to students. The panel is especially positive about the recently introduced peer-review system in which lecturers review each other's assessment. The panel assessed the third standard, assessment, as good.

The panel is positive about the realised learning outcomes. The panel studied 15 theses, which show that the programme's graduates have expert knowledge and are able to conduct research in the field of Construction Management and Engineering. The panel discussed the extent to which students show that they are able to reflect on the used methodologies and suggests the programme could strengthen this aspect in the setup of the thesis. The programme's graduates are successful in pursuing their career and employers are positive about the performance of its graduates. The panel assessed the fourth standard, achieved learning outcomes, as satisfactory.

The panel that conducted the assessment of the Master programme in Construction Management and Engineering of the University of Twente 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 satisfactory. Therefore, the panel recommends NVAO to accredit this programme.

Rotterdam, 25 March 2019

Prof. dr. P. Bosch
(panel chair)

Jetse Siebenga MSc.
(panel secretary)

2. Assessment process

The evaluation agency Certiked VBI received the request by the University of Twente in Enschede to support the limited framework programme assessment process for the Master Construction Management and Engineering 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).

The management of the programmes in the assessment cluster Civil Engineering convened to discuss the composition of the assessment panel and to draft the list of candidates.

Having conferred with management of the 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. Petra Bosch, Professor of Management, Technology and Innovation, Chalmers University of Technology (Chair);
- Prof. dr. Jos Arts, Professor of Environmental and Infrastructure Planning, Rijksuniversiteit Groningen;
- Dr. Ir. Adriënne van der Sar, staff of the Delta Programme Commissioner;
- Quinten Swanborn BSc, student Master Industrial Engineering & Management, Rijksuniversiteit Groningen.

On behalf of Certiked, J.W. Siebenga MSc. served as the secretary in the assessment process. The overall coordination of the assessment cluster Civil Engineering was executed by drs. W. Vercouteren.

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 last two complete years. Acting on behalf of the assessment panel, the process coordinator selected 15 final projects from this list. The grade distribution in the selection was ensured to conform to the grade distribution in the list, sent by programme management.

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 8 and 9 November 2018, the panel conducted the site visit on the University of Twente Campus. The site visit schedule was in accordance with the schedule as planned. In a number of separate sessions, the panel was given the opportunity to meet with Faculty Board representatives, programme management, Examination Board representatives, lecturers and final projects examiners, professional field 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: M Construction Management and Engineering

Orientation, level programme: Academic Master

Grade: MSc.

Number of credits: 120 EC

Specialisations: Digital Technologies in Construction
Management and Organization of Construction

Location: Enschede

Mode of study: Full-time (language of instruction: English)

Registration in CROHO: 21PH-60337

Name of institution: University of Twente

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 Master Construction Management and Engineering of the University of Twente is a two-year (120 EC), research-based, interdisciplinary master programme in the domain of Civil Engineering. The programme started as a combined effort of the three technical universities (3TU) in the Netherlands. Although the general vision behind the programme is similar to all three universities, the specific execution of the programme depends on the local character as well as on the available expertise within each university. The University of Twente offers, in addition a Bachelor in Civil Engineering in this domain, and another Master programme, which is the Master in Civil Engineering and Management.

The programme's objectives are to educate a generation of engineers, which is able to cope with the increased complexity of management in Construction Engineering. The increased complexity of project management is a result of several developments such as internationalisation, increasing use of (digital) technologies and an increase in the need of multidisciplinary perspectives and knowledge in order to provide robust solutions. The programme aims to qualify students for the independent professional practice in Civil Engineering and to prepare students for enrolment in PhD-programmes and PDEng-programmes in the field of Civil Engineering. The programme performed a benchmark from which it becomes clear that the programme focuses stronger on management aspect than other Dutch Universities and most international universities and includes studying markets and the organisation of the construction industry.

The learning outcomes conform to the Meijers Criteria, which have been developed by the 3TU Federation and are related to the Netherlands Qualification Framework (NQLF). An international benchmark in 2018 compares the programme to four other international programmes (the benchmark was a combined 3TU-effort). It shows that none of the other programmes address the interface of architecture, building and planning with technology management and innovation. Therewith the programme is unique. Compared to the other Dutch programme's in Construction Management and Engineering, the programme focuses more on the management aspects of Civil Engineering and includes studying markets and the organization of the construction industry. In comparison to the programme in Civil Engineering and Management, also offered by the UT, the programme has exactly the same learning outcomes.

Graduates of the programme have to be able to identify gaps in scientific knowledge, formulate research problems, contribute to acquiring scientific knowledge and combine appropriate theories from business and /or public administration with technical knowledge and apply this in an integral way within civil engineering systems, projects or processes. They have to be able to take contextual factors into account when designing solutions and analysing problems. The programme did not draft specific learning outcomes for the two specialisations.

The research groups to which the staff of the programme is connected are of high stance and allow the programme to be up-to-speed with regard to academic developments, allowing the programme to be in tune with academic developments.

The learning outcomes of the Dutch Civil Engineering programmes are regularly reflected on by an advisory council representing industry and government, the Dutch OCIB (Stichting Universitair Onderwijs Civiele Techniek voor Bedrijfsleven en Overheid). Representatives of the professional and

field as well as alumni expressed their appreciation for the programme's learning outcomes during the site visit, and emphasized the importance of the distinguishing profile of the programme in terms of attention for business/public administration and soft skills. The programme and its graduates are highly appreciated by the professional field.

Considerations

The panel is positive about the learning outcomes of the programme. They reflect a master's level and are well-formulated. The programme maintains a clear profile, which is recognized and appreciated by the professional field. The panel advises the programme to stronger distinguish the learning outcomes of those formulated for the programme in Civil Engineering and Management and the programme in Construction Management and Engineering. The differences between these programmes are not clear from the intended learning outcomes. In addition, the committee suggests the programme could maintain some general intended learning outcomes for the programme as a whole and develop specific learning outcomes for each specialisation.

The learning outcomes of the programme provide insight to what can be expected of graduates of the programme, and give, in general terms, insight in the specialized character of the programme's graduates. The benchmark performed by the programme shows that the programme is aware of its comparative value and strengths and weaknesses. The panel agrees upon the outcomes of this benchmark and compliments the programme for the niche it covers.

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

Organization and student body

The programme is offered by the department of Civil Engineering. The programme director is responsible for the day-to-day management of the programme, the MSc. Programmes and the graduate school. The programme director is assisted by the programme coordinator. The Programme Committee, being composed of lecturers and students, advises programme management on the quality of the programme. The Faculty Examination Board has the authority to ensure the quality of the examinations and assessments of this programme and the other programmes in the field of Civil Engineering.

The programme admits students with a relevant BSc. degree from an approved university and with sufficient mastery of the English Language (IELTS 6.5, TOEFL 90). Most students entering the programme have a background in programmes with a strong technical focus such as Construction Engineering or Civil Engineering. Students with a different profile mainly have a background in design studies, such as Architecture. Students with a Civil Engineering bachelor degree from a university of applied science are admitted to a pre-master programme as well as students with a deficiency of more than 15 EC in relevant courses. Students with a deficiency less than 15 EC can start the programme and recuperate the missing knowledge during the programme. Students with a background in Architecture have to take several courses to address certain knowledge gaps. They are sufficiently prepared to follow the programme and have additional value. The programme starts with an introduction for all students during which students are taught about cultural awareness.

The number of students entering the programme is about 25 students per year with most students entering the programme with a BSc. from a Dutch Technical University. The percentage of international students is 30%. The programme notes that students with a BSc. from another university than the University of Twente, and especially certain groups of international students, seem to have less developed soft skills and are less used to project work. They have to get used to the mode of study at the University of Twente. During the site visit, the committee learned from the students that within due time they start to get accustomed to the programme's approach and develop appreciation for it. From students with a background in Architecture, the panel learned that the programme is doable,

The programme

The programme has structured the courses on offer by the two specialisations: Digital Technologies in Construction and Management and Organization of Construction. The structure of each specialisation is in the current situation as follows: Each specialization consists of several profile courses (30 EC – 40 EC compulsory courses) and electives from which students follow a selection (30 EC – 40 EC). In addition, students can choose a maximum of 15 EC free electives. All students follow a Master thesis preparation course of 5 up to 10 EC and the 30-EC thesis itself.

Students are quite free to compose an individual programme. It is the student's responsibility to select courses and develop a study path. Students have to think about their choices in an early stage and discuss their choices with a profile coordinator. The profile coordinator takes into account the interest of the student, the intended learning outcomes of the programme and the coherency of the courses in guiding the student. Students are not obliged to discuss their programme with the profile coordinator, but the programme stimulates students to do so by for example organizing a lunch with the students that and the

specialisation coordinator at the very beginning of the programme. To ensure that all students have obtained the learning outcomes, the administration of the programme checks before students graduate whether all learning outcomes have been accomplished and to this end uses a matrix containing all courses and their relation to the learning outcomes of the programme. If a student lacks a certain learning outcome he or she will have to follow an additional course.

Courses within each specialisation on offer are amongst others: Innovation in Construction, Building Information Modelling and 5D planning, Digital Technologies for Civil Engineering, as well as Legal and Governance Aspects, Construction Industry Dynamics and Infrastructure Asset Management.

The main objective of the thesis is for students to independently carry out a large individual research project, applying state-of-the art scientific knowledge of Construction Management and Engineering. The project can be carried out externally at a civil engineering entity or internally within one of the department's research groups. The programme improved the thesis writing process by making the aims and learning objectives of the thesis and of the thesis preparation course more explicit. Students who struggle to finish their thesis are invited to a writing group in order to stimulate student's progress. The programme provided the success rates, which indicate that the group of students finishing the programme in two years has been on average less than 20% with some years less than 10%. The percentage of students finishing the programme after three years has been on average less than 80% with a number of students not being able to finish their study within four years. From discussions with students the panel learned that students are not specifically keen on graduating within two years. Reasons for delay, which are common are that students who study abroad decide to enlengthen their stay, there is a group of students who combines their studies with a job and some students decide to increase the length of their MSc thesis at an external company.

The programme uses a variety of teaching methods such as lectures, tutorials, practicals, tutor sessions, excursions as well as guided self-study. In addition, the programme has provided a table which shows the extent to which a student with a typical profile is made familiar with research, either by being exposed to examples of research, reading scientific papers or doing research or design assignments. Courses are taken by students from several MSc. Programmes within the University of Twente. Courses that are considered large by the programme are followed by 40-60 students, courses which are regarded small are followed by 10-15 students. Students feel that the relatively small scale of the programme allows them to easily communicate with staff members and strengthens the sense that there is a real academic community. Study guidance is available to all students who are in need of advice and for students who wish to study abroad or to do an internship (both abroad as well as local), information is available. The students are also informed about the courses that are available at the other Dutch Technical Universities which have the programme on offer. In practice, the extent to which students take courses at other Dutch Universities is limited but there are students who do follow courses of their interest at one of the other Technical Universities of the Netherlands.

Staff

The vast majority of the staff has obtained a PhD (91%) and is involved in both teaching and research. The percentage of staff members with a University Teaching Qualification (UTQ) is 74%, in case a staff member did not obtain a UTQ this is mostly because of a recent appointment. The programme aims to attract more international staff members, currently 20% of the staff members have an international background.

Considerations

The panel has established that the learning outcomes are translated into the learning objectives of the modules. Although the programme's elective part is an important element, the programme has measures in place to stimulate that all students follow a coherent programme and that the individual student's

programme allows him or her to obtain the intended learning outcomes. The panel suggests the programme to reflect on whether a formal approval on the elected courses before the student starts his or her electives would help to safeguard that students do not have to follow additional courses after they have requested graduation.

The admission policies are adequate and clearly communicated through the website of the university. The courses on offer within each specialisation provide students with a broad choice of relevant and interesting courses. The students are guided in this process by an academic staff member who is also coordinator of the specialisation. The staff and research groups are of high quality and the quantity of staff is sufficient to deliver the programme. The panel encourages the programme to attract more staff members with an international background, so as to stimulate the development of an international community.

The educational methods used provide students with a varied learning experience. The committee felt that students are challenged throughout the programme, in their intellectual, creative and communicative capacities. The small-scale character of the programme allows students to explore their interests and develop their own learning path within the academic community. The committee is therefore positive about the teaching and learning environment of the programme.

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.
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Findings

The programme's examination and assessment rules are derived from the TU Twente assessment policy. This policy describes constructive alignment as an important principle through which assessment should be developed on a programme level. Other principles and procedures for the examinations are worked out in various documents such as the rules and regulations from the examination board and a description of quality assurance concerning assessment policies.

The programme uses various assessment methods, which include assignments, open question exams. Multiple choice exams, combined exams, oral exams, open book exams and presentations. A number of courses contain group work. The methods are selected in line with the nature of the course goals to be assessed. Lecturers compile a module manual that describes the content, the learning objectives and the assessment methods used in the module. The programme closely monitors student's satisfaction with regard to assessment. In the national student survey, assessment scores 3.8 on a 5-point scale. Although this score is above the national average of 3.65, the programme seizes the opportunity to improve the assessment and installed a peer-feedback system in which lecturer's evaluate each other's test plans, assessment methods, student workload and the results of student evaluation, after completion of a course.

The system allows the programme to systematically pinpoint what kind of improvement can be made. Other quality assurance processes on assessment contain ex-ante and ex-post checks on the assessment. Ex-ante checks are a check of the actual tests by an assessment expert from the faculty, and

the approval of a course manual by the programme director. After the exam a lecturer evaluates the exam and receive the results of the student survey.

Students prepare their thesis during the course 'Preparation MSc. Thesis'. The proposal is graded by the department's supervisors with the same form as is used for grading the actual thesis. The form lists four criteria and contains a grade scale. The grade scale is used as a calibration mechanism and ensures that grades given by different graduation committees follow a certain standard. The graduation committee consists of a chairperson (often a full professor), the daily supervisor and an external supervisor. The external supervisor informs the committee on what the student has accomplished at the company or organisation where the thesis was written.

The examination board has the authority to monitor the quality of examination and assessment processes and products of the programme. The board spot-checks theses on a regular basis and all board members attend a student's defence at least twice a year as an observer. If the examination board disagrees with the mark given, it will discuss this with the lecturer. In addition, the examination board invites a lecturer to its (monthly) meetings during which the lecturer presents the assessment for a certain course. The examination board discusses the assessment with the lecturer and gives feedback to the lecturer.

Considerations

The panel is positive about the assessment system in place. The attention paid to quality of assessment and the assurance thereof is high. In the first place, the system ensures that a test is being reviewed before and after the test is held. Secondly, the programme oversees the assessment for the programme as a whole, ensuring that all intended learning outcomes are assessed several times throughout the curriculum and that the assessment methods used are varied. The committee is positive about the peer-review system, which will allow the programme to better address student's concerns. The panel has established that these concerns are of an acceptable level and that students are overall satisfied with the assessment.

Students are provided with information on the assessment criteria and the assessment method(s). The panel has also established that to students it is clear why they receive a certain grade and that students receive ample feedback on their thesis during the graduation ceremony. The assessment form used in order to assess the thesis is makes it difficult to derive why a certain grade was given since the criteria are very limited and the comments of the supervisor on each criterion are limited as well. The panel recommends the programme to review the thesis assessment form.

The examination board has an adequate system in place in order to ensure that assessment is carried out in compliance with the programme's policies. The panel is positive about the peer-review system, which is installed.

Assessment of this standard

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

4.4 Standard 4: Achieved learning outcomes

The programme demonstrates that the intended learning outcomes are achieved.

Findings

The programme collects information about graduate's success in the career they start after their studies by sending out a survey to its alumni and by interviewing companies. About 96% of the programme's graduates report to find a job easily, with 75% of the graduates finding a job within three months after graduation. The programme's graduates appear to be highly satisfied with the programme and score positive on the extent to which they feel that they have accomplished each separate intended learning outcome. The survey indicates that almost all graduates feel that they are well prepared for their jobs. This was confirmed by the alumni the panel spoke with. From the survey it appears that all graduates (96%) feel they are able or very well able to: work systematically and methodically, manage complex assignments in a multidisciplinary team, enhance his/her expertise, act in different roles depending on the situations and have the attitude to endorse personal development. Items of which three quarter of the population feels that he or she is able, or very well able to do so are the ability to generate novel ideas and the extent to which one is able to adhere to existing academic contexts. Employers are positive about the process approach of U-Twente graduates as well as their ability to deal with multidisciplinary problems.

Graduates of the programme find positions in a wide range of job fields. 10% of the programme's graduates continue their study with a PhD. The majority of the graduates (63%) find their first job at large companies (>1000 employees).

The panel studied a representative selection containing 15 theses. The theses contain in-depth studies of problems situated in a construction engineering context and provide either a (direction for) solution to the problem or a design with which solves the problem. The profile of the programme is reflected well in the thesis. Students integrate in their work managerial questions with technical aspects in construction engineering. All theses contain a reflection on the chosen methodology.

Considerations

The theses the panel reviewed reflect the programme's profile, a number of theses are clearly oriented towards processes relevant to Civil Engineering, such as the procurement process. Students' use both qualitative and quantitative methods to develop their solutions and designs. They have developed adequate models, analysis and designs of real-life problems. In addition, the theses contain recommendations for the company or organization with which the student writes his or her thesis. All theses show that students have attained the MSc.

The panel is positive about the extent to which graduates find a job and feel able to perform as expected and above. The appreciation for the programme's graduates as expressed by the professional field reflects the panel's impression that the programme succeeds in delivering highly knowledgeable and skilled graduates. The programme's reflection on realised learning outcomes in cooperation with the programme's alumni and the field allows the programme to reflect on the realised learning outcomes which may lead to adjustment of the programme or the intended learning outcomes.

Assessment of this standard

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

5. Overview of assessments

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

6. Recommendations

In this report, a number of recommendations by the panel have been listed. For the sake of clarity, the most important ones have been brought together below. The panel recommends the programme:

- to draft learning outcomes related to the specialisations;
- to differentiate the learning outcomes from the learning outcomes of the Master in Civil Engineering and Management, offered by the University of Twente;
- to improve the thesis assessment form so that it provides a clearer explanation of why a student received a certain grade;
- to attract more international staff members;
- to take measures that improve the study success rates.