

Points of improvements in response to the Accreditation 2018

On 9th of November 2018, Civil Engineering (BSc and MSc) was visited by an independent committee. This committee consists of experts in the field and was asked by the University of Twente to check the quality of the study programme. This happens at least every six years. Reports are made of the visitation and the development dialogue. These reports are important for the academic accreditation of the study programme from the government by the Dutch-Flemish Accreditation Organisation (NVAO), but are also very important for the continuous development and improvement of Civil Engineering (BSc and MSc). The University of Twente works with a bottom-up approach when it comes to quality assurance and improvement of the study programmes. The students themselves have a lot of influence in the development and improvement of their own education. To facilitate students, teachers and anyone who directly contributes to education to participate in improving the quality of Civil Engineering (BSc and MSc), the visitation panel's findings are listed below.

Civil Engineering (BSc); points for improvement from the visitation report:

Standard 1	Intended learning outcomes (The intended learning outcomes of the programme have been concretised with regard to content, level and orientation; they meet international requirements)
Assessment:	Satisfactory
Substantial findings:	The panel is positive about the growing involvement of the professional field for the programme.
Advise:	<ul style="list-style-type: none">• An aspect that can be addressed more explicitly in the intended learning outcomes are the intercultural competencies that students say to have developed during the programme.• In support of the tendencies addressed by the professional field, the panel recognized the importance of digitalization, safety and resilience. It recommends considering these topics of relevance to the programme and suggests addressing these more specifically in the intended learning outcomes and the programme.• The local aspects and terminology that remain important in specific areas should be addressed more specifically in order to ensure that staff members, students and graduates remain familiar with relevant terminology used in everyday' s local business.
Standard 2	Teaching-learning environment (the curriculum, staff and programme-specific services and facilities enable the incoming students to achieve the intended learning outcomes)
Assessment:	Good
Substantial findings:	The panel is positive about the efforts made by the programme to stimulate cultural exchange and the contacts students have with the professional field.
Advise:	<ul style="list-style-type: none">• The programme should have a more explicit identification of the courses that contain a local focus and for which it is inevitable that students learn local (Dutch) terminology.• The panel encourages the programme to effectively market the programme internationally, in order to increase the number of international students.• The panel encourages the programme to reconsider the minor so as to ensure that students use their time completely or partially to deepen their knowledge in a fundamental and specific way.

	<ul style="list-style-type: none"> Although the study success rates within four years are in par with the targets set by the ministry of education, the panel encourages the programme to improve the study success rates, so that more students finish the programme within three years. <p>The panel encourages the programme to attract more staff members with an international background, so as to stimulate the development of an international community.</p>
Standard 3	Assessment (the programme has an adequate assessment system in place)
Assessment:	Good
Substantial findings:	The attention paid to quality of assessment and the assurance thereof is high. The panel is positive about the peer-review system.
Advise:	<ul style="list-style-type: none"> The panel saw a contrast between the form used to assess the thesis proposal, which is quite elaborate, and the form used to assess the completed thesis, from which it is hard to derive why a certain grade was given since the criteria are very limited and the comments of the supervisor on each criterion somewhat limited in most theses the panel reviewed. The panel therefore recommends the programme to redesign the thesis assessment form and suggests developing a form which can be used for both the assessment of the thesis proposal and the assessment of a completed thesis.
Standard 4	Achieved learning outcomes (the programme demonstrates that the intended learning outcomes are achieved)
Assessment:	Satisfactory
Substantial findings:	-
Advise:	<ul style="list-style-type: none"> Based on the review of the thesis, the panel advises the programme to stronger connect the thesis preparation module (11) with the thesis (module 12) in terms of reflection on the choice of methodology.
General conclusion	Satisfactory

In response to the visitation the programme management discussed all results and points of improvements (of Bachelor and Master) with the Rector. The Programme Director will use these outcomes in his programme development plan.

Civil Engineering and Management (MSc)

Standard 1

Intended learning outcomes (The intended learning outcomes of the programme have been concretised with regard to content, level and orientation; they meet international requirements)

Assessment:

Satisfactory

Substantial findings:

The panel is positive about the learning outcomes of the programme. They reflect a master's level and are well-formulated.

Advise:

- The panel advises the programme to stronger distinguish between the specialisation of Construction Management and Engineering and the separate 4-TU master programme in Construction Management and Engineering.
 - With regard to skills concerning personal development, the panel suggests the programme to consider whether or not to strengthen them in the learning outcomes and advises them to address these in terms of the ability to reflect upon one's role in processes and projects and one's personal development.
 - The panel suggests the programme could maintain some general intended learning outcomes for the programme as a whole and develop specific learning outcomes for each specialisation. This will allow the programme to more specifically emphasize the differences between the specialisations and align the learning outcomes and the curriculum accordingly.
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Standard 2

Teaching-learning environment (The curriculum, staff and programme-specific services and facilities enable the incoming students to achieve the intended learning outcomes)

Assessment:

Satisfactory

Substantial findings:

The staff is of high quality and the quantity of staff is sufficient to deliver the programme. The programme offers interesting electives and the small-scale character of the programme adds to its charm.

Advise:

- The panel suggests the programme to reflect on whether a formal approval on the elected courses and their coherence, 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 for graduation.
 - The panel suggests the programme to reflect on the number of electives on offer, preventing that too many courses are followed by a small student body, which can lead to inefficient use of staff's capacity.
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Standard 3

Assessment (The programme has an adequate assessment system in place)

Assessment:

Good

Substantial findings:

The panel is positive about the installed peer-review system, which has a lot of potential of improving the assessment practices executed by the programme- not solely through the outcome of the reviews but by drawing lecturers' attention to assessment practices.

Advise:

- The assessment form used in order to assess the thesis 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.
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Standard 4

Achieved learning outcomes (The programme demonstrates that the intended learning outcomes are achieved)

Assessment:

Satisfactory

Substantial findings:

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.

Advise:

- The theses contain recommendations for the company or organization with which the student writes his or her thesis. In the eyes of the panel, these recommendations could sometimes be more elaborate.
- The panel recommends the programme to more explicitly require students to elaborate on the reflection after execution of the investigation in the thesis document.

General conclusion

Satisfactory

Construction Management Engineering (MSc)

Standard 1	Intended learning outcomes (The intended learning outcomes of the programme have been concretised with regard to content, level and orientation; they meet international requirements)
Assessment:	Satisfactory
Substantial findings:	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.
Advise:	<ul style="list-style-type: none">• 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 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.
Standard 2	Teaching-learning environment (The curriculum, staff and programme-specific services and facilities enable the incoming students to achieve the intended learning outcomes)
Assessment:	Satisfactory
Substantial findings:	The staff and research groups are of high quality and the quantity of staff is sufficient to deliver the programme.
Advise:	<ul style="list-style-type: none">• 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 panel encourages the programme to attract more staff members with an international background, so as to stimulate the development of an international community.
Standard 3	Assessment (The programme has an adequate assessment system in place)
Assessment:	Good
Substantial findings:	-
Advise:	The assessment form used in order to assess the thesis 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.
Standard 4	Achieved learning outcomes (The programme demonstrates that the intended learning outcomes are achieved)
Assessment:	Satisfactory
Substantial findings:	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.
Advise:	-
General conclusion	Satisfactory

Outcomes of the development dialogue with the panel (CE, CEM and CME):

Variety of the MSc Profiles

The panel questions the need for the profiles and the amount of choices students have within the profiles. For an outsider the profiles might be somewhat confusing, although students do not perceive them as such.

The panel states that the focus of the programme is very much in line with the needs of the students. They feel that students are provided with a solid base and are offered a lot of flexibility. The network of the programme is widespread, and students really benefit from it. On the other hand, the profiles might relate to the relatively high number of courses offered by the programme. Taking professors' workload into consideration, the panel advises the programme to include a cost-benefit analysis when reconsidering the programme. This could help them to decide which courses should be on offer and which are of less relevance.

Another suggestion is to decide on whether the core of each profile should be enlarged so that there is sufficient density in terms of student numbers and profile character. Reviewing the profiles could also lead to a stronger character of the separate master programmes CME and CEM.

Academic skills

The programme indicates that they can offer students a lot when it comes to personal development. This can be offered as a separate part of the curriculum or as extra-curricular. Not all teachers can contribute to this, but there is an increasing support for students, e.g. via the writing center. It is important to consider where to put the resources into and what amount of time is asked from students. Especially the soft skills should focus on the individual student. In the BSc the soft skills are integrated into the TOM model, but the MSc is much more focused on the content. Because of this, there could be a difference on this part between students of our own BSc and external BSc students. And advice could be to offer a Master course where the individual differences are equalized.

Workload

What are good suggestions for reducing the workload? Small groups are nice, but how is this sustainable? What should be the amount of choices you offer to a student in order to keep the same influx? The programme does not want to offer large-scale education. Students must complete the study independently, but there is also a need to accompany students. This applies for BSc students in particular, where the Twente Education Model is used. Teachers would like to know if students are on the right track, which obligates the teacher to choose for short-cycle testing. In addition, there is a lot of emphasis on making tests more explicit and objective. The previous issues are areas in which the workload should be reduced and controlled as much as possible.

Remaining subjects

The panel suggests that the programme should celebrate her successes of internationalization and to include cultural awareness in the Intended Learning Outcomes. The programme should make use of the existing 'best practises' in order to test and validate the ILOs.

The profile of CEM can be optimised by choosing a more technical focus. This does require investment in research. Finally, the panel advises to keep the depth of the programme, also in the minors.

Plan of action by the programme:

Following this advice, the programme would like to invest in a number of things.

1. Developing a MSc course of academic/professional skills to equalize the differences between our own BSc and external BSc students (zij-instromers) [budget of Quality Agreements is used for this purpose]
2. Cultural awareness training for staff, teachers and students. Creating more projects with an international character and making sufficient use of cultural knowledge and insights.
3. Besides paying more attention to international aspects, it is also important to expose students to the Dutch jargon and practices, as most of them will stay in the Netherlands. We will make a list of technical terms in various languages. Offering a Dutch-language minor for foreign students could be an option or pay attention to items like tendering or Dutch law and regulations.
4. Reviewing the profiles could also lead to a stronger character of the separate master programmes CME and CEM.