



NVAO • THE NETHERLANDS

# INITIAL ACCREDITATION

ACADEMIC MASTER

HUMANITARIAN ENGINEERING

University of Twente

SUMMARY REPORT

6 MARCH 2024



## 1 Peer review

The quality of a new programme is assessed by means of peer review. A panel of independent peers including a student reviews the plans during a site visit to the institution. A discussion amongst peer experts forms the basis for the panel's final judgement and the advisory report. The focus is on the curriculum, the teaching and learning environment, and student assessment.

The Accreditation Organisation of the Netherlands and Flanders (NVAO) takes a formal decision on the quality of the new programme based on the outcome of the peer review. This decision can be positive, conditionally positive or negative. Following a positive NVAO decision with or without conditions the institution can proceed to offer the new programme. Upon completion of the programme graduates are entitled to receive a legally accredited degree.

This summary report contains the main outcomes of the peer review. A full report with more details including the panel's findings and analysis is also available. NVAO bases an accreditation decision on the full report.

Both the full and summary reports of peer reviews are published on NVAO's website [www.nvao.net](http://www.nvao.net). There you can also find more information on NVAO and peer reviews of new programmes.

## 2 Panel

### Peer experts

- Prof. dr. Isa Baud, chair assessment committee NWA, 2011-2016 president of EADI European Association of Development Research and Training Institutes and emeritus Professor International Development Studies, Development at University of Amsterdam;
- Drs. Judith Sargentini, chair Supervisory Board ASKV/ Refugee support center was director of Médecins Sans Frontières Nederland until June 2023, previously Member of the European Parliament for Groenlinks;
- Dr. Nazli Y. Aydin, assistant professor at the Faculty of Technology, Policy and Management, Systems Engineering section at TU Delft;
- Vincent van der Wolf, student of the Master programme Population Health Management at Leiden University.

### Assisting staff

Ikrame Faris (secretary)

Reina Louw (NVAO policy advisor and process coordinator)

### Site visit

Enschede, 9 February 2024

### 3 Outcome

The NVAO approved panel has reached a positive conclusion regarding the quality of the master programme Humanitarian Engineering offered by the University of Twente. The programme complies with all standards of the limited NVAO framework.

The Master Humanitarian Engineering seeks to bridge the gap between innovative technologies and the socio-cultural realm, preparing engineering professionals to operate effectively in complex societal settings characterised by social, cultural, and economic constraints. Humanitarian engineering professionals are equipped to collaborate with a wide range of stakeholders and co-create appropriate technological solutions for communities that have limited resources. There is a high demand for these professionals in the global labour market and the graduate profile has been refined in consultation with representatives of the working field. The intended learning outcomes are well aligned with (international) professional needs, demands and standards. The panel advises to safeguard continued and sustainable involvement of the professional field to ensure the programme is kept up-to-date.

Strong elements of the teaching-learning environment include the didactic principles of challenge-based learning and community-based learning, the content of the curriculum and the quality of the teaching staff. The panel is also enthusiastic about the flexibility provided in the programme and the state-of-the-art facilities that are available for students. Given the diversity in the composition of the teaching staff, the panel recommends investing in a shared vision on a support and guidance system specific to the programme Humanitarian Engineering. The panel also encourages the management to once again request the Executive Board of the UTwente to make the list of countries exempt from the English language test more inclusive by enhancing accessibility for students from non-Anglo-Saxon but mainly English-speaking countries. This will provide access to potential students from the Global South.

The programme has a sound and transparent system of student assessment in place. The Examination Board plays an important role in ensuring the quality of (final) examinations and has taken up a proactive advisory role to the management. A wide variety of assessment methods is deployed and validity, reliability and transparency are guaranteed by several procedures. The panel supports the suggestion of the Examination Board to include individual assessments in the CBL-projects and recommends ensuring consistency and quality in formative assessments among the teaching staff through calibration of standards through peer review by the staff.

### 4 Commendations

The programme is commended for the following features of good practice.

1. Societal and scientific need – The programme addresses an important societal and scientific need in the field of humanitarian engineering. The panel is particularly appreciative of the combination of socio-cultural and engineering focus of the programme, which shows the programme's recognition that knowledge generation and application of technical solutions has to combine technical aspects and social contexts within an interdisciplinary approach to become effective.
2. Didactic approach – The didactic principles of challenge-based learning and community-based learning are considered highly suitable for the objectives of the programme, and reflect inter- and trans-disciplinary approaches.
3. Teaching staff – The enthusiasm and dedication displayed by the teaching staff are noteworthy. The staff members bring in a wide array of expertise from various disciplines. This instills confidence in their ability to create a stimulating learning environment.
4. Flexibility – The flexibility provided within the programme gives students the opportunity to define and shape their learning path according to their own interests and personal ambitions.

5. Available facilities – The programme offers state-of-the-art facilities that students can utilise at various moments during their study.

## 5 Recommendations

For further improvement to the programme, the panel recommends a number of follow-up actions.

1. Involvement of the professional field – Safeguard continued and sustainable involvement of the professional field to ensure the programme is kept up-to-date.
2. English language requirements – Adopt a more inclusive list of countries that are exempt from the English language test to encourage enrolment beyond Anglo-Saxon countries, acknowledging students from the Global South.
3. Support and guidance system – Establish a more structured student support and guidance system, specifically designed for the programme Humanitarian Engineering, to provide clear accountability within the programme.
4. Individual assessment CBL-project – Adopt the advice of the Examination Board to include an individual assessment (oral exam) in the CBL-projects.
5. Quality formative assessments – Strengthen cohesion and coherence among the teaching staff (from different faculties) by organising regular calibration sessions to standardise and guarantee quality of formative assessments.
6. Part-time programme – Consider offering a part-time programme in the future. This will improve the accessibility of the programme for specific groups, such as working professionals aspiring to new career opportunities.  
stakeholders – Customize the choice of language to the needs and demands of societal stakeholders.

## 6 What comes next?

NVAO grants initial accreditation to a new programme on the basis of a panel's full report. The decision is valid for a maximum of six years. For conditional accreditation other regulations apply. Upon accreditation the new programme will follow the NVAO review procedures for existing programmes. NVAO publishes the accreditation decision together with the full report and this summary report.<sup>1</sup>

Each institution has a system of quality assurance in place ensuring continuous follow-up actions and periodic peer-review activities. Peer reviews help the institution to improve the quality of its programmes. The progress made since the last review is therefore taken into consideration when preparing for the next review. The follow-up activities are also part of the following peer-review report. For more information, visit the institution's website.<sup>2</sup>

## 7 Summary in Dutch

Het panel oordeelt positief over de kwaliteit van wo-master Humanitarian Engineering van Universiteit Twente. Dit is de uitkomst van de kwaliteitstoets uitgevoerd door een panel van peers op verzoek van de Nederlands-Vlaamse Accreditatieorganisatie (NVAO). Voor deze beoordeling heeft het panel gesprekken gevoerd met de opleiding op 9 februari 2024.

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<sup>1</sup> <https://www.nvao.net/nl/besluiten>

<sup>2</sup> <https://www.utwente.nl/en/>

De masteropleiding Humanitarian Engineering heeft als doel een brug te slaan tussen innovatieve technologieën en het sociaal-culturele domein. Humanitarian engineering professionals worden klaargestoomd om adequaat te opereren in complexe maatschappelijke omgevingen die worden gekenmerkt door sociale, culturele en economische uitdagingen. Zij zijn uitgerust om samen te werken met een breed scala aan belanghebbenden en gezamenlijk passende technologische oplossingen te creëren voor gemeenschappen met beperkte middelen. Er is grote vraag naar deze professionals op de internationale arbeidsmarkt en het beroepsprofiel is tot stand gekomen in overleg met vertegenwoordigers uit het werkveld. De beoogde leerresultaten zijn goed afgestemd op de (internationale) eisen en behoeften. Het panel adviseert om voortdurende en duurzame betrokkenheid van het werkveld te waarborgen, zodat het programma up-to-date blijft.

Sterke elementen van de onderwijsleeromgeving omvatten de didactische principes van *challenge-based learning* en *community-based learning*, de inhoud van het curriculum en de kwaliteit van het docententeam. Het panel is ook enthousiast over de flexibiliteit die wordt geboden binnen het programma en de faciliteiten die beschikbaar zijn voor studenten. Gezien de diverse samenstelling van het docententeam, adviseert het panel te investeren in een gedeelde visie op een ondersteunings- en begeleidingssysteem dat toegespitst is op het programma Humanitarian Engineering. Het panel moedigt het management ook aan om het College van Bestuur opnieuw te verzoeken de lijst van landen die zijn vrijgesteld van een Engelse taaltest inclusiever te maken en uit te breiden met niet-Angelsaksische landen. Dit maakt het programma toegankelijker voor potentiële studenten uit het 'Mondiale Zuiden'.

De opleiding kent een gedegen en transparant systeem van studentenbeoordeling. De examencommissie speelt een belangrijke rol in het bewaken van de kwaliteit van (eind)examens en heeft een proactieve, adviserende rol op zich genomen richting het programmamanagement. Een grote variëteit aan beoordelingsmethoden wordt ingezet en validiteit, betrouwbaarheid en transparantie worden gegarandeerd middels verschillende procedures. Het panel ondersteunt het voorstel van de examencommissie om individuele toetsing in te zetten in CBL-projecten. Tevens beveelt zij aan om consistentie en kwaliteit in formatieve toetsing onder het docententeam te waarborgen, bijvoorbeeld door kalibraties middels peer-review.

Meer informatie over de NVAO-werkwijze en de toetsing van nieuwe opleidingen is te vinden op [www.nvao.net](http://www.nvao.net). Voor informatie over de Universiteit Twente verwijzen we naar de website van de instelling.<sup>3</sup>

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<sup>3</sup> <https://www.utwente.nl/en/>

