

Besluit

Besluit strekkende tot het verlenen van accreditatie aan de opleiding hbo-master Geoinformation Science and Earth Observation (Master) (nieuwe opleidingsnaam: Applied Geoinformatics) van de Universiteit Twente alsmede strekkende tot het toekennen van het bijzonder kenmerk Internationalisering en tevens strekkende tot instemming met de wijziging van de opleidingsnaam

Gegevens

datum	Naam instelling	: Universiteit Twente
30 oktober 2015	Naam opleiding	: hbo-master
onderwerp	Geoinformation Science and Earth Observation (Master)	
Besluit	(nieuwe opleidingsnaam: Applied Geoinformatics)	
accreditatie hbo-master	(77 EC)	
Geoinformation Science and Earth Observation (Master)	Datum aanvraag	: 29 december 2014
(nieuwe opleidingsnaam: Applied Geoinformatics) van de Universiteit Twente	Graad opleiding	: Master of Science
(003630)	Variant opleiding	: voltijd (postinitieel)
ons kenmerk	Locatie opleiding	: Enschede
NVAO/20152789/LL	Datum goedkeuren panel	: 14 juli 2014
bijlagen	Datum locatiebezoeken	: 6,7,8 oktober 2014
2	Datum visitatierapport	: 6 februari 2015; bijstelling 23 juni 2015.
	Instellingstoets kwaliteitszorg	: ja, positief besluit van 2 mei 2014

Aanvullende informatie

De NVAO heeft op 26 mei 2015 een gesprek gevoerd met het panel en daarbij nadere informatie gekregen over de onderbouwing van de oordelen ten aanzien van het hbo-masterniveau van de doelstelling en het programma, en de mate waarin onderzoek deel uitmaakt van het curriculum en de afstudeerwerken. Op basis van de toelichting door het panel heeft de NVAO vastgesteld dat deze oordelen voldoende zijn onderbouwd. Het panel heeft naar aanleiding van dit gesprek enkele tekstuele aanpassingen in het rapport gedaan waarmee de onderbouwing van de oordelen op deze punten duidelijker is verwoord. De NVAO heeft op 15 juli 2015 een bijgesteld beoordelingsrapport ontvangen en heeft dit betrokken in haar oordeelsvorming.

Als gevolg van het wijzigen van de titulatuur van hbo-opleidingen is de graad Master of Science aan de opleiding verbonden. Omdat de instelling tevens een wo-masteropleiding aanbiedt onder de naam Geoinformation Science and Earth Observation waaraan deze graad is verbonden, verzoekt zij bij brief van 1 september 2015 om het wijzigen van de opleidingsnaam in: Applied Geoinformatics.

Beoordelingskaders

- Beoordelingskader voor de beperkte opleidingsbeoordeling van de NVAO (Stcrt. 2010, nr 21523).

- Pagina 2 van 10 – Frameworks for the Assessment of Internationalisation: Distinctive Quality Feature Internationalisation (kader voor het bijzonder kenmerk internationalisering), 14 november 2011.
- Art.5a.2, lid 2a, onder a, van de WHW en de Regeling titulatuur hoger onderwijs.

Bevindingen

De NVAO stelt vast dat in het visitatierapport en de aanvullende informatie deugdelijk en kenbaar is gemotiveerd op welke gronden het panel de kwaliteit van de opleiding voldoende heeft bevonden en heeft geadviseerd tot toekenning van het bijzonder kenmerk Internationalisering.

Advies van het visitatiepanel

This report provides an overview of the panel's findings and considerations regarding the professional master's degree programme Geo-Information Science and Earth Observation of the University of Twente. The panel based its judgment on information acquired from the critical reflection, a number of selected GP reports, the interviews held during the site visit, additional reading material which was available during the site visit, and the digital learning environment. It found positive aspects as well as points for improvement. After careful consideration, it concludes that the professional master's programme Geo-Information Science and Earth Observation satisfies the requirements for re-accreditation. In addition, the panel grades the overall quality of 'internationalisation' of the programme as 'good' and advises the NVAO to award the programme a distinctive quality feature internationalisation.

Limited programme assessment

Standard 1

The panel studied the domain-specific framework of reference and finds it clearly formulated. The framework includes an adequate description of the characteristics of the field, developments and requirements and covers the academic and professional master's programme of the ITC Faculty well. The panel is enthusiastic about the general mission of the ITC Faculty to be a gateway for knowledge exchange on Geo-Information Science and Earth Observation for individuals and institutes from countries that are economically and/or technologically less developed. The professional master's programme has a strong technical and vocational focus. It teaches students how to solve problems by using and applying existing knowledge. The panel concludes that there is a clear demand in the international working field for vocational training in the field. However, the programme is also quite unique because only a few countries have a similar dual system of higher education as the Netherlands. Therefore, the long-term sustainability of the programme needs continuous assessment by the ITC Faculty. The panel studied the intended learning outcomes of the programme and judges them to be adequate, well-formulated, and relevant. They clearly meet international requirements with regard to content, level and orientation. Still, the panel feels that it is possible to further improve the intended learning outcomes by explicitly referring to more general competences.

Standard 2

The professional master's programme has a study load of 77 EC, which is spread over twelve months and three blocks. The curriculum of the programme is the same for all students and consists of an introductory period (2 EC) and 15 modules. The modules in the first block deal with the basic principles of Geo-Information, Remote Sensing, the System Earth, Data Integration, the User and Academic Skills. In Block 2, students take eight course

Pagina 3 van 10 modules. They are in-depth modules related to geoinformation technology, applied research system design and development. Block 3 focuses on the Graduation Project (GP). The panel is of the opinion that the curriculum of the professional master's degree programme is coherent and matches the available expertise at the ITC Faculty. The curriculum has a clear professional focus with sufficient attention for applied research. However, its professional profile could be strengthened further by introducing reflection, project management and entrepreneurship in the modules. The panel also recommends to include more training in communication with business organisations and technical report writing in the programme. Education at the ITC Faculty is based on the philosophy of 'life-long learning'. Other important didactic principles are 'blended learning', 'the international classroom'; and the 'ethically aware engineer and academic'. Although the didactical principles have not yet been streamlined with the didactic concept of the University of Twente, the panel established that they are well integrated in the programme and relevant.

The panel studied the admission criteria and considers them to be adequate. It is enthusiastic about the diversity of the student body: the vast majority of students originates from different continents outside Europe. The intake numbers of the programme are a point for concern, however. The panel has serious doubts about the long-term sustainability of the programme because the international recognition of the diploma is not self-evident. The panel is convinced of the value of the niche of the programme and urges the programme management to develop a stronger marketing strategy. The programme management should also consider options to offer the programme in a format more appealing to international students. The workload of the programme is high, but feasible. The panel understands the choice of the ITC Faculty to offer a programme that is as short and dense as possible. The programme management is actively monitoring the workload and is urged by the panel to continue doing so.

The panel is confident that the programme has a good teaching staff. Nevertheless, it recommends the programme management to encourage more staff to take the University Teaching Qualification and additional courses on internationalisation and the multicultural classroom. The quantity of the teaching staff is adequate. It appreciates the fact that the programme management has recently hired new staff members with a strong professional profile. The Programme Committee is functioning well, but could be more pro-active on strategic issues in the future.

Standard 3

Following the merger with the University of Twente, the ITC Faculty established one Examination Board (EB) for all of its courses. This EB works according to an annual cycle and is responsible for the assessment policy and for the safeguarding of the achieved learning outcomes. It also deals with complaints and exemption requests applicable to all examinations. The panel found that the EB is professional and has implemented clear procedures for assessment and control as well as adequate action points for the near future. It urges the EB to continue on the course it has set.

According to the panel, there is sufficient variation in the assessment types and the assessment procedure of the GP report is satisfactory. The GP procedure includes clear assessment instructions, multiple examiners and an extensive discussion about the final mark for the GP. Nevertheless, there are several opportunities to increase the transparency and quality of it further. The panel advises the programme to develop an instruction for students, to further specify the assessment criteria in terms of professional orientation and

Pagina 4 van 10 level, to archive separate assessment forms of the examiners, and to provide students with a written mark sheet after the thesis defence.

The panel read several GP reports. In general, the selected reports are well constructed, have clear objectives and show a logical line of reasoning. The panel assesses the quality of the GP reports as satisfactory. However, it was disappointed about design of some of them. In these reports, the panel would have liked to see more reflection on methods, more consultation of the recent international literature and a more developed problem analysis. In addition, the panel would like to suggest the ITC Faculty to include a reflective appendix in the thesis addressing the intercultural setting of the project. From the interviews with alumni and the alumni survey, it became clear that the programme is well-connected to the labour market. The vast majority of graduates finds employment soon after graduation.

Due to the satisfactory level of the project reports and the good connection to the labour market, the panel is convinced that the learning outcomes are achieved upon graduation.

Advies van het panel ten aanzien van het Bijzonder kenmerk Internationalisering

Standard 1

The mission of the ITC Faculty is to be a gateway of knowledge exchange in the field for individuals and institutes from countries that are economically and/or technologically less developed. The vision of the ITC Faculty on internationalisation is rooted in, and inherent to, its capacity-building mission. It includes linking up the content of education to relevant realworld problems, teaching students about research and professional practices worldwide, attracting an international student body, and responding to the needs of international students and the international working field. In the panel's opinion, the vision of the ITC Faculty on internationalisation is clear and supported by stakeholders. The link between the ITC and the university vision on internationalisation of global citizenship could be more explicit, however. The same applies to the verifiable objectives of this vision. Although the vision includes implicit and relevant verifiable objectives, they are not explicitly mentioned in a document. The ITC Faculty also needs to develop explicit procedures for the evaluation of this vision. Although there are still opportunities for improvement, the panel assesses the overall quality of this standard as satisfactory. The excellent integration of the capacity-building mission in its vision on the design of its international educational activities and the international reputation of the ITC Faculty are important factors in this decision.

Standard 2

The set of intended learning outcomes of the professional master's programme includes specific learning outcomes for internationalisation. They focus on the ability of students to operate and communicate in a multicultural environment. According to the panel, these learning outcomes are relevant, a clear reflection of the vision on internationalisation of the university and addressed in the programme. However, they are not formally tested at the moment. The panel advises the programme to develop more detailed ideas on how to test international and intercultural skills in the near future. The panel read several project reports. It established that the overall level of the reports is satisfactory. The majority of project reports showed a logical line of reasoning, was adequately constructed, and demonstrated sufficient English language skills. In some reports, the panel would have liked to see more reflection on methods, more consultation of the recent international literature and a better developed problem analysis. Most graduates are positive about their

Pagina 5 van 10 employability and feel that the international approach and the international learning environment at the ITC Faculty have broadened their understanding of cultural differences.

Standard 3

The panel concludes that the curriculum, the teaching methods and the learning environment of the professional master's programme match the vision on internationalisation of the university and the ITC Faculty, and the intended international and intercultural learning outcomes. The teaching methods of the programme focus on multicultural project work, reflection on international concepts and cases, and discussion about the work experiences that students bring in from their home country. The curriculum reflects this focus: modules discuss concepts and case studies from around the world, students are invited to compare problems and solutions with situations in their home countries, student take excursions to companies and organisations in Europe, and the development of intercultural competencies and communicative skills is stimulated through guided discussions and project work in international teams. In the panel's opinion, the ITC Faculty offers students a unique and stimulating multicultural learning environment. In this specific respect, it can be seen as an international 'best practice'.

Standard 4

The student-staff ratio for the professional master's programme is 1:4.2 for the 2012 courses and 1:6.25 for the 2013 courses. According to the panel the number of teaching staff is adequate. The panel is also positive about their general quality and engagement. The staff is well informed about recent developments in the field. It concludes that the staff of the programme has ample international experience and expertise. Furthermore, sufficient services are in place to facilitate their international experiences, intercultural competences and language skills. In addition, the ITC Faculty offers courses throughout the world. As a consequence, staff members continue to develop and expand their international experience and intercultural competences while they work at the ITC Faculty.

Standard 5

The majority of students at the ITC Faculty come from developing countries. Most of them originate from countries in Africa and Asia, but the ITC Faculty also attracts students from the Americas, Europe, and Australia/Oceania. The panel is very impressed by the international composition of the student group and concludes that the ITC Faculty is extremely successful in its mission 'to be a gateway for knowledge exchange for individuals and institutes from countries that are economically and/or technologically less developed'. According to the panel, students have ample opportunity to develop multicultural professional and communicative skills and international experience through the curriculum (formal and informal) and the international learning environment at the ITC Faculty. Important in this respect is the fact that many students come from abroad: for them, staying at the ITC Faculty is already an international experience in itself. Many services and facilities have been put in place to support international students

Aanbevelingen

De NVAO onderschrijft de aanbevelingen van het panel.

Naamswijziging

Op 1 september 2015 heeft de instelling de NVAO verzocht akkoord te gaan met de wijziging van de naam van de opleiding van Geoinformation Science and Earth Observation (Master) in: Applied Geoinformatics.

Pagina 6 van 10 De NVAO stemt in met de gevraagde naamswijziging op basis van de volgende onderbouwing:

- Bij brief van 7 augustus 2015 oordeelt de visitatiecommissie positief over de naamswijziging. De commissie stelt vast dat de nieuwe opleidingsnaam goed aansluit bij de doelstellingen en het programma van de opleiding. De commissie stelt vast dat de instelling niet voornemens is een nieuwe opleiding in te richten.

Ingevolge het bepaalde in artikel 5a.10, derde lid, van de WHW heeft de NVAO het college van bestuur van de Universiteit Twente te Enschede in de gelegenheid gesteld zijn zienswijze op het voornemen tot besluit van 28 september 2015 naar voren te brengen. Bij e-mail van 23 oktober 2015 heeft de instelling ingestemd met het voornemen tot besluit.

De NVAO besluit accreditatie te verlenen aan de postinitiële hbo-master Geoinformation Science and Earth Observation (Master) (nieuwe opleidingsnaam: Applied Geoinformatics) (77 EC; variant: voltijd; locatie: Enschede) van de Universiteit Twente te Enschede en het bijzonder kenmerk Internationalisering toe te kennen aan de opleiding hbo-master Geoinformation Science and Earth Observation (Master) (nieuwe opleidingsnaam: Applied Geoinformatics) van de Universiteit Twente te Enschede. De NVAO beoordeelt de kwaliteit van de opleiding als voldoende.

De NVAO stemt in met het verzoek van de instelling tot het wijzigen van de opleidingsnaam in: Applied Geoinformatics.

Graad: Master of Science

Dit besluit treedt in werking op 30 oktober 2015 en is van kracht tot en met 29 oktober 2021.

Den Haag, 30 oktober 2015

De NVAO
Voor deze:



Lucien Bollaert
Bestuurder

Tegen dit besluit kan op grond van het bepaalde in de Algemene wet bestuursrecht door een belanghebbende bezwaar worden gemaakt bij de NVAO. De termijn voor het indienen van bezwaar bedraagt zes weken.

Beperkte opleidingsbeoordeling

Standaard	Formulering Standaard	Beoordeling door het panel
1. Beoogde eindkwalificaties	De beoogde eindkwalificaties van de opleiding zijn wat betreft inhoud, niveau en oriëntatie geconcretiseerd en voldoen aan internationale eisen	Voldoende
2. Onderwijsleeromgeving	Het programma, het personeel en de opleidingsspecifieke voorzieningen maken het voor de instromende studenten mogelijk de beoogde eindkwalificaties te realiseren	Voldoende
3. Toetsing en gerealiseerde eindkwalificaties	De opleiding beschikt over een adequaat systeem van toetsing en toont aan dat de beoogde eindkwalificaties worden gerealiseerd	Voldoende
Eindoordeel		Voldoende

De standaarden krijgen het oordeel onvoldoende, voldoende, goed of excellent. Het eindoordeel over de opleiding als geheel wordt op dezelfde schaal gegeven.

Onderwerp	Standaard	Beoordeling door het panel
		voltijd
Bijzonder kenmerk Internationalisering	1. vision on internationalisation	Voldoende
	1.1 Shared Vision	Goed
	1.2 Verifiable objectives	Voldoende
	1.3 Improvement-oriented evaluations	Onvoldoende
	2 learning outcomes	Voldoende
	2.1 Intended learning outcomes	Voldoende
	2.3. Student assessment	Onvoldoende
	2.4 Graduate achievement	Goed
	3 teaching and learning	Goed
	3.1 Curriculum	Voldoende
	3.2 Teaching methods	Goed
	3.3 Learning environment	Excellent
	4 Staff	Goed
	4.1 Staff composition	Goed
	4.2 International experience and competence	Goed
	4.3 Services provided to staff	Voldoende
	5 Students	Goed
	5.1 Student group composition	Excellent
	5.2 International experience	Goed
	5.3 Services provided to students	Goed
Beoordeling BKK	Eindoordeel	Goed

- Prof. G. (Gerrit) van Straten, (voorzitter) is emeritus professor of Measurements, Systems and Control at Wageningen University and part-time technical-scientific consultant via his firm AgrodynamicsSupport;
- Prof. I. (Ian) Dowman, (lid) is emeritus professor of Photogrammetry and Remote Sensing at the University College London;
- Prof. A. (Alexis) Comber, (lid) is professor of Geographical Information Science at the University of Leicester;
- M. (Martin) Kodde MSc., is Research & Development manager at Fugro GeoServices B.V.;
- M. (Marija) Krūminaitė, BSc., (student-lid) is a student of the master's programme Geomatics at Delft University of Technology.

Het panel werd ondersteund door A.J. (Adrienne) Wieldraaijer-Huijzer, MA, secretaris (gecertificeerd).