

Besluit

Besluit strekkende tot het verlenen van accreditatie aan de opleiding wo-master Engineering and Policy Analysis van de Technische Universiteit Delft

Gegevens

datum	Naam instelling	: Technische Universiteit Delft
29 september 2017	Naam opleiding	: wo-master Engineering and Policy Analysis (120 EC)
onderwerp	Datum aanvraag	: 26 april 2017
Besluit	Variant opleiding	: voltijd
accreditatie wo-master	Locaties opleiding	: Delft, Den Haag
Engineering and Policy Analysis	Datum goedkeuren panel	: 10 oktober 2016
Technische Universiteit Delft	Datum locatiebezoeken	: 12 en 13 december 2016
(005648)	Datum visitatierapport	: 28 maart 2017
uw kenmerk	Instellingstoets kwaliteitszorg	: ja, positief besluit van 7 september 2017

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ons kenmerk

NVAO/20172365/ND

bijlagen

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Beoordelingskader

Beoordelingskader voor de beperkte opleidingsbeoordeling van de NVAO (Stcrt. 2014, nr 36791).

Bevindingen

De NVAO stelt vast dat in het visitatierapport deugdelijk en kenbaar is gemotiveerd op welke gronden het panel de kwaliteit van de opleiding goed heeft bevonden.

Advies van het visitatiepanel

Samenvatting bevindingen en overwegingen van het panel.

Standard 1

The master's programme Engineering and Policy Analysis (EPA) is an international programme, which focuses on supporting decision-making processes regarding large-scale, socio-technical systems. It aims to produce engineers, analysts and modellers who are able to work in international and interdisciplinary teams, who are aware of the political and policy environment they are operating in, and who can contribute to solving the Grand Challenges the world is facing in this century, as described in the EU programme H2020. The panel considers it very positive that the master's programme EPA is a truly international and interdisciplinary programme. It greatly appreciates that the programme objectives are elaborated in well-defined, detailed learning outcomes.

Pagina 2 van 5 The panel does advise the programme management, however, to ensure that the programme is clearly distinguished from the programme Systems Engineering, Policy Analysis and Management, and that this profile is evident in the master's theses. The panel concludes that the intended learning outcomes meet the Dutch qualifications framework and tie in with the international perspective of the requirements set by the professional field and the discipline. They fit the Domain-Specific Framework of Reference developed by the Dutch programmes for Industrial Engineering and Management. The intended learning outcomes have been made more specific in terms of content, level and orientation; they meet international requirements. The panel greatly appreciates that the general learning outcomes are elaborated in well-defined, detailed learning outcomes. The panel assessed standard 1, Intended learning outcomes, as good.

Standard 2

The curriculum is structured along two learning lines: a series of courses with a focus on policy analysis and political decision-making and a series of courses leaning towards more quantitative methods, ranging from data analytics to advanced modelling and simulation courses. The common focus is on facing the Grand Challenges of a rapidly developing and changing world. The panel established that the content and structure of the master's programme EPA enable the students to achieve the intended learning outcomes. The curriculum is well-structured, coherent and attractive, while also offering ample opportunity for creating an individual profile based on electives and specialisation tracks. Nonetheless, the panel recommends closely monitoring the translation of the new take on the curriculum at thesis level to communicate the programme design effectively and clearly.

The underlying didactical principle of the EPA curriculum is 'learning by doing', with practical application of the theory offered. This learning by doing principle is supported by a blended learning approach. The panel appreciates the efforts to implement blended learning in the programme, which adds to the stimulating learning environment. It encourages the programme to proceed further in this direction. The panel verified that students of the programme take the offered opportunities and partake in international exchange, both in Delft and abroad, and that therefore EPA enjoys the advantages of being a truly international community. The programme has succeeded in building an international, stimulating learning environment supported by an enthusiastic, involved, accessible and highly qualified teaching staff. Standard 2, Teaching-learning environment, is assessed as good.

Standard 3

The Faculty of Technology, Policy and Management described its assessment policy in the Assessment Policy 2013-2014 document. The panel studied a selection of test dossiers and master's theses and the accompanying assessment forms. Furthermore, it held a meeting with the Board of Examiners during the site visit. It verified that the programme has an adequate assessment system. The assessments are valid, transparent and reliable. The Board of Examiners is performing its legally mandated tasks adequately. The panel assesses standard 3, Assessment, as satisfactory.

Standard 4

The panel studied 15 master's theses to establish whether the graduates had achieved the intended learning outcomes of the programme. It was impressed by the high level of the theses. They demonstrated clearly that the graduates had achieved the intended learning outcomes. The conclusions that the programme stimulates the students to perform at a high

Pagina 3 van 5 level and that its graduates are highly appreciated is confirmed by the data about the employability of the alumni, as well as by the presentation and evaluation of the alumni themselves. Standard 4, Achieved learning outcomes, is assessed as good.

General conclusion

Considering the assessments of the standards 1, 2 and 4, and the panel's general impression of the EPA programme as a very attractive programme in a stimulating, international learning environment, the panel assesses the master's programme Engineering and Policy Analysis as good.

Besluit

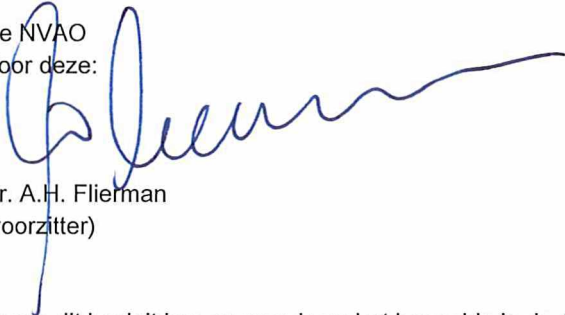
Ingevolge het bepaalde in artikel 5a.10, derde lid, van de WHW heeft de NVAO het college van bestuur van de Technische Universiteit Delft te Delft in de gelegenheid gesteld zijn zienswijze op het voornemen tot besluit van 14 augustus 2017 naar voren te brengen. Bij e-mail van 6 september 2017 heeft de instelling gereageerd maar dit heeft niet geleid tot inhoudelijke wijzigingen.

De NVAO besluit accreditatie te verlenen aan de wo-master Engineering and Policy Analysis (120 EC; variant: voltijd; locaties: Delft, Den Haag) van de Technische Universiteit Delft te Delft. De NVAO beoordeelt de kwaliteit van de opleiding als goed.

Dit besluit treedt in werking op 29 september 2017 en is van kracht tot en met 28 september 2023.

Den Haag, 29 september 2017

De NVAO
Voor deze:


Dr. A.H. Flierman
(voorzitter)

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.

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.	goed
2. Onderwijsleeromgeving	Het programma, het personeel en de opleidingsspecifieke voorzieningen maken het voor de instromende studenten mogelijk de beoogde eindkwalificaties te realiseren.	goed
3. Toetsing	De opleiding beschikt over een adequaat systeem van toetsing.	voldoende
4. Gerealiseerde eindkwalificaties	De opleiding toont aan dat de beoogde eindkwalificaties worden gerealiseerd.	goed
Eindoordeel		goed

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

Pagina 5 van 5 **Bijlage 2: Panelsamenstelling**

- Prof. dr ir. Rob van der Heijden, Professor in Innovate Planning Methods, Radboud University Nijmegen [chair];
- Prof. dr. Harrie Eijkelhof, emeritus Professor of Physics Education at the Faculty of Physics and Astronomy, and former Director of the Freudenthal Institute for Science and Mathematics Education at the Faculty of Science, Utrecht University;
- Prof. dr. Arthur Petersen, Professor at the Department of Science, Technology, Engineering and Public Policy, University College London, United Kingdom;
- Prof. dr. Marcel Veenswijk, Professor in Management of Cultural Change, VU University Amsterdam;
- Prof. dr. Hens Runhaar, Special Professor of Management of Biodiversity in Agricultural Landscapes, Wageningen University and Research & Utrecht University
- Maarten van Ruitenbeek BSc, master's student in Industrial Engineering and Management, University of Groningen [student member].

Het panel is ondersteund door dr. Barbara van Balen, secretaris (gecertificeerd).