

Besluit strekkende tot een oordeel positief onder voorwaarde(n) van een aanvraag toets nieuwe opleiding van de wo-master Data Science and Society van de Tilburg University

	Gegevens	
datum	Instelling	: Tilburg University
31 oktober 2018	Opleiding	: wo-master Data Science and Society
onderwerp	Variant	: voltijd
Besluit	Afstudeerrichtingen	:
Toets nieuwe opleiding	Locatie	: Tilburg
wo-master	Studieomvang (EC)	: 60
Data Science and Society	Datum macrodoelmatigheidsbesluit	: 6 september 2017
van de	Datum aanvraag	: 6 december 2017
Tilburg University	Datum locatiebezoek	: 8 juni 2018
(006342)	Datum adviesrapport	: 25 september 2018
uw kenmerk	Instellingstoets kwaliteitszorg	: ja, positief besluit van 3 april 2013
811.17.0020		
ons kenmerk		
NVAO/20183068/ND		
bijlage		
2	Beoordelingskader(s)	
	Beoordelingskader voor de beperkte toets nieuwe opleiding van de NVAO (Stcrt. 2016, nr 69458).	
	– Artikel 5a.11, vierde lid, van de Wet op het hoger onderwijs en wetenschappelijk onderzoek (WHW) (Stb. 2010, 293)	
	– Artikel 1 van het Accreditatiebesluit WHW (Stb. 2011, 536)	

De NVAO stelt vast dat in het paneladvies deugdelijk en kenbaar is gemotiveerd op welke gronden het panel de kwaliteit van de opleiding positief onder voorwaarden heeft bevonden.

Advies panel

Samenvatting bevindingen en overwegingen van het panel.

The new Master's programme Data Science and Society is based on the existing track Data Science: Business and Governance of the Master's programme Communication and Information Sciences. Tilburg University intends to present this track as an independent degree programme.

The track Data Science: Business and Governance started in September 2015 and is part of the Jheronimus Academy of Data Science, a partnership on education and research among Tilburg University, the Technical University Eindhoven, the municipality of 's-Hertogenbosch and the province of Noord-Brabant. The new Master will also be a part of the Jheronimus Academy of Data Science.

The intended learning outcomes are adopted from the 'original' programme Communication and Information Sciences. They are modified to some extent to include the requirements of the Data Sciences. The panel learned that specifically outcomes in law and business are added.

It is not the ambition of the programme to deliver 'hard core' data scientists, but graduates that have to be data savvy and also are able to be the 'linking pin' between data science and society or other disciplines. For the panel it is convincing that Data Science is introduced and combined with other disciplines. In this respect the intended learning outcomes clearly address societal demand for graduates that are qualified as the intended 'linking pin'.

The representatives that the panel has spoken, express a strong demand for graduates with a combined expertise in data science and social science.

The programme convincingly demonstrates that the intended learning outcomes are at master level.

The legitimization for this programme is building upon a background in relevant 'social' disciplines including humanities, economics and law and is bringing in data science and exploring the social background further.

Clearly only the combination of being data savvy in a specific field and having an appropriate level of professionalism (substantive expertise) in that field, guarantees the 'linking-pin' in data science as intended by the programme at master level.

The Master Data Science and Society is a 60 EC programme, consisting of four terms, with the final term completely reserved for the thesis Data science in Action. In this thesis the students combine data science with social science.

In general, the panel believes that the curriculum contains a coherent programme that supplies the students with a firm base to combine Data Science and Social Science. Considering the fact that the programme's duration is one year, choices have to be made.

Pagina 3 van 7 It is also obvious that not all the links between Data Science and Social Science can be covered in-depth. The panel concludes that the students do not obtain Master's level on all (data science) subjects, but that the interdisciplinary character makes for an enrichment of the societal part of the programme at Master's level and thus for an overall Master's level of the programme.

The Social Sciences dimension is well represented in two subjects: a) Data Science Regulations and Law and b) Analytics for Business and Governance.

The panel has no doubt on the level reached in the understanding of data science tools and methodology. The programme clearly also provides integrative skills, but the level achieved in the field in which data-science is applied is not sufficiently defined and taken into account in the design of the programme.

Electives chosen to build upon knowledge acquired in the bachelor in combination to an appropriate admission policy will provide for this.

The panel therefore formulates as a condition to define individual study pathways for students leading to the realisation of this intended learning outcome, in combination with an admission policy geared toward accepting students that are or can become substantive experts in the field in which data science is applied.

The learning by doing didactical approach is recognized by the panel. Students and teachers provided convincing examples and it was convincingly demonstrated in the documents.

Both the staff and the students indicate that the workload is considerable.

The assessments of the master are regulated by the Education and Examination Regulations (EER). The Tilburg School of Humanities and Digital Sciences Examining Board assures that these objectives are met and that there is a sufficient level of variation in the assessment methods.

The panel studied 18 out of 87 theses from graduates since 2015. The panel focused on recent papers from graduates in 2017 and 2018. Each panel-member studied lower marked, mediocre and good to very good graded papers.

The overall conclusion is that the panel had no doubt that master level is achieved. It found not one thesis that was below standard.

The papers all demonstrate sufficient skills in the application of data-science methodologies or tools. The papers also reflect good skills in methodology and statistics. Graduates demonstrate to be proficient in relevant data-science tools.

In addition to the findings of the panel on the quality of the theses, alumni and representatives from the working field convinced the panel that the graduates are of sufficient master level.

The conclusion of the panel is that the programme partially meets standard 2. It satisfies the other standards.

Pagina 4 van 7 The conditions encompass the strengthening of a structured individual study path towards the intended profile of the graduate as a 'linking-pin' in the application of data science in a field in which the graduate acquired substantive expertise. In relation to that the panel also recommends to reflect on the Learning Outcomes in the light of the interdisciplinary intentions of the programme and take the heterogeneous background of the students into consideration. Currently this remains rather implicit and informal. The panel however found no indications that this jeopardized the basic quality of the programme. On the contrary, assessments and theses studied convinced the panel that a sufficient level is reached and graduates definitely are 'data savvy' and on a master level.

Given these considerations, the panel advises NVAO to take a conditionally positive decision regarding the quality of the proposed programme wo-master Data Science and Society at Tilburg University.

Advies van het panel

Het panel adviseert de NVAO om positief onder voorwaarden te besluiten ten aanzien van de kwaliteit van de nieuwe opleiding wo master Data Science and Society van de Tilburg University.

Besluit

Ingevolge het bepaalde in artikel 5a.10, derde lid, in verbinding met artikel 5a.11, achtste lid van de WHW heeft de NVAO het college van bestuur van de Tilburg University te Tilburg in de gelegenheid gesteld zijn zienswijze op het voornemen tot besluit d.d. 1 oktober 2018 naar voren te brengen. Bij e-mail van 12 oktober 2018 heeft de instelling ingestemd met het voornemen tot besluit.

De NVAO besluit de aanvraag beperkte Toets nieuwe opleiding van de opleiding wo-master Data Science and Society (60 EC; variant: voltijd; locatie: Tilburg) van de Tilburg University te Tilburg als positief onder voorwaarden te beoordelen.

The panel formulates the following conditions to be met:

- develop enrolment criteria for the programme related to the background in the other disciplines of the individual student and define a clear starting level in the 'societal domain';
- evaluate the programme as a whole and its individual courses on the contribution to the Intended Learning outcomes. Give specific attention to the objectives in the domain of communication. Strengthen where needed;
- develop a system of 'suggested individual study paths' for students as a structured combination of courses that build upon and enrich the disciplinary background of the students. Advance that students build on the strengths and what they already learned in the bachelor to develop 'substantive expertise in the field in which the data science is applied'.

De termijn waarbinnen aan deze voorwaarden moet zijn voldaan bepaalt de NVAO op twee jaar.

Pagina 5 van 7 Uiterlijk zes maanden voor afloop van de termijn van de voorwaarden, levert de instelling documentatie aan de NVAO waarin zij aangeeft hoe aan de voorwaarden is voldaan.

Graad: Master of Science

Advies Croho-onderdeel: sectoroverstijgend.

Visitatiegroep : nader te bepalen¹.

Van kracht tot en met 30 oktober 2020

Den Haag, 31 oktober 2018

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.

¹ De opleiding dient ten minste twee jaar voor de vervaldatum gebruik te maken van de zogenoemde aprilronde om zelf zorg te dragen voor een indeling in een visitatiegroep. Daarna neemt de NVAO het besluit over de indeling in een visitatiegroep.

Standaard	Oordeel
<p><u>Beoogde leerresultaten</u> <i>Standaard 1: De beoogde leerresultaten passen bij het niveau en de oriëntatie van de opleiding en zijn afgestemd op de verwachtingen van het beroepenveld en het vakgebied en op internationale eisen.</i></p>	<p>Voldoet</p>
<p><u>Onderwijsleeromgeving</u> <i>Standaard 2: Het programma, de onderwijsleeromgeving en de kwaliteit van het docententeam maken het voor de instromende studenten mogelijk de beoogde leerresultaten te realiseren.</i></p>	<p>Voldoet ten dele</p>
<p><u>Toetsing</u> <i>Standaard 3: De opleiding beschikt over een adequaat systeem van toetsing.</i></p>	<p>Voldoet</p>
<p><u>Gerealiseerde leerresultaten</u> <i>Standaard 4: De opleiding toont aan dat de beoogde leerresultaten zijn gerealiseerd.</i></p>	<p>Voldoet</p>
<p>Algemene conclusie</p>	<p>Positief onder voorwaarden</p>

The panel consisted of:

Chair:

- Prof. dr. ir. Maarten van Steen, scientific director Digital Society Institute, University of Twente; professor of large-scale distributed systems, University of Twente; chair ICT-Research Platform Netherlands.

Panel members:

- Prof. dr. Wim Van Petegem, policy coordinator Learning Technologies, Faculty of Engineering Technology, Katholieke Universiteit Leuven;
- Prof. dr. Elena Marchiori, professor of machine learning for natural sciences, head of section Data Science, Institute for Computing and Information Sciences, Faculty of Science Radboud University Nijmegen The Netherlands;.

Student member:

- Lennart van Doremalen, PhD candidate Subatomic Physics Universiteit Utrecht.

On behalf of the NVAO, drs. Frank Wamelink and drs. Willem Hendrikx were responsible for the process coordination and the drafting of the experts' report.