

Besluit

Besluit strekkende tot het verlenen van accreditatie aan de opleiding wo-master Innovation Sciences van de Technische Universiteit Eindhoven

Gegevens

datum	Naam instelling	: Technische Universiteit Eindhoven
31 augustus 2017	Naam opleiding	: wo-master Innovation Sciences (120 EC)
onderwerp	Datum aanvraag	: 1 mei 2017
Besluit	Variant opleiding	: voltijd
accreditatie wo-master	Locatie opleiding	: Eindhoven
Innovation Sciences van de	Datum goedkeuren	
Technische Universiteit	panel	: 19 december 2016
Eindhoven	Datum locatiebezoeken	: 14 en 15 februari 2017
(005707)	Datum visitatierapport	: 20 april 2017
uw kenmerk	Instellingstoets kwaliteitszorg:	ja, positief besluit van 6 mei 2014
CvB 2017/1649237		
ons kenmerk		
NVAO/20172261/ND	Beoordelingskader	
bijlagen	Beoordelingskader voor de beperkte opleidingsbeoordeling van de NVAO (Stcrt. 2014, nr	
2	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 voldoende heeft bevonden.

Advies van het visitatiepanel

Samenvatting bevindingen en overwegingen van het panel.

In this executive summary, the panel presents the main considerations which have led to the assessment of the quality of the programme Master Innovation Sciences of Eindhoven University of Technology. The programme was assessed according to the NVAO Assessment Framework.

The panel observed programme management has taken up the recommendations made in the previous assessment in 2011. Programme management, among others, improved the scheduling of the curriculum to limit study delay, raised the number of lecturers having obtained the University Teaching Qualification and intensified the contacts with alumni.

Pagina 2 van 6 The objectives of the programme are to study and understand innovations and innovation processes in socio-economic systems and the effects, challenges and opportunities of the introduction of new technologies in these systems. The panel supports these objectives and the subsequent focus in the programme on the disciplines of economics, transition studies and technology and also on advanced research methods for this domain. The panel observed the programme to be interdisciplinary in addressing the three disciplines mentioned and in integrating these. The efforts of management of the Vrije Universiteit, Utrecht University and Eindhoven University of Technology programmes to draft the domain-specific framework of reference are very much appreciated by the panel. Through this framework, the programme is definitely linked to international concepts, notions and trends in the innovation sciences domain.

The panel observed the programme intended learning outcomes to meet the programme objectives, exhibiting, among others, knowledge and understanding of the constituent disciplines economics, transition studies and technology in the context of innovations in socio-economic systems, advanced research and design skills and academic skills. Although the panel is positive about the disciplines economics and transition studies being both addressed, it is recommended to inform students clearly about the differences in perspective of each of these disciplines. The intended learning outcomes are structured and have been well-elaborated. The panel ascertained the intended learning outcomes to meet the requirements of a master level programme and to correspond to the domain-specific framework of reference for innovation sciences.

The Advisory Board is instrumental in keeping the programme aligned with trends in the professional field.

The panel shares the concern of programme management about the limited number of incoming students in the programme and recommends to take measures to increase the influx and to raise the student success rates. The proportion of female students complies with the technical studies average in the Netherlands.

The admission requirements and admission processes are appropriate. Programme management drafted rather strict admission criteria, tailored to the various student categories. *The panel is positive about the pre-master and deficiency programme offered to incoming students.*

The panel feels the curriculum to be well-structured, covering all of the intended learning outcomes and addressing subjects which are relevant for this programme. Students are appropriately taught disciplinary and interdisciplinary knowledge and understanding. Although research methodology is addressed satisfactorily, the panel advises to strengthen the application of the research methods and techniques. The panel is content with the ample opportunities offered to students to spend part of the curriculum abroad.

The teaching concept and the study methods fit the programme and promote self-directed learning by the students. The panel is positive about the assignments and projects within the courses, promoting the application of knowledge and skills. The study load, the number of contact hours and the student-to-staff ratio are adequate. The panel is very positive about the study guidance in the programme and feels students are especially well guided in their

Pagina 3 van 6 choice of electives and the composition of their curriculum. Programme management is advised to inform students more clearly about their career perspectives.

The panel is positive about the lecturers' research track records and about their educational track records. All of the lecturers have a PhD and are active researchers in their field. The proportion of 62 % of the lecturers having obtained and another 18 % of them being in the process of acquiring the University Teaching Qualification is quite satisfactory. The panel applauds the programme management intentions to pursue a 50 % proportion of female lecturers in the set of yearly appointments of new staff.

The assessment policy of the School of Innovation Sciences which applies to this programme as well, is appropriate, specifying relevant rules and regulations as well as control mechanisms for the examinations and assessments in the programme. The measures taken by programme management to foster the validity of the examinations and reliability of the assessments are satisfactory. The examinations and assessments and the processes in this respect are adequately monitored by the Board of Examiners.

The panel approves of the examination methods, programme management has selected. They are in line with the course contents to be assessed.

The processes of supervision and assessment for the Graduation Projects are regarded by the panel to be satisfactory. The assessment by three examiners, using forms with relevant assessment criteria leads to reliable assessments. The panel recommends to require all of the assessment criteria to be satisfactory and not to allow compensation. In addition, the panel advises programme management to introduce rubrics forms for the assessment of the Graduation Project to calibrate grades, like has been done in the Sustainable Innovation major of the Bachelor Innovation Sciences. These forms may further improve the reliability of the assessments.

The examinations of the courses studied by the panel are satisfactory in breadth and depth and reflect the learning goals of the courses. The panel assesses the Graduation Projects the panel reviewed to be at least satisfactory. The grades given for these projects are appropriate. The panel recommends to improve the alignment between the grades given for *assessment criteria and the written comments on the criteria*. In addition, the panel advises to strengthen the reflection on the research design or application, which includes applying appropriate research methods and techniques. The panel also suggests to achieve more alignment in the set-up of the projects, as these are now quite diverse.

Pagina 4 van 6 **Besluit**

Ingevolge het bepaalde in artikel 5a.10, derde lid, van de WHW heeft de NVAO het college van bestuur van de Technische Universiteit Eindhoven te Eindhoven in de gelegenheid gesteld zijn zienswijze op het voornemen tot besluit van 17 juli 2017 naar voren te brengen. Van deze gelegenheid heeft het college van bestuur geen gebruik gemaakt

De NVAO besluit accreditatie te verlenen aan de wo-master Innovation Sciences (120 EC; variant: voltijd; locatie: Eindhoven) van de Technische Universiteit Eindhoven te Eindhoven. De NVAO beoordeelt de kwaliteit van de opleiding als voldoende.

Dit besluit treedt in werking op 31 augustus 2017 en is van kracht tot en met 30 augustus 2023.

Den Haag, 31 augustus 2017

De NVAO
Voor deze:

b/c

A handwritten signature in black ink, consisting of a large, stylized 'P' followed by 'Z' and 'B', with a horizontal line extending to the right.

Dr. A.H. Flierman
(voorzitter)

Paul Zevenbergen
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.

Onderwerp	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	De opleiding beschikt over een adequaat systeem van toetsing.	Voldoende
4. Gerealiseerde eindkwalificaties	De opleiding 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.

- Prof. dr. ir. P.C. de Weerd-Nederhof, Professor Organizational Studies and Innovation and chair of NIKOS, University of Twente (panel chair);
- Prof. dr. A.M. Bergek, Professor Innovation Systems and Technology Policy, Chalmers University of Technology (panel member);
- Prof. dr. M.S. van Geenhuizen, Professor of Innovation and Innovation Policy in the Urban Economy, Delft University of Technology (panel member);
- Prof. dr. C.M. Jonker, Professor Interactive Intelligence, Delft University of Technology (panel member);
- E.E.M. Leo BSc, student Master Educational Sciences, University of Amsterdam (student member).

Het panel werd ondersteund door drs. W. Vercouteren RC, secretaris (gecertificeerd).