

## Besluit

### Besluit strekkende tot het verlenen van accreditatie aan de opleiding wo-bachelor Natuurwetenschap en Innovatiemanagement van de Universiteit Utrecht

#### Gegevens

<b>datum</b>	Naam instelling	: Universiteit Utrecht
31 augustus 2017	Naam opleiding	: wo-bachelor
<b>onderwerp</b>		Natuurwetenschap en Innovatiemanagement (180 EC)
Besluit accreditatie wo-bachelor Natuurwetenschap en Innovatiemanagement van de Universiteit Utrecht (005738)	Datum aanvraag	: 3 mei 2017
<b>uw kenmerk</b>	Variant opleiding	: voltijd
O&O N12962	Locatie opleiding	: Utrecht
<b>ons kenmerk</b>	Datum goedkeuren panel	: 19 december 2016
NVAO/20172185/ND	Datum locatiebezoek	: 3 februari 2017
	Datum visitatierapport	: 14 april 2017
	Instellingstoets kwaliteitszorg	: ja, positief besluit van 12 juli 2012

#### bijlagen

#### 2 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.

The panel observed programme management has taken up the recommendations made in the previous assessment in 2012. Programme management, among others, elaborated the intended learning outcomes, increased the study load in the first year, introduced an integrative course in the first year and took measures to limit the study delay of students. A number of these actions taken by programme management are not yet fully implemented.

Pagina 2 van 6 The panel is positive about the focus of the programme to study innovation dynamics, as defined and elaborated by programme management. Students are trained in knowledge and understanding of the natural sciences and social sciences as well as in combining these two disciplines into an interdisciplinary programme. In addition, the panel approves of the choice of programme management to focus on the life sciences and the energy and transport domains within the natural sciences discipline. The panel feels the programme is well-placed in these domains on account of the research foci in the Copernicus Institute of Sustainable Development, which is strongly related to the programme.

The panel very much welcomes the efforts of management of the Vrije Universiteit, Utrecht University and Eindhoven University of Technology programmes to draft the domain-specific framework of reference. Through this framework, the programme is definitely linked to international concepts, notions and trends in the innovation sciences domain.

The panel applauds the level of the intended learning outcomes, which at times approaches the master level in this domain, the degree of detail achieved in them and the way in which these learning outcomes have been matched with the domain-specific framework of reference and the Dublin-descriptors for bachelor programmes.

The Advisory Board of the programme offers programme management a broad window on trends in the professional field.

The admission requirements and processes are adequate. The panel approves of the matching procedures, as these enable programme management to attract the most talented students for this programme.

The curriculum reflects all of the intended learning outcomes of the programme adequately and evenly. All of the routes students may take are checked against the intended learning outcomes. The panel regards the curriculum to address all of the subjects to be expected in this interdisciplinary programme. Natural sciences courses, social sciences or innovation study courses and research methods courses are offered. In addition, courses in the application domains life sciences or energy and transport are scheduled. The panel is positive about the Innovation projects, as these allow bringing disciplines together and addressing interdisciplinary problems. The curriculum includes academic skills to a satisfactory degree. The panel recommends strengthening the coherence in the first year, as programme management intends to do.

The educational principles and the study methods of the programme are appropriate. In the panels' view, these allow students to acquire both disciplinary and interdisciplinary knowledge, understanding and skills. The number of contact hours is appropriate. The panel recommends to increase the study load in especially the first year and to make the courses more challenging. The study guidance in the programme is regarded by the panel to meet the requirements, as both the tutors and the study advisor assist students in this respect. The student success rates are adequate. In addition, the panel advises to offer extra and more comprehensive information on career opportunities in the innovation sciences field.

The panel is very positive about the lecturers' research and educational track records. The Copernicus Institute of Sustainable Development, at which nearly all of them are employed as researchers, has a strong reputation as a research institute. The educational capabilities are impressive, to be deduced from the high proportion of 74 % of lecturers having obtained

Pagina 3 van 6 the BKO-certificate and 37 % of them being in possession of the SKO-certificate. The lecturers discuss the curriculum on a regular basis.

The examination and assessment rules and regulations of the programme meet university and Faculty of Geosciences policies. The panel considers the Memorandum for Assessments and the implementation thereof to be an important step to ensure the quality of the examinations and assessments in the programme. The panel is positive about the position and activities of the Board of Examiners. The Board has the responsibilities and works along the lines, as intended by Dutch applicable law. The examinations are regularly inspected by the Committee of Assessments. In the panel's view, the examination methods are in line with the course contents and the validity and reliability of examinations and assessments are satisfactory. Supporting the plans of programme management, the panel advises to draft a comprehensive assessment matrix to relate course goals and contents to the intended learning outcomes and to implement an examinations repository to document the goals, contents and examinations of the courses. The panel also advises to continue the plans of the Committee of Assessments to improve identifying individual results in group assignments. The panel regards the processes of supervision and assessment for the Bachelor thesis as satisfactory, but recommends to address and assess the natural sciences knowledge and understanding components more explicitly. Also, the panel advises to introduce rubrics forms, as planned by programme management.

The panel established the examinations in the courses to be of adequate quality and of an appropriate level, meeting the courses' learning goals. The panel assesses the fifteen theses, which have been studied by the panel, to be definitely at or, in a number of cases, to be above the level to be expected of bachelor theses. Given the only 7.5 EC size of the thesis, the performances of the students in these final products are considered by the panel to be well above expectations. The panel supports the plans of programme management to raise the study load of the Bachelor thesis from 7.5 EC to 15.0 EC, as this measure may improve the correspondence between the thesis study load and the number of credits awarded. The panel observed the graduates of the programme to proceed to relevant master programmes.

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 Universiteit Utrecht te Utrecht 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-bachelor Natuurwetenschap en Innovatiemanagement (180 EC; variant: voltijd; locatie: Utrecht) van de Universiteit Utrecht te Utrecht. De NVAO beoordeelt de kwaliteit van de opleiding als goed.

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/a

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
<b>1. Beoogde eindkwalificaties</b>	De beoogde eindkwalificaties van de opleiding zijn wat betreft inhoud, niveau en oriëntatie geconcretiseerd en voldoen aan internationale eisen.	<b>Goed</b>
<b>2. Onderwijsleeromgeving</b>	Het programma, het personeel en de opleidingsspecifieke voorzieningen maken het voor de instromende studenten mogelijk de beoogde eindkwalificaties te realiseren.	<b>Voldoende</b>
<b>3. Toetsing</b>	De opleiding beschikt over een adequaat systeem van toetsing.	<b>Voldoende</b>
<b>4. Gerealiseerde eindkwalificaties</b>	De opleiding toont aan dat de beoogde eindkwalificaties worden gerealiseerd.	<b>Goed</b>
<b>Eindoordeel</b>		<b>Goed</b>

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);
- E.E.M. Leo BSc, student Master Educational Sciences, University of Amsterdam (student member).

Het panel werd ondersteund door drs. W.Vercouteren Rc, secretaris (getraind).