

Besluit

Besluit strekkende tot een positieve beoordeling van een aanvraag toets nieuwe opleiding van de opleiding wo-master Nanobiology (joint degree) van de Technische Universiteit Delft en de Erasmus Universiteit Rotterdam

	Gegevens	
datum	30 juni 2015	Instellingen : Technische Universiteit Delft Erasmus Universiteit Rotterdam
onderwerp	Besluit Toets nieuwe opleiding wo-master Nanobiology (joint degree)	Opleiding : wo-master Nanobiology (joint degree)
	Technische Universiteit Delft	Variant : voltijd
	Erasmus Universiteit Rotterdam	Locatie : Delft en Rotterdam
	(003438)	Studieomvang (EC) : 120
uw kenmerk	O&S-UIT-1142/JB/ms	Datum macrodoelmatigheidsbesluit : 1 oktober 2014
	ons kenmerk	Datum aanvraag : 10 november 2014
	NVAO/20151773/SL	Datum locatiebezoek : 20 maart 2015
bijlagen	2	Datum paneladvies : 12 mei 2015
		Instellingstoets kwaliteit zorg : Technische Universiteit Delft : positief besluit 21 november 2011
		Erasmus Universiteit Rotterdam : positief besluit 17 oktober 2013

Beoordelingskaders

- Beoordelingskader voor de beperkte toets nieuwe opleiding van de NVAO (Stcrt. 2010, nr 21523);
- Protocol voor Nederlandse aanvragen Toets Nieuwe Opleiding leidend tot een Joint degree (NVAO, februari 2011);
- Protocol cursusduur masters (NVAO, 8 oktober 2003);
- Beleidsregel doelmatigheid hoger onderwijs 2012 (Stcrt. 2012, nr 22213).

Bevindingen

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

Samenvatting bevindingen en overwegingen panel.

The Accreditation Organisation of the Netherlands and Flanders (NVAO) received a request for an initial accreditation procedure with regard to the academic (wo) master's programme Nanobiology of Delft University of Technology. This institution has the intention to offer this programme as a joint degree programme in collaboration with Erasmus University Rotterdam. NVAO convened an expert panel, which studied the information available and discussed the proposed programme with representatives of both institutions and programme management during a site visit. In this executive summary, the panel presents the main considerations which have led to the assessment of the quality of this programme. Since the programme is meant to be a joint degree programme, the panel considered the joint degree requirements as well. As the programme management has applied for a two-year master's programme, the panel examined the programme in this respect also.

The programme management drafted a subject benchmark statement, as no internationally accepted benchmark statement is yet available for the relatively new nanobiology domain. For the panel, the field of nanobiology has been described very appropriately in this statement. The objectives of the programme have been derived from the subject benchmark statement, meeting the international requirements of this field of study. In turn, the intended learning outcomes are an adequate representation of these objectives. The disciplines required for the study of nanobiology, being biology, physics, mathematics and chemistry are addressed in the learning outcomes as is the integration of these disciplines. Also, the learning outcomes specify the required research skills and communication skills of the graduates. The panel considers the learning outcomes to comply fully and unquestionably with the requirements of a master's level programme. From a comparative study by the programme management, it has become clear the programme is comparable to master's programmes abroad. The representatives of the professional field indicated the graduates are welcome in universities for PhD positions as well as in industry.

The programme is very demanding. In the opinion of the panel, the entry requirements, requiring incoming students to be knowledgeable in the disciplines molecular biology, chemistry, physics and mathematics at the required levels, are in line with the programme management's ambitions.

The panel established that all the intended learning outcomes have been covered by the contents of the courses. The panel supports the goal to deeply acquaint the students with the aforementioned disciplines and feels the contents and the structure of the curriculum as well as the lecturers' commitment will enable the students to reach this goal. Although the programme in principle offers enough opportunities for students who want to specialize in the theoretical or modelling aspects of nanobiology, the panel recommends to design more explicit study paths in the curriculum leading to this specialization. The panel approves of the focus of the programme on cancer-related subjects, observing these subjects provide ample opportunities for studying nanobiology in satisfactory breadth but suggests to consider including other fields of application in due time, such as immunology and neuroscience.

The structure of the curriculum is adequate, mandatory courses, electives, internship and research project having been assembled logically. The panel considers the number and contents of the electives to be offered to be quite appropriate in this stage.

Pagina 3 van 6 The teaching staff consists of well-qualified researchers, a number of whom being internationally renowned. Not only are the lecturers experts in their field but they also have adequate teaching competencies. Most lecturers have basic teaching qualifications certificates and may, in future, apply for senior teaching qualification certificates.

The panel is positive about the educational principle and the study methods to be adopted, as these encourage students to participate actively in the classroom and are in line with the various elements of knowledge and skills the students are to acquire. The average number of contact hours and the staff-to-students ratio meet the requirements. Measures to ensure a solid network of study guidance and study advice have been taken.

The panel considers the responsibilities and the workings of the board of examiners to be a safeguard for the quality of the examinations and the procedures in this respect. In most cases, the assessment methods conform to the learning goals to be assessed. The panel would suggest adding one particular assessment method, i.e. the poster presentation, which may prepare students for presentations for academic audiences and may, therefore, be of interest to the students. In addition, the panel suggests to make explicit that two examiners will assess and grade the internships. In all of the courses, formative assessments have been introduced. The panel considers these to be beneficial for monitoring the students' progress. The design of the research projects trajectory is very complete, including presentation and writing skills lectures and sessions for lecturers and students to comment on research proposals. The assessment of the research projects is appropriate, including a list of assessment criteria and involving a number of non-supervising, independent examiners.

The two institutions cooperating to offer the programme have submitted a guarantee for the students to be able to complete the programme. Having studied the budget statement for the programme, the panel does not question the financial viability of the programme.

The two institutions have a long and successful history in collaboration and joint degrees. In this programme, they participate on an equal basis in the curriculum, each of the institutions designing and offering courses, in the staff deployment, researcher and lecturers of each of the institutions lecturing in the programme, and in the facilities, each of the institutions providing lecture rooms, laboratories and equipment.

In view of the complexity of the curriculum and the level the students are to achieve, the comparison with similar programmes abroad and the competitiveness of this programme in an international perspective, the panel is convinced a duration of two years (120 EC) for this programme is imperative.

Given these considerations, the panel advises NVAO to take a positive decision with regard to the quality of the academic master's programme Nanobiology of Delft University of Technology in collaboration with Erasmus University Rotterdam and to grant the programme the initial accreditation. As the programme meets the joint degree requirements, the panel advises NVAO to grant the programme the status of a joint degree programme. Given strong arguments in favour of a duration of two years, the panel advises to grant the programme the right to offer a two-year master's programme (120 EC).

The panel supports Delft University of Technology's request for the programme to be registered under "Technology" as its field of study (CROHO-onderdeel).

Het panel adviseert de NVAO om positief te besluiten ten aanzien van de kwaliteit van de nieuwe opleiding wo-master Nanobiology (joint degree; 120 ECTS) van de Technische Universiteit Delft en de Erasmus Universiteit Rotterdam.

Aanbevelingen

De NVAO onderschrijft de aanbevelingen van het panel, met name de aanbeveling over het ontwerpen van explicietere studieroutes leidend naar een specialisatie in theoretische of modelmatige aspecten van nanobiologie en de aanbeveling om expliciet vast te leggen dat bij het beoordelen van de stages twee examinatoren worden ingezet.

Besluit

Ingevolge het bepaalde in artikel 5a.10, tweede lid, in verbinding met artikel 5a.11, zesde 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 d.d. 1 juni 2015 naar voren te brengen. Bij e-mail van 9 juni 2015 heeft de instelling ingestemd met het voornemen tot besluit.

De NVAO besluit de aanvraag Toets nieuwe opleiding joint degree wo-master Nanobiology (variant: voltijd; locaties: Delft en Rotterdam) van de Technische Universiteit Delft te Delft en de Erasmus Universiteit Rotterdam te Rotterdam positief te beoordelen.

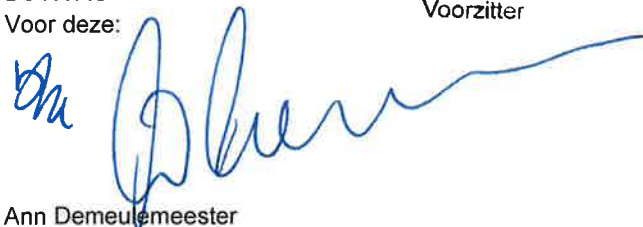
Graad:	joint degree Master of Science
Advies Croho-onderdeel:	Techniek
Advies cursusduur:	120 ECTS

Van kracht tot en met 29 juni 2021

Den Haag, 30 juni 2015

De NVAO
Voor deze:

A.H. Flierman
Voorzitter



Ann Demeulemeester
(vicevoorzitter)

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	Standaarden	Oordeel
1 Beoogde eindkwalificaties	De beoogde eindkwalificaties van de opleiding zijn wat betreft inhoud, niveau en oriëntatie geconcretiseerd en voldoen aan internationale eisen	V
2 Onderwijsleeromgeving	Het programma, het personeel en de opleidingsspecifieke voorzieningen maken het voor de instromende studenten mogelijk de beoogde eindkwalificaties te realiseren	V
3 Toetsing	De opleiding beschikt over een adequaat systeem van toetsing	V
4 Afstudeergarantie en financiële voorzieningen	De instelling geeft aan studenten de garantie dat het programma volledig kan worden doorlopen en stelt toereikende financiële voorzieningen beschikbaar	V
Algemene conclusie		Positief

V = voldoende O = onvoldoende

Pagina 6 van 6 **Bijlage 2: Samenstelling panel**

- dr. W. Voorhout (voorzitter), product marketing manager, Life Science business unit, FEI Europe;
- prof. dr. V. Subramaniam (lid), director FOM-institute AMOLF;
- prof. dr. J. Schymkowitz (lid), professor, VIB Switch Laboratory, KU Leuven;
- L.V.R. van Doremalen BSc (studentlid), student master's programme in Physics, Utrecht University.

Het panel werd bijgestaan door drs. F. Mulder, beleidsmedewerker NVAO, procescoördinator, en drs. W. Vercooteren RC, secretaris (gecertificeerd).