nvao
nederlands - vlaamse accreditatieorganisatie

Besluit

Besluit strekkende tot het verlenen van accreditatie aan de opleiding wo-master Artificial Intelligence van de Universiteit van Amsterdam

datum
31 oktober 2014
onderwerp
Besluit accreditatie wo-master Artificial Intelligence van de Universiteit van Amsterdam (002599)
uw kenmerk
2013sfil47
ons kenmerk
NVAO/20143581/AH
bijlagen
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Gegevens

Naam instelling	:	Universiteit van Amsterdam
Naam opleiding	:	wo-master Artificial Intelligence (120 ECTS)
Datum aanvraag	:	24 december 2013
Variant opleiding	:	voltijd
Afstudeerrichtingen	:	Gaming, Intelligent Systems, Learning Systems, Natural Language Processing and Learning, Web Information Processing
Locatie opleiding	:	Amsterdam
Datum goedkeuren panel	:	6 mei 2013
Datum locatiebezoeken	:	12 en 13 juni 2013
Datum visitatierapport	:	3 december 2013
Instellingstoets kwaliteitszorg	:	ja, positief besluit van 26 juni 2013

Beoordelingskader
Beoordelingskader voor de beperkte opleidingsbeoordeling van de NVAO (Stcrt. 2010, nr 21523).

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 (hierna ook: the committee).

This report reflects the findings and considerations of the committee on the master's programme in Artificial Intelligence, University of Amsterdam. The evaluation of the committee is based on information provided in the self-evaluation report and the selected theses, additional documentation and interviews conducted during the site visit. The committee noted both positive aspects and some that could be improved. Taking those aspects into consideration, the committee decided that the programme fulfils the requirements of the criteria set by NVAO, which are the conditions for accreditation.

Inlichtingen
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Standard 1: Intended learning outcomes

The committee assesses Standard 1 as good. The committee compared the objective and intended learning outcomes of the programme to the domain-specific reference framework. It concludes that the framework gives an adequate picture of the AI domain and the basic knowledge and skills that graduates need to acquire. The intended learning outcomes of the master's programme are predominantly in line with the framework. The committee is of the opinion that the profile and academic orientation are very clear. The committee appreciates the explicit choices the programme has made in this. The programme chooses a more technical approach to AI. The programme focuses on developing, understanding and implementing computational processes with regard to (human) intelligence. The committee appreciates the broad opportunities students have, to specialise in one of five tracks, which represent the key areas of artificial intelligence.
The committee considers the intended learning outcomes to be adequately defined. It finds them suited to the objectives and appropriate for the level and orientation of an international master's programme. In addition, the relation with the Dublin descriptors is evident in the intended learning outcomes.

Standard 2: Programme

The committee assesses Standard 2 as satisfactory. The committee concludes that the programme, the personnel and the programme-specific facilities enable the students to realize the intended learning outcomes. It noted that all intended learning outcomes are crossmatched to the different components of the programme in the self-evaluation report. It is of the opinion that the objectives as described in the course descriptions could be more uniform and more explicitly related to the intended learning outcomes.

The committee is positive about the mandatory first semester of the programme. This ensures that all international students have the same starting level for the other courses. In addition, the different tracks offer students specialisation. The committee is of the opinion that the tracks and projects provide quite a lot of coherence in the individual study programmes.

The committee concludes that the development of academic and professional skills is very well addressed within the programme. The programme does not offer any philosophical reflection on conducting research in the field of artificial intelligence, however. It recommends paying more attention to this aspect.

The committee appreciates the opportunities students have to execute the research projects for external organisations. It advises informing students more actively about the industry, for example, by inviting alumni as guest lecturers.
The committee is of the opinion that the services provided to students (both guidance and facilities) are sufficient. It also appreciates the opportunities for students to study abroad. The programme is feasible and attracts quite a lot of international students, from a wide range of countries. The committee appreciates this. The completion rates are adequate. The committee recommends that the programme implement the academic mentors and the structuring of the thesis project mentioned in the self-evaluation report. It expects that this will contribute to an improvement of the completion rates.

The programme is based on research-oriented teaching. The committee is of the opinion that the educational principle is consistently implemented, with an important role given to the research projects. The number of contact hours is adequate.

The committee concludes that the staff consists of sufficient numbers of motivated and competent lecturers. It is of the opinion that the BKO training should be intensified. It recommends increasing the involvement of full professors in the courses and lectures. It confirmed that an adequate quality assurance system is in place.

Standard 3: Assessment and achieved learning outcomes
The committee assesses Standard 3 as satisfactory. The committee concludes that the programme has an adequate assessment system in place. The different components of the programme are assessed in different ways, with a well-balanced mix between exams and practical assignments. Students are satisfied with the assessment in general. The committee appreciates the use of multiple assessments in the different courses. It advises the programme to develop and implement an assessment policy. It is of the opinion that the Board of Examiners has sufficient insight into the quality of the assessments and takes adequate measures as necessary. It appreciates the fact that the Board is actively involved in the final presentations and grading of all theses. It advises the programme to fill the vacancy on the Board of Examiners swiftly.

The committee concludes that the master students acquire a high final level by the end of the programme. This was confirmed by the theses it evaluated.

Aanbevelingen
De NVAO vraagt aandacht voor de constatering van de commissie dat in het landelijke domeinspecifieke referentiekader een nadere operationele definitie van het begrip 'kunstmatige intelligentie' wenselijk is. Daarnaast behoeven daarin het bachelor- en het masterniveau nadere uitwerking.
De NVAO onderschrijft bovendien in algemene zin de aanbevelingen van de commissie, in het bijzonder die met betrekking tot versterking van de rol van de Examencommissie en het ontwikkelen en implementeren van het toetsbeleid.

Besluit

Ingevolge het bepaalde in artikel 5a.10, derde lid, van de WHW heeft de NVAO het college van bestuur van de Universiteit van Amsterdam te Amsterdam in de gelegenheid gesteld zijn zienswijze op het voornemen tot besluit van 22 april 2014 naar voren te brengen. Bij e-mail van 29 september 2014 heeft de instelling van de gelegenheid gebruik gemaakt om te reageren. Dit heeft geleid tot enkele aanpassingen in bijlage 2.

De NVAO besluit accreditatie te verlenen aan de wo-master Artificial Intelligence (120 ECTS; variant: voltijd; locatie: Amsterdam) van de Universiteit van Amsterdam te Amsterdam. De opleiding kent de volgende afstudeerrichtingen: Gaming, Intelligent Systems, Learning Systems, Natural Language Processing and Learning, en Web Information Processing. De NVAO beoordeelt de kwaliteit van de opleiding als voldoende.

Dit besluit treedt in werking op 31 oktober 2014 en is van kracht tot en met 30 oktober 2020.

Den Haag, 31 oktober 2014

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.

 Bijlage 1: Schematisch overzicht oordelen panel

Onderwerp	Standaard	Beoordeling door het panel voltijd
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	**Voldoende**
3. Toetsing en gerealiseerde eindkwalificaties	De opleiding beschikt over een adequaat systeem van toetsing en 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.

 Bijlage 2: Feitelijke gegevens

Tabel 1: *Rendement*

Cohort	2009	2010	2011
Rendement	61%	52%	59%

Tabel 2: *Docentkwaliteit*

Graad	Ma	PhD	BKO
Percentage	100%	94%	42%

Tabel 3: *Student-docentratio*

Ratio	21:1

Tabel 4: *Contacturen*

Studiejaar	1	2
Contacturen	9,5	4,9

 Bijlage 3: Panelsamenstelling

- prof.drs. dr. L.J.M. (Leon) Rothkrantz (chairman), Associate Professor at Delft University of Technology and Professor of Intelligent Sensor-Systems at the Netherlands Defense Academy;
- prof. em. T. Grant, professor emeritus of Operational ICT & Communications within the Faculty of Military Sciences at the Netherlands Defence Academy (NLDA) and founder/ director Retired But Active Researchers (R-BAR);
- drs. M.J. den Uyl, MSc, owner of SMRGroup, Senior Researcher and CEO of VicarVision, Sentient and Parabots;
- prof.dr. L. (Luc) De Raedt is Research Professor at the Lab for Declarative Languages and Artificial Intelligence at the Department of Computer Science of the K.U. Leuven;
- Y. (Yfke) Dulek, student of the bachelor's programme Artificial Intelligence at Utrecht University.

Het panel werd ondersteund door drs. H. Wilbrink en drs. T. Buising, secretaris (gecertificeerd).