

# Besluit

## Besluit strekkende tot het verlenen van accreditatie aan de opleiding wo-master Informatica van de Universiteit Utrecht

### Gegevens

datum	Naam instelling	:	Universiteit Utrecht
31 juli 2014	Naam opleiding	:	wo-master Informatica (120 ECTS)
onderwerp	Datum aanvraag	:	5 december 2013
Definitief besluit	Variant opleiding	:	volijd
accreditatie wo-master	Tracks/specialisaties	:	Computing Science (CS), Technical Artificial Intelligence (TAI), and Game and Media Techology (GMT)
Informatica van de Universiteit	Locatie opleiding	:	Utrecht
Utrecht	Datum goedkeuren	:	26 augustus 2013
(002241)	panel	:	19 en 20 september 2013
uw kenmerk	Datum locatiebezoeken	:	16 december 2013
ons kenmerk	Datum visitatierapport	:	Instellingstoets kwaliteitszorg ja, positief besluit van 12 juli 2012
NVAO/20142521/ND			
bijlagen			
3			

### Beoordelingskader

Beoordelingskader voor de beperkte opleidingsbeoordeling van de NVAO (Stcr. 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 visitatieteam

Samenvatting bevindingen en overwegingen van het panel (hierna ook: the committee).

#### Standard 1: Intended learning outcomes

The master's degree programme Computer Science consists of three master research programmes (Computing Science, Technical Artificial Intelligence and Game and Media Technology). The overall aim of the programme is to prepare students for a career in research. By choosing one of the three programmes from the start, students specialize in one particular field.

According to the committee, the level and orientation of the programme reflect the Domain Specific Framework of Reference and meet international academic standards. The intended learning outcomes show that the management has succeeded in identifying generic learning

#### Inlichtingen

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Pagina 2 van 8 outcomes for all three programmes. The committee advises the programme to also set learning outcomes for each programme individually, to exemplify the individual characteristics of the programmes and to highlight their unique character in comparison to similar programmes elsewhere – nationally and abroad.

The committee is pleased with the intention expressed by the programme management to pay more attention to the demands of students not wishing to continue a career in research. Instead of supporting the idea for a new, one-year master's programme, the committee is in favour of paying more attention to job orientation in the curricula of the current programmes.

*Standard 2: Teaching-learning environment*

The committee concludes that the contents and design of the curriculum are adequate to ensure that students can obtain the intended learning outcomes. However, it also concludes that the curriculum has a complicated structure, as the rules differ for each of the three programmes within the master degree programme. The committee is pleased about the possibility for students to set out their own studypath. It concludes that this does place an urgent call for an intense level of study guidance.

The committee is satisfied with the teaching personnel, in both quantitative and qualitative terms. The educational policy of Utrecht University encourages lecturers to obtain not only a basic, but also a senior teaching qualification (SKO in addition to BKO). This shows that it takes the quality of teaching seriously. The committee is impressed by the way in which the programme is continuously focussing on the improvement of the quality of teaching.

The committee concludes that the completion rates are low, mainly because of a delay during the Research project. Appropriate solutions are being implemented to reduce this delay. The committee is confident that these solutions will contribute to the improvement of the completion rates.

On two specific aspects of the teaching-learning environment the committee concludes that there is room for improvement. These entail study guidance (which is in the opinion of the committee too dependent on the work of the programme coordinator) and internal quality assurance. The Educational Advisory Committee should make itself much more visible in the programme, towards students as well as towards staff and programme management. Both parties should be aware that this committee can play an important role in contributing to the overall quality of the programme.

*Standard 3: Assessment and achieved learning outcomes*

The committee has examined the quality of the assessment and concludes that it is sufficient throughout the whole programme. The examinations in the programme are varied and match the learning objectives of the subjects. Students are well informed about assessment procedures. The introduction of a new Assessment Form, provided by the Graduate School for the assessment of the thesis project, should lead to more clarity on what the final grade is based on. This form, the committee concludes, needs to be better implemented and better formalized.

The committee is impressed by the active role taken by the Board of Examiners, the Exam Subcommittee and the Assessment Advisory Board.

Pagina 3 van 8 To assess the level achieved by the master students of Computer Science, the committee examined a range of master's theses. It concludes that the final level of the master projects is generally high and matches with what can be expected of a graduate of the master's research programme in Computer Science.

In the committee's judgement, the master's programme Computer Science at Utrecht University fulfils the criteria for accreditation. It has noted many positive aspects and suggested several points for improvement. It is confident that the programme management will continue to improve the quality of its teaching-learning environment and the assessment procedure for the master's theses.

### Aanbevelingen

De NVAO onderschrijft de aanbevelingen van de commissie. In het bijzonder vraagt de NVAO aandacht voor de aanbevelingen met betrekking tot het formuleren van 'learning outcomes' voor ieder van de specialisaties.

### 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 10 juni 2014 naar voren te brengen. Bij e-mail van 9 juli 2014 jaar heeft W. Sharif MA, adviseur onderwijs, namens het bestuur ingestemd met het voornemen tot besluit.

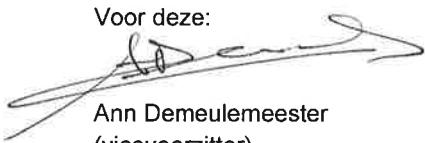
De NVAO besluit accreditatie te verlenen aan de wo-master Informatica (120 ECTS; variant: voltijd; locatie: Utrecht) met de specialisaties: Computing Science (CS), Technical Artificial Intelligence (TAI), and Game and Media Technology (GMT) van de Universiteit Utrecht te Utrecht. De NVAO beoordeelt de kwaliteit van de opleiding als voldoende.

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

Den Haag, 31 juli 2014

De NVAO

Voor deze:



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.

Pagina 4 van 8 **Bijlage 1: Schematisch overzicht oordelen panel**

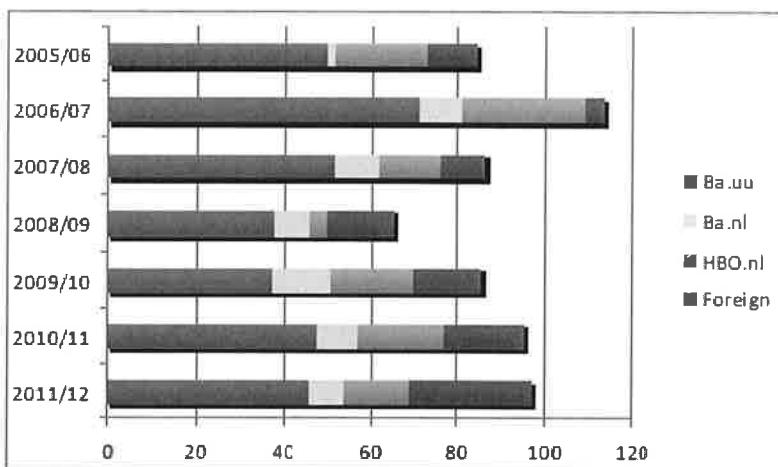
Onderwerp	Standaard	Beoordeling door het panel
<b>1. Beoogde eindkwalificaties</b>	De beoogde eindkwalificaties van de opleiding zijn wat betreft inhoud, niveau en oriëntatie geconcretiseerd en voldoen aan internationale eisen	<b>Voldoende</b>
<b>2. Onderwijsleeromgeving</b>	Het programma, het personeel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

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**Data on intake, transfers and graduates**

Intake Master's degree programme Computer Science

year	Intake total	By previous education				By gender				By start date	
		Ba.univ	Ba.nl	HBO.nl	Foreign	M#	F#	M%	F%	Sept	Febr
2005/06	84	50	2	21	11	52	2	98%	2%	44	40
2006/07	113	71	10	26	4	107	6	95%	5%	78	35
2007/08	86	52	10	14	10	51	5	94%	6%	67	19
2008/09	63	38	8	4	15	56	9	86%	14%	54	11
2009/10	85	37	14	19	15	77	8	91%	9%	63	22
2010/11	95	45	9	20	18	54	11	58%	12%	61	34
2011/12	97	46	8	15	28	59	8	92%	8%	76	21

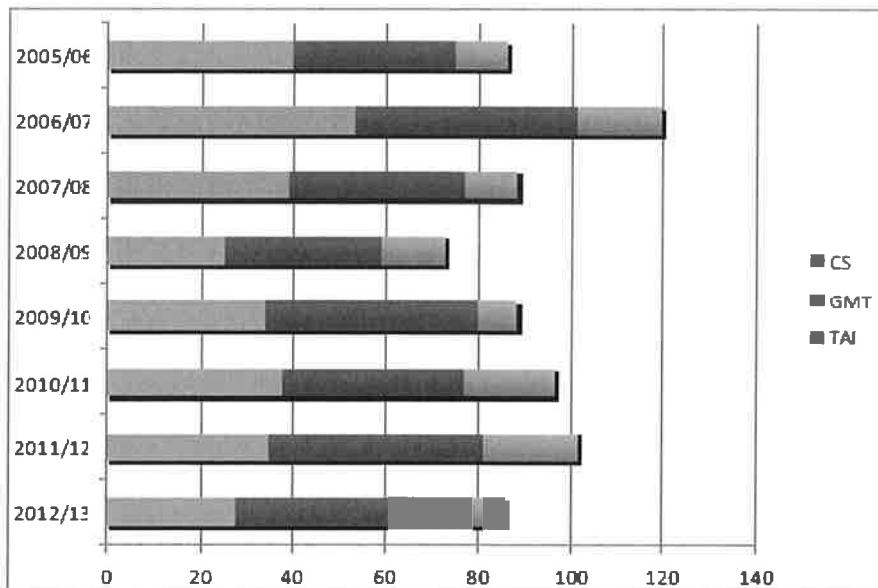


Intake by programme

Cohort	Intake total	By program		
		CS	GMT	TAI
2005/06	86	40	35	11
2006/07	119	53	48	18
2007/08	88	39	38	11
2008/09	72	25	34	13
2009/10	88	34	46	8
2010/11	96	38	39	19
2011/12	101	35	46	20
2012/13	86	28	37	21

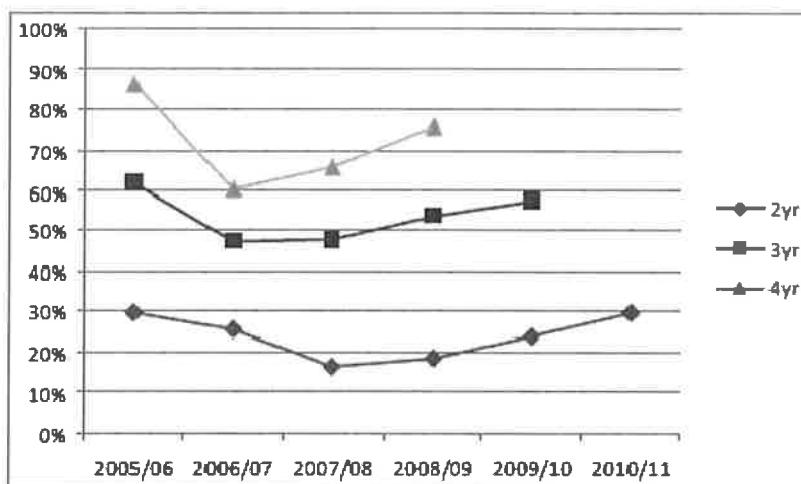
source: UU student administration

totals differ slightly from KUO numbers



**Yield**

Start Year	Intake		Cumulative # graduated				Cumulative % graduated			
	Total	Sept	1yr	2yr	3yr	4yr	1yr	2yr	3yr	4yr
2005/06	84	44	1	13	27	38	2%	30%	61%	86%
2006/07	113	73	7	20	37	47	9%	26%	47%	60%
2007/08	86	67	2	11	32	44	3%	16%	48%	66%
2008/09	65	54	0	10	29	41	0%	19%	54%	70%
2009/10	85	63	0	15	36		0%	24%	57%	
2010/11	95	61	1	18			2%	30%		
2011/12	97	76	0				0%			



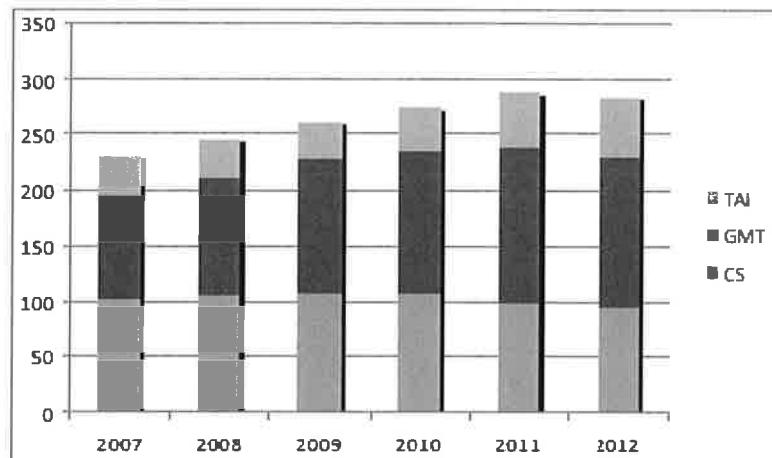
## Study length

Grad.n	# by previous education				Average study length in months Master				Ba+Ma		
Year	Total	Ba.uu	Ba.nl	HBO.nl	Foreign	avg	Ba.uu	Ba.nl	HBO.nl	Foreign	Ba.uu
2003/04	3			1	2	23			22	24	
2004/05	10	2		5	3	21	15		26	23	76
2005/06	15	4	2	7	2	23	3	33	32	23	75
2006/07	42	27	2	8	5	18	13	31	30	24	76
2007/08	46	28	3	13	2	26	22	34	33	32	73
2008/09	55	41	1	8	5	32	32	28	37	30	80
2009/10	57	33	8	8	8	33	33	35	39	27	84
2010/11	63	35	11	4	13	36	39	33	43	29	84
2011/12	65	38	6	10	11	35	34	33	44	31	78

Grey numbers are not meaningful because Ba/Ma was in transition at the time

## Number of students per programme

Programme	2007	2008	2009	2010	2011	2012
CS	103	107	109	109	100	96
GMT	95	106	120	127	140	136
TAI	32	32	31	40	48	52
total	230	245	260	276	288	284



## Teacher-student ratio achieved

	2008	2009	2010	2011	2012
# staff (teaching-fte)	8,75	7,80	6,84	6,90	6,24
# student	245	260	276	288	284
student : staff ratio	28,0	33,4	40,4	41,7	34,5

## Average amount of face-to-face instruction per stage of the study programme

Weighed avg contact hours/wk/course 4,41

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- Prof.dr. J. Paredaens (chairman), retired professor in Database Research, Antwerp University;
- Prof.dr.ir. K. De Bosschere is professor Computer Science at Ghent University;
- Prof.dr. S. Mauw (member), professor in Security and Trust of Software Systems, University of Luxembourg;
- Prof.dr. S. Mullender (member), Director of the Network Systems Laboratory at Bell Labs, Antwerp and professor Systems Research, University of Twente;
- R. Verbij Bsc (student member), master student Computer Science, University of Twente.

Het panel werd ondersteund door E. Kozlowska, secretaris (gecertificeerd).