

Besluit **Accreditatiebesluit met een positief eindoordeel voor de opleiding Master of Science in de biomoleculaire wetenschappen / Master of Science in Biomolecular Sciences (master) van de Vrije Universiteit Brussel**

datum **Samenvattende bevindingen en overwegingen**
30 september 2016 De NVAO steunt haar inhoudelijke besluitvorming op de onderstaande elementen uit het
onderwerp (Engelstalige) visitatierapport.

Accreditatiebesluit

(004891) *Generieke kwaliteitswaarborg 1 – Beoogd eindniveau*

bijlagen De visitatiecommissie (commissie) beoordeelt het beoogd eindniveau als voldoende.

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The programme aims to develop students' knowledge and understanding of the functioning of all forms of life at the molecular and cellular level. It is a unique study programme in Flanders, with a particular focus on applied immunology, advanced molecular biology, protein structure and function, as well as the ability to apply bioinformatics in these fields.

The programme offers two variants: a curriculum instructed in Dutch or English. The Dutch variant has never been followed by a single student.

The programme had a limited visibility and the student intake has become very low. The commission recommends a full and thorough benchmarking exercise that provides a lot of information for the further profiling and positioning of the programme both at home and abroad, and offers opportunities to communicate the profile of graduates in a clear manner to the employment market. The panel considers it necessary to position the programme better internationally. The establishment of long-term and structured collaborations would be helpful.

As a unique programme in Flanders, the programme has implemented the Domain-specific Learning Outcomes directly without any modification or addition as programme-specific learning outcomes. Therefore the Programme-specific Learning Outcomes comply with the Flemish qualification framework and – evidently – with the domainspecific learning outcomes too. Despite the benchmarking with similar programmes, the panel finds that there is not enough reflection on the programmespecific learning outcomes. There is no trace of opinions from (external) experts. The panel considers it necessary to position the programme better internationally. The assessment panel itself finds that, in international perspective, the learning outcomes are sufficient. The panel appreciates the high ambitions regarding research skills, illustrated by the fact that students have to be able to write a scientific publication and set up an original PhD research proposal. This fits well with the specific profile of the programme.

Pagina 2 van 8 In conclusion, the panel finds that the programme learning outcomes comply with all formal requirements. The panel appreciates the high ambitions regarding research skills, but sees opportunities to give more attention to social and economic aspects and topics such as non-communicable diseases.

Generieke kwaliteitswaarborg 2 – Onderwijsproces

De commissie beoordeelt het onderwijsproces als voldoende.

The programme counts 120 ECTS and consists of two years. The curriculum of the first year is fixed for all students. Lectures are on Thursday and Friday, while lab-work/exercises take place on Monday, Tuesday and Wednesday.

The first year courses are grouped into four sub-domains: Protein structure and function, Applied immunology; Advanced molecular biology, Bioinformatics. In the second year, students have to follow four elective courses (5 credits each), while the remaining credits go to a compulsory course 'Research communication and management' (10 credits) and the Master thesis (30 credits).

In the second year students have to prepare and defend a master's thesis, write a scientific publication based on the results obtained during their thesis work, and write a PhD project proposal.

The panel is impressed by the high quality of the (research) expertise of the staff. Face-to-face lecturing is the most common teaching form. Acquisition of knowledge in the second year mainly occurs through conventional lecturing and self-study. Each course is accompanied by practical labwork and/or exercises. Given the very small number of students, the classes are nearly private teaching sessions. The current teaching methods are not sufficiently adapted to the small groups.

At the start of the academic year, an information meeting is organised by the scientific-administrative coordinator. On this occasion, the newcomers are informed about the structure and content of the programme, the examinations, and the objectives of the programme. During their studies, the students can always rely on the lecturers whenever they meet problems with course contents. Contacts between lecturers and students are open. An ombudsperson is available whom the students can contact when problems arise related to examination procedures and assessments. At university level the Study Guidance Center (SGC) offers study guidance to all students.

The programme is organised on Campus Etterbeek in Brussels. Practical trainings and the experimental work for the master's thesis all take place in research labs of VUB. All these labs are equipped to meet international standards for research.

The panel concludes that there are sufficient quality guarantees concerning the learning process. The learning outcomes are adequately reflected in the programme. Courses are built on ongoing research and the research expertise of the staff is quite high. Concern is the low intake and the need for strengthening a clear and commonly shared vision and quality assurance of the programme towards the future. The panel recommends to focus on active promotion of the master and on the development of a realistic plan for the future.

De commissie beoordeelt het gerealiseerde eindniveau als voldoende.

In the first year the most common evaluation form is oral examination with written preparation, although for some courses oral examination or written examination with open or closed questions are also used. Since every course in the first year consists of a theoretical and a practical part, practicals are also evaluated. This is mostly based on written reports or assignments, sometimes in combination with observation of the students during the practical training sessions. During the oral examinations questions about the practicals can also be asked.

In the second year, the oral examination form predominates, although oral evaluation with written preparation is still used. For the self-studies, evaluation of written assignments is often used. The master's thesis has to be defended before a jury.

Of the 25 students that have enrolled in the programme, 22 obtained their diploma: 19 students after two years and the remaining 3 after 2.5 years. The average study yield is 90.8%. Over the years there has been a slight decrease in study yield, because of the tendency to defend the master's thesis in January of the third year. Even so, the pass rate remains quite high. After graduation, about half of the respondents started PhD studies.

Graduates are employable in different types of jobs such as the medical, pharmaceutical and biotechnological industries, both in research, production and quality control functions; academic research laboratories; hospital and medical labs; science education and training; Research and Development departments of academic institutions and industries; management; science journalism; patent law offices; and governmental organisations.

Regarding the English-language variant, the panel finds that the learning outcomes are achieved. The high quality of master's theses and the high percentage of students enrolling in a PhD can be outlined. Various types of evaluation are used. Overall, the quality of evaluation and the combination of different forms of examination give results that reliably reflect the level achieved. The panel considers it necessary to create an assessment form in the short term with a clear link to the learning outcomes. The panel concludes that there are sufficient generic quality assurances regarding the final attainment level of the English-language variant. Regarding the Dutch variant, the panel notes that to date no single student has enrolled in this programme. Given this fact there is no data about student progression rates and achieved learning outcomes. However, the panel is convinced that because of the equivalence with the English variant, all guarantees required for quality, validity, reliability and transparency of assessments, testing and examination are in place.

Eindoordeel commissie

De commissie heeft vastgesteld dat de opleiding Master of Science in de biomoleculaire wetenschappen / Master of Science in Biomolecular Sciences (master) voldoet aan alle generieke kwaliteitswaarborgen. Ze beoordeelt de kwaliteit van de opleiding als voldoende.

Aanbevelingen commissie

De NVAO onderschrijft de aanbevelingen van de commissie.

- Het visitatierapport is opgesteld en onderbouwd overeenkomstig het toepasselijke Kader voor de opleidingsaccreditatie 2de ronde (8 februari 2013);
- De commissie heeft voor de externe beoordeling het visitatieprotocol gevolgd zoals vastgesteld door de Vlaamse Universiteiten en Hogescholen Raad (augustus 2013);
- Het visitatierapport geeft inzicht in de samenstelling van de commissie;
- Het visitatierapport bevat een onderzoek ten gronde naar de aanwezigheid van voldoende generieke kwaliteitswaarborgen.

Besluit¹

betreffende de accreditatie van de Master of Science in de biomoleculaire wetenschappen / Master of Science in Biomolecular Sciences (master) van de Vrije Universiteit Brussel.

De NVAO,
Na beraadslaging,
Besluit:

Met toepassing van de Codex Hoger Onderwijs, in het bijzonder de artikelen II.133-II.149, besluit de NVAO accreditatie te verlenen aan de opleiding Master of Science in de biomoleculaire wetenschappen / Master of Science in Biomolecular Sciences (master) georganiseerd door de Vrije Universiteit Brussel. De opleiding wordt aangeboden te Brussel zonder afstudeerrichtingen. De kwaliteit van de opleiding is voldoende.

De accreditatie geldt van 1 oktober 2016 tot en met 30 september 2024.

Den Haag, 30 september 2016

De NVAO
Voor deze:



Marc Luwel
(bestuurder)

¹ Het ontwerp accreditatiebesluit werd aan de instelling bezorgd voor eventuele opmerkingen en bezwaren. Bij e-mail van 28 september 2016 heeft de instelling van de gelegenheid gebruik gemaakt om te reageren. Dit heeft geleid tot enkele aanpassingen.

De onderstaande tabel geeft per generieke kwaliteitswaarborg het globaal oordeel van de NVAO weer, alsook het eindoordeel.

Generieke kwaliteitswaarborg

Oordeel	
1. Beoogd eindniveau	Voldoende
2. Onderwijsproces	Voldoende
3. Gerealiseerd eindniveau	Voldoende
Eindoordeel opleiding	Voldoende

Naam instelling	Vrije Universiteit Brussel
Adres instelling	Pleinlaan 2 B-1050 BRUSSEL
Aard instelling	ambtshalve geregistreerd
Naam associatie	Universitaire Associatie Brussel
Naam opleiding (Graad, kwalificatie, specificatie)	Master of Science in de biomoleculaire wetenschappen / Master of Science in Biomolecular Sciences
Niveau en oriëntatie	master
Bijkomende titel	geen
Opleidingsvarianten: – Afstudeerrichtingen – Studietraject voor werkstudenten	geen
Onderwijstaal	Nederlands (MSc in de biomoleculaire wetenschappen) en Engels (MSc in Biomolecular Sciences)
Vestiging(en) opleiding	Brussel
Studieomvang (in studiepunten)	120
Vervaldatum accreditatie, tijdelijke erkenning of erkenning nieuwe opleiding	30 september 2016
Academiejaar(en) waarin opleiding wordt aangeboden ²	2015 - 2016
(Delen van) studiegebied(en)	Wetenschappen
ISCED benaming van het studiegebied	Natural sciences, mathematics and statistics - Biological and related sciences

² Betreft het lopende academiejaar, op het ogenblik van de accreditatieaanvraag

De leerresultaten van deze master bouwen voort op deze van de bachelor in de bio-ingenieurswetenschappen

1. Een diepgaande theoretische en toepassingsgerichte kennis hebben in de toegepaste immunologie, geavanceerde moleculaire biologie en de structuur en functie van proteïnen.
2. Bio-informatica en bio-statistiek in deze domeinen kunnen toepassen.
3. Over gevorderde praktische vaardigheden beschikken in deze domeinen.
4. Wetenschappelijke informatie verzamelen, kritisch kunnen evalueren en aanwenden om verder te bouwen op reeds verworven kennis.
5. Functioneren als lid van een multidisciplinair team.
6. Eigen onderzoek, gedachten en projectvoorstellen kunnen communiceren en rapporteren, zowel mondeling als schriftelijk, aan vakgenoten en een breder publiek.
7. De vaardigheden bezitten om origineel wetenschappelijk onderzoek uit te voeren, op een kritische en creatieve manier.
8. Een wetenschappelijke publicatie kunnen schrijven op basis van resultaten van het eindwerk.
9. Een origineel doctoraatsvoorstel kunnen uitwerken.
10. Bewust zijn van de ethische dimensie in onderzoek en publicaties.

Voorzitter:

- Prof.dr.ir. Wim Rulkens, em. hoogleraar Milieutechnologie, Wageningen University.

Leden:

- Prof.dr.ir. Akke van der Zijpp, em. hoogleraar Dierlijke Productiesystemen, Wageningen University;
- Prof.dr. Gerrit Heil, Director Undergraduate School bètawetenschappen, Utrecht University;
- Dr.ir. Jaak Lenvain, ontwikkelingsexpert voor VLIR-UOS;
- Prof.dr. Dietrich Knorr, hoogleraar Food technology, Berlin University of Technology;
- Prof. Guy Garrod, Reader in Environmental Economics, Newcastle University;
- Dr. Karin Scager, senior adviseur, Interfacultair Instituut voor Lerarenopleiding, Onderwijsontwikkeling en Studievaardigheden, Universiteit Utrecht (onderwijsdeskundige);
- Thomas Alderweireldt, 1MA bio-ingenieurswetenschappen, UGent (student-lid);
- Marie Loveniers, 2MA bio-ingenieurswetenschappen: biosysteemtechniek, KU Leuven (student-lid).

Tot projectbegeleider van de visitatie en secretaris van de commissie worden benoemd:

- Wouter Teerlinck, stafmedewerker kwaliteitszorg;
- Peter Daerden, stafmedewerker kwaliteitszorg;
- Jasper Stockmans, stafmedewerker kwaliteitszorg.