NVAO • THE NETHERLANDS

INITIAL ACCREDITATION

ACADEMIC BACHELOR

BSc REGENERATIVE MEDICINE AND TECHNOLOGY

Maastricht University

SUMMARY REPORT

7 APRIL 2023

1 Peer review

The quality of a new programme is assessed by means of peer review. A panel of independent peers, including a student, reviews the plans during a site visit to the institution. A discussion amongst peer experts forms the basis for the panel's final judgement and the advisory report. The focus is on the curriculum, the teaching and learning environment, and student assessment.

The Accreditation Organisation of the Netherlands and Flanders (NVAO) takes a formal decision on the quality of the new programme based on the outcome of the peer review. This decision can be positive, conditionally positive or negative. Following a positive NVAO decision with or without conditions the institution can proceed to offer the new programme. Upon completion of the programme graduates are entitled to receive a legally accredited degree.

This summary report contains the main outcomes of the peer review. A full report with more details including the panel's findings and analysis is also available. NVAO bases an accreditation decision on the full report.

Both the full and summary reports of peer reviews are published on NVAO's website www.nvao.net. There you can also find more information on NVAO and peer reviews of new programmes.

2 Panel

Peer experts

- Prof. dr. Gerda Croiset (*chair*), Dean of Education and Training, University Medical Centre Groningen
- Prof. dr. Abhay Pandit, Established Professor in Biomaterials and Director of the SFI Research Centre in Medical Devices (CÚRAM), University of Galway, Ireland
- Prof. dr. Helena Verkooijen, Professor of Evaluation of Image-Guided Interventions, University Medical Center Utrecht / Utrecht University
- Koen Wijsman MSc (*student member*), student MSc Medicine, Leiden University; MSc Health Care Management, Erasmus University Rotterdam

Assisting staff

- Dr. Duco Duchatteau, MBA, secretary
- Michèle Wera MA, NVAO policy advisor and process coordinator

Site visit

14 February 2023, Maastricht University

3 Outcome

The NVAO-approved panel reaches a positive conclusion regarding the quality of the BSc Regenerative Medicine and Technology programme offered by Maastricht University.

The academic bachelor's programme Regenerative Medicine and Technology is a 180 EC three-year full-time programme. The programme aims to educate undergraduates who can develop medical therapies, products and devices for research and clinical use. The academic and professional field needs scientists who can look beyond one specific discipline's borders. Maastricht University intends to provide for this need. Students will be trained in natural sciences, engineering, medicine, methodology, entrepreneurship and technologies such as imaging, modelling and programming.

The programme will be offered in a robust ecosystem. The research infrastructure at Maastricht University and the many medical and technological companies in the university's immediate environment provide ample opportunities for students.

Maastricht University intends to educate a new generation of scientists not constrained to one discipline, able to fill the gap between physicians, scientists, engineers and entrepreneurs. Although this programme is new to the Netherlands, similar programmes exist abroad. That is why the panel has recommended the university perform an international benchmark to identify potential partners for strategic collaboration.

The programme was developed in close collaboration with the professional field. The panel saw several examples of how well the university has listened to the needs of the professional field. This ensures that students and graduates will be welcomed by the field.

The panel has made some suggestions to strengthen the programme. The programme could benefit from increased student interaction with patients and an increased emphasis on entrepreneurship. These are, however, suggestions to make an already strong programme better. Maastricht University has followed a rigorous process to successfully develop an innovative and multidisciplinary curriculum.

The programme's multidisciplinary nature implies that faculty members with diverse backgrounds are involved. This is a point of attention, since the panel observed that the teachers do not yet form a cohesive multidisciplinary team. The panel has, however, established that the involved faculty members are experts in the fields in which they teach. In addition, the faculty is well-trained in didactics. Teachers have sufficient time to ensure their availability to students.

The university's vision on student assessment has been consistently implemented in the programme. The programme uses a wide variety of different assessments. Procedures for a diligent assessment process are in place, and the relevant committees are actively involved.

All in all, the NVAO expert panel is of the opinion that Maastricht University has successfully developed a promising and novel academic bachelor's programme. Its graduates can form a new generation of multidisciplinary educated scientists and engineers, who should be able to give the needed push to advance the field of regenerative medicine.

4 Commendations

The programme is commended for the following features of good practice.

1. Multidisciplinary – The programme interfaces the fields of biomedical sciences, healthcare, technology and entrepreneurship. This novel multidisciplinary approach is unique in the Netherlands.

2. Involvement of the professional field – Future employers were involved in the programme's design and expressed the necessity for these graduates. Maastricht University has demonstrably listened to the needs of the professional field. Employers remain committed to a continued contribution through involvement in students' projects and thesis placements.

3. Strong ecosystem – The programme is embedded in a robust ecosystem. In addition to the internal research environment, Maastricht University partners with a wide variety of research-driven, technologically innovative companies, including startups, in regenerative medicine.

5 Recommendations

For further improvement to the programme, the panel recommends a number of follow-up actions.

1. International benchmark and collaboration – Identify international institutions that offer similar programmes and form strategic partnerships. Universities can learn from one another and create synergy in opportunities for research and international student exchange.

2. Patient interaction – Explore opportunities to increase patient interaction in the programme.

3. Entrepreneurship – Monitor the development of entrepreneurial thinking amongst students. Consider increased exposure to entrepreneurs in the programme, e.g. by way of guest lectures.

4. Identity – The innovative nature of the programme implies that role models are scarce. Give sufficient attention to the development of the new multidisciplinary identity of students. Identify potential role models.

5. Team cohesion – Invest in team development to ensure that the group of teachers becomes a cohesive multidisciplinary team.

6 What comes next?

NVAO grants initial accreditation to a new programme on the basis of a panel's full report. The decision is valid for a maximum of six years. For conditional accreditation other regulations apply. Upon accreditation the new programme will follow the NVAO review procedures for existing programmes. NVAO publishes the accreditation decision together with the full report and this summary report.[1]

Each institution has a system of quality assurance in place ensuring continuous follow-up actions and periodic peer-review activities. Peer reviews help the institution to improve the quality of its programmes. The progress made since the last review is therefore taken into consideration when preparing for the next review. The follow-up activities are also part of the following peer-review report. For more information, visit the institution's website.[2]

[1] https://www.nvao.net/nl/besluiten

[2] https://www.maastrichtuniversity.nl

7 Summary in Dutch

Het panel oordeelt positief over de kwaliteit van de Engelstalige bacheloropleiding Regenerative Medicine and Technology van de Universiteit Maastricht. Dit is de uitkomst van de kwaliteitstoets uitgevoerd door een panel van peers op verzoek van de Nederlands-Vlaamse Accreditatieorganisatie (NVAO). Voor deze beoordeling heeft het panel gesprekken gevoerd met de opleiding op 14 februari 2023.

De wo-bachelor Regenerative Medicine and Technology is een driejarige voltijdse opleiding van 180 EC. De opleiding beoogt studenten op te leiden die behandelingen, producten en apparaten kunnen ontwikkelen voor onderzoeksdoeleinden en klinisch gebruik. Dit vakgebied heeft wetenschappelijk opgeleide professionals nodig die over de grenzen van één discipline heen kunnen kijken. De nieuwe opleiding wil in deze behoefte voorzien. De Universiteit Maastricht wil een nieuwe generatie wetenschappelijk opgeleide professionals afleveren die zich niet beperken tot één vakgebied, en een brug slaan tussen artsen, wetenschappers, ingenieurs/ontwikkelaars en ondernemers. Studenten worden opgeleid in de natuurwetenschappen, engineering, geneeskunde, methodologie, ondernemerschap en technieken als beeldvorming, modelleren en programmeren. De multidisciplinaire benadering is uniek in Nederland. Wel bestaan vergelijkbare opleidingen in het buitenland. Daarom beveelt het panel aan om een internationale benchmark te maken om zo mogelijke samenwerkingspartners in kaart te brengen.

Studenten volgen de opleiding in een aantrekkelijke leeromgeving. Zowel de onderzoeks-infrastructuur van de universiteit als het grote aantal medische en technologische bedrijven in de directe nabijheid bieden veel kansen voor studenten.

Bij de ontwikkeling van het programma is goed samengewerkt met het beroepenveld. Het panel heeft meerdere voorbeelden gezien waar de universiteit echt goed heeft geluisterd naar wensen van de industrie. Hierdoor leidt de Universiteit Maastricht daadwerkelijk professionals op waar toekomstige werkgevers behoefte aan hebben.

Het panel doet enkele aanbevelingen om de opleiding te versterken. Meer interactie met patiënten en een sterkere nadruk op ondernemerschap kunnen bijdragen aan de kwaliteit van het programma. Dit zijn echter suggesties om een reeds goede opleiding verder te verbeteren.

Het multidisciplinaire karakter van de opleiding brengt met zich mee, dat docenten met een zeer uiteenlopende achtergrond bij de opleiding zijn betrokken. Het viel het panel op dat de docenten nog geen hechte groep vormen. Wel heeft het panel vast kunnen stellen dat de docenten deskundig zijn in de vakken die zij onderwijzen. Docenten zijn didactisch geschoold en hebben voldoende tijd voor hun onderwijstaken.

De visie op toetsing van de universiteit is consistent geïmplementeerd in de nieuwe opleiding. De opleiding maakt gebruik van gevarieerde toetsen, waarbij vorm en inhoud goed op elkaar zijn afgestemd. Er zijn deugdelijke procedures en de relevante commissies zijn actief betrokken.

Al met al is het NVAO-panel van mening dat de Universiteit Maastricht met succes een veelbelovende en vernieuwende wo-bachelor in Regenerative Medicine and Technology heeft ontwikkeld. De afgestudeerden van deze opleiding kunnen een nieuwe generatie multidisciplinaire wetenschappers worden die hun steentje zullen bijdragen aan de verdere ontwikkeling van de regeneratieve geneeskunde.

Meer informatie over de NVAO-werkwijze en de toetsing van nieuwe opleidingen is te vinden op www.nvao.net. Voor informatie over de Universiteit Maastricht verwijzen we naar de website van de instelling.[3]

[3] https://www.maastrichtuniversity.nl/

The summary report was written at the request of NVAO and is the outcome of the peer review of the new programme BSc Regenerative Medicine and Technology of Maastricht University

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NVAO

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