

## **Ontwikkelgesprek**

Master Applied Nanotechnology  
3 June 2021



Present on behalf of Saxion:

- Team leader / program manager
- Course director
- Educational development and quality assurance consultant

Present on behalf of the panel:

- Panel member

The development interview is based on the results of the assessment report. The programme management would like further explanation and advice in response to a few points for improvement.

### **Overall impression by the audit panel**

The degree programme comes across as a master-apprentice training, with intensive supervision from the lecturers and research group. The collaboration between lecturers, the NanoBio and NanoPhysics research groups, research institutes and (local) companies is equally intensive and very valuable. The downside is that this system is vulnerable to illness or changes in staff. The programme relies on specific expertise, but is small in terms of numbers in staff. Although this is (frequently) inherent to highly specialized programs with a relatively small team, there are some options to reduce this vulnerability.

### **Advice and conclusions**

The question is how the programme management can set up a more robust or resilient educational organization without losing the advantages of the small scale. A next topic of conversation was how the organization can strengthen and utilize its international character. Finally, the nature of the graduation assignments was also discussed. The panel observed that the focus of some theses was on the literature study and less on prototyping, implementation and valorization. This yielded the following recommendations and conclusions:

#### *Resilience of the degree programme*

Expand the group of experts ('masters') especially in cooperation with other (international) technical oriented (master) programmes. For instance, in collaborating with other institutes where students can work on their masters' thesis or the joint offering of education on topics like data science, business & finance or society and technology. Extending (international) contacts with institutes like WWU in Münster can yield nano-related expertise or shared use of specific research equipment. Finally, the continued growth of both Nano research groups will contribute to increasing the resilience of the programme.

#### *Internationalization*

Sharpen the vision on internationalization, making a distinction between supporting the integration of incoming students into Dutch culture and professional field, and preparing students in general for professional functioning in a strongly internationally oriented environment. Intercultural awareness can focus on preparing to the Western-European labor market, as well as collaboration with students with a diversity of cultural backgrounds.

#### *Student influx and diversity in backgrounds*

The influx of students is diverse, as well as their interest and ambitions. A significant percentage of students have a preference to tackle fundamental research-questions during the master's thesis, while the meaning of the program is to prepare to design-oriented (applied) graduation assignments.

Some of the foreign students have the ambition to get a PhD while, at the same time, the Dutch influx of students still strongly originates from the applied science domain. An increase of influx, especially from the engineering domain would support the design-oriented mindset within the population. The

programme has strengthened its ties with several engineering bachelor's programmes. If this intake starts to grow, you will automatically get cross-pollination between students. Within the teaching team the process to get a team that better reflects the diversity of our students and of the (local) professional field has been started, creating a team with a better balance with respect to men/female, Dutch/non-Dutch and Engineering/Life Science ratio's. In addition, the redefinition of the positioning of the degree programme also becomes increasingly clear and is accordingly communicated so to aspirant students. This supports the design-oriented character and strengthening interdisciplinary collaboration in the aforementioned program components will support the creation of a design-oriented mindset.