

## **Report/ notes of Developmental discussion**

### **M Energy and Environmental Science**

University Groningen

12-06-2024

#### **1. Curriculum**

*The master's programme EES would like to discuss any weaknesses or topics lacking in the new curriculum.*

*The typical Groningen signature should be kept.*

The panel thinks EES has a nice set of courses, in which knowledge of the environment stands out. On a national level, the panel sees that each programme tries to be unique, although programmes also overlap. The programme EES in Groningen typically emphasizes the natural and technical sciences. According to the panel, this focus is fine as long as students also learn to communicate with scientists from other disciplines. Communication skills are much needed, for instance, to help implement an innovation. Communication skills are present in the courses, but not very clearly. An exception is the mandatory course Science & Communication. The panel suggests making an overview or learning line that states where in the programme students encounter communicative skills. Such an overview can also be helpful to raise staff awareness.

The panel feels that the electives offer a wide variety of interesting content, and students are guided to choose electives that suit their interests. The economics theoretics are covered too, also in projects.

The panel suggests that societal issues can be made more explicit. Engineering can be used to find solutions for societal issues. The panel thinks that the transition process toward sustainability in society could also be a topic. The EES learning outcomes do not explicitly reflect impact and transition, but it would make sense for an engineer to learn about these issues as they are such a large part of new developments in the work field.

After several recent site visits, the panel concludes that alternative paradigms, degrowth perspectives, and such, are lacking in programmes at other universities. EES could evaluate whether these topics are lacking in its curriculum. EES clarifies that degrowth is part of the minor. If students want to explore these topics, there are opportunities within the faculty. EES thinks this content is appreciated by students, as EES students often want to have hands-on experience to improve the world.

#### **2. How to deal with AI?**

*EES would like to compare opinions on how to deal with AI in education and identify fields of attention.*

The panel is informed of the UG policy and Faculty vision on the use of AI. The Centre for Teaching and Learning advises lecturers on AI and assessment methods. Some teachers are early adopters; they are experimenting and have contacts with other faculties. The programme organizes awareness sessions. From discussions with students, privacy concerns have risen. The panel agrees that students need to learn to use AI critically and scientifically. This includes not only general AI but also specific tools for the natural sciences disciplines.

EES students feel that students are in very different positions. Some know a lot about AI, while others do not use it because of concerns about penalization. There are no good instruments to prove that AI was used. Clarity of guidelines is very important to students. EES should take into account that some students are native speakers of English, which makes them better equipped with the English language, but can also make them suspect of using AI to improve their language. According to the students, the professors should provide a clear definition of how to use AI to help the students work according to the rules. AI cannot always be used due to costs. Also, AI tools are not yet available for scientific projects.

The panel has seen rapid developments in the last six months within the approach towards the use of AI by programmes, from prevention of cheating to putting AI to good use. The panel notes that transparency is the key. Students should not be sanctioned as fraudulent, as long as they are transparent. In this way, students can try different things and teachers can select which forms of use to accept or not. The panel recommends that lecturers use AI to develop new courses, as this saves time and effort. The panel recognizes the concern about the confidentiality of data, faculties can draw up contracts with AI programmes to shield and protect data. AI is evolving rapidly, the panel advises that sessions and courses on the use of AI are continued, as well as regular talks with students.

### **3. Student recruitment, English language**

*The international character of the programme is highly valued by EES.*

*EES aims to keep international student numbers at a good and workable level.*

EES participates in different marketing activities. Many international students apply, but not so many sign up for the programme. This could have to do with rising tuition fees, as well as costs of living. The panel suggests reaching out to Dutch HBO programmes and having more direct contact with bachelor programmes. Alumni networks could also help attract new (foreign) students. The panel thinks that there are opportunities to educate young professionals who are sent over by international companies.

The (mandatory use of the) Dutch language could make EES less attractive for international students. Most students do not learn Dutch, as they do not intend to stay in the Netherlands. However, quite a few change their minds about this after graduation and then regret not having learned much Dutch. The panel suggests that students can be made more aware of the importance of the Dutch language for certain jobs and social integration. Regional embedding is important for scientists, to improve societal acceptance. The panel suggests discussing this with other faculties and advises to 'think locally, act globally.'