

## **Development Dialogue concerning the Master's degree programme Energy and Environmental Sciences, University of Groningen**

Audit has taken place on March 19, 2018; Development meeting on March 19, 2018  
Zernike campus, university of Groningen  
Programme discussed: Master's degree programme Energy and Environmental Sciences  
(CROHO 60608)

Representatives of assessment panel:

- Prof. dr. W.A. Hafkamp, Professor at Erasmus University Rotterdam (chair)
- Prof. dr. M.C.E. van Dam-Mieras, emeritus Professor Open University, University of Leiden (panel member)
- Prof. dr. L. Hordijk, emeritus Professor Wageningen University (panelmember)
- Pleun Aarts (student member)
- Supported by W. Vercouteren from Certiked

Representatives of degree programme:

- Dr. ir. S. Nonhebel, deputy programme director
- Dr. W.P. Leenes, chair programme committee
- Prof. M.A. Herber, chair board of examiners
- G.A.H. Laugs, lecturer
- Drs. K. de Jonge, programme coordinator
- N. Roberts, secretary to the degree programme (taking minutes)

### **Introduction**

Vercouteren explains the procedure: Nowadays a development dialogue is a new element. This dialogue has to take place after the audit. The aim is to improve the education. This meeting is not part of the factual audit and the information will not be incorporated in the audit report for the NVAO.

### **Question from the programme**

What actions should be taken to adjust the education in the master EES to increasing student numbers?

During the discussion several ideas are mentioned:

- E-learning. Not meant as learning from home, but learning in the classroom, with different modes of education. This is an investment. With more students you will receive more finances, you can spend that on more staff, or in ICT, for example. Increasing numbers of students may increase the workload for the staff.

- Education and knowledge will always deal with people. But ICT can facilitate education. For example recording of lectures. Staff members have to be instructed effectively.
- International students: students can already prepare for the master via MOOCs (massive open online courses). Social media can be used as well as preparation.
- Implementation of new facilities has to take place step-by-step and needs sufficient expertise and support.
- Discussion between students is very useful, students learn a lot, but with increasing numbers this has to be organized effectively. Encourage the staff to make the lectures more interactive but the learning objectives have to be kept in mind.
- The board of examiners would like to encourage digital exams. This improves the quality of the exams. The students can correct their text, the staff does not have to decipher the handwriting and it saves a lot of time when checking the exams.
- An important point of attention: when the student numbers increase you have to pay attention to maintain sufficient bonding/team building. Attending colloquia of students doing research in other research groups is one way to stay connected.
- More students will mean more groups. Students can assess each other's work, that is very informative. But they need a guideline or a rubric to use the same criteria and standards. How to deal with cultural bias? That will happen and students have to learn to cooperate with students from different backgrounds and cultures. In practice students are honest but also strict to one another. The student panel member remarks that students do not like to grade one another and also do not like to receive grades from other students. But in this way students can learn from each other and a rubric makes the grading transparent.