

# Annual Report Board of Studies BSc and MSc AES 1/9/2021 – 31/8/2022

## Faculty CEG, Delft University of Technology

This annual report of the Board of Studies BSc and MSc Applied Earth Sciences (AES) provides an overview of the actions of the Board of Studies during the academic year 2021-2022. This review serves to inform people and bodies within Delft University of Technology concerned with the AES programmes of the status of recent and ongoing items within the AES Board of Studies. This document also gives new members of the AES Board of Studies insight into recent and ongoing items, and it supports the progress of actions in the coming year.

The AES Board of Studies is a committee that actively, and in a constructive-critical manner, works to ensure the highest quality of education in the AES programmes. The Board interacts regularly with AES teachers, students, the Board of Examiners, Education & Student Affairs, and the AES Programme Coordinator and AES Director of Studies. The Board consists of 10 members: 5 staff members and 5 student members. In 2021-2022 the Board consisted of:

Dr.ir. A.A. Verhagen	chair
Dr. S.R. de Roode	staff member
Dr. J. Gebert	staff member
Dr. M. Soleymani Shishvan	staff member
Dr. C. Weemstra	staff member
W. Horeman	student member
S. van der Kleij	student member
A. Ocampo Mendoza	student member
K. van Alphen	student member
S. Romijn	student member

The Board of Studies was supported by Ms E. van der Kruk (Secretary to the Board). In 2021-2022, the Board had seven meetings.

The AES Board of Studies has performed its lawful roles and responsibilities:

- Provide advice on the establishment of the Teaching and Education Regulations (TER) and Annex
- Assess the implementation of the TER
- Provide advice – solicited and unsolicited – to the Dean, the Directors of Education and the Director of Studies concerning the programme and all associated teaching-related affairs.

## Important items 2021-2022

### **1. Education quality**

#### **1.1 Educational Quality Assurance**

### **2. Bachelor programme**

#### **2.1 Changes to Bachelor courses for 2022-2023**

#### **2.2 Python in the Bachelor programme**

#### **2.3 Advice on and approval of TER and Annex BSc AES 2022-2023**

### **3. Master programme**

#### **3.1 New MSc programme**

#### **3.2 Transitional measures for students of the old MSc programme**

#### **3.3 Advice on and approval of TER and Annex MSc AES 2022-2023**

#### **3.4 Applied Geophysics as a separate MSc programme**

### **4. New Board of Studies**

#### **4.1 Changes to the Boards of Studies of the CEG Faculty**

## Elaboration on items

### **1. Educational Quality**

#### **1.1 Educational Quality Assurance**

Throughout the year the Board regularly discussed the quality of the education of both the Bachelor and Master programmes. The results from course evaluations are shared with the Board of Studies. The Board can and does advise the Director of Studies to take action if necessary. The percentage of positive Binding Study Advice for AES students was lower than the overall results for the University, 58,7% compared to 70,7% respectively. This is a recurring problem, for which a solution has not been found. One idea was to change the order of the Mathematics courses in the first year, but it turned out the first year students strongly opposed this, so no further action was taken in this respect. However, a change in assessment to one of the Mathematics courses of the first year was made, see 2.1 below.

### **2. Bachelor Programme**

#### **2.1 Changes to Bachelor courses for 2022-2023**

Three courses of the BSc have been changed for 2022-2023: Linear Algebra, Grand Challenges and Applied Earth Sciences and Rock Mechanics. The Board has given positive advice regarding these changes.

##### *Linear Algebra (AESB1311)*

Linear Algebra was taught over two periods, with a final exam at the end of the second period. A new course code was requested to change the assessment to two examinations, each worth 50% of the final

grade. The first examination is at the end of the first period and will cover all topics of that period, the second examination is at the end of the second period and will only cover the topics of the second period.

#### *Grand Challenges and Applied Earth Sciences (AESB1242)*

A “goal setting” assignment was added to the assessment of Grand Challenges, as part of a project to help students critically reflect on their motivation and study success. Other changes to the assessment of the course: there will only be a final report at the end of the first period, and a presentation in the second period. Finally, a pass/fail assessment on Python programming has been added to the course.

#### *Rock Mechanics (AESB2341)*

The second year course Rock Mechanics needed a new course code to change the assessment of the course. Grading will be based on assignments worth 45% of the final grade and a written exam for 55% of the grade, and a literacy module as a pass/fail assignment.

### **2.2 Python in the Bachelor Programme**

To improve the programming skills of Bachelor students, a Python module and pass/fail assessment has been added to the first year BSc course Grand Challenges and Applied Earth Sciences. The Python module is initiated at the request of various lecturers within the programme. It will ensure students will meet some minimum requirements in programming skills (for example in Python), which they will benefit from during the remainder of the programme. The module will not be assessed by means of an exam, but by a pass/fail assignment. The results of this intervention will be evaluated in the coming years.

### **2.3 Advice on and approval of the TER and Annex BSc AES 2022-2023**

The Teaching and Examination Regulations 2022-2023 were discussed during the meetings of the Board in May and June. Eva van der Kruk was responsible for the TER procedure this year, due to the absence of the secretary to the Board of Examiners, Birgid Zaaier. Changes to the model text were discussed and approved, such as the registration period for exams which is back to 14 days. There were no major changes to the Annex, just the three new course codes and corresponding transitional rules. The Board of Studies approved of the new TER and Annex for the BSc AES on 13 June 2022.

## **3. Master Programme**

### **3.1 New MSc programme**

Lecturers of the AES programme continued to work on the new MSc programme throughout the academic year, and the redesign was a recurring topic on the agenda of the Board of Studies. In 2021-2022, the last cohort of students started in the old MSc programme, and courses that had been designated as “first year courses” were taught for the last time during this year. The Board of Studies was consulted regularly on the content of the new MSc programme, and gave its formal approval of the new programme

### **3.2 Transitional measures for students of the old MSc programme**

Dirk Martin, project manager at Education and Student Affairs CEG, joined the meetings of the Board in February and April to introduce and discuss the transitional measures for students of the old MSc programme. Students have four opportunities to pass a course: two in the year a course is offered, two in the year after a course has been discontinued. For the courses that were taught for the last time in 2021-2022, lecturers need to provide students with two opportunities to pass the course in 2022-2023. They will need to make materials available to students to help them prepare for the exams. If students fail to pass the course in 2022-2023 they will have to do designated equivalent courses in 2023-2024. Dirk Martin contacted the track coordinators and put together a list of equivalent courses. These lists are included in the programme-specific Annexes to the TER 2022-2023. The Board of Studies AES approved of the proposed transitional measures.

### **3.3 Advice on and approval of TER and Annex MSc AES 2022-2023**

The Teaching and Examination Regulations 2022-2023 for the MSc programme were also discussed during the meetings in May and June. The TER for the MSc programme needed to be changed to reflect the changes to the MSc programme, such as the change from tracks to disciplines. The content of the Annex MSc AES was also changed to reflect the changes to the programme, and the transitional measures for students of the old MSc programme was added. The Board of Studies approved the TER and Annex for the MSc AES 2022-2023 on 13 June 2022.

### **3.4 Applied Geophysics as a separate MSc programme**

Applied Geophysics is currently (2022-2023) a separate track within the MSc AES. However, the structure of the new MSc AES is such that it has disciplines instead of tracks. This has some formal and practical consequences (number of electives, mandatory modules, etc.). For this reason, actions are undertaken to make Applied Geophysics a separate, independent MSc programme. The track is a joint programme with partner universities in Switzerland (Zürich) and Germany (Aachen). Zürich and Aachen already have the programme as a separate MSc programme and have received accreditation for the programme, the goal is now to obtain accreditation in The Netherlands as well. The visitation of the accreditation panel will be in February or March of 2023 and the programme is set to start as a separate MSc programme in September 2023, possibly with a single diploma. The Board has been informed by Evert Slob on the proceedings and has given its approval.

## **4. New Board of Studies**

### **4.1 Changes to the Boards of Studies of the CEG Faculty**

The changes to the MSc curriculum of the CEG faculty, and especially the creation of a faculty-wide core module 'Modelling, Uncertainty and Data for Engineers' (MUDE, CEGM1000), necessitate changes to the structure and constitution of the different Boards of Studies within the faculty. Consequently, a separate Board of Studies will be formed, which will consist of representatives (one lecturer and one student) from the three Board of Studies of the MSc programmes Applied Earth Sciences, Civil Engineering, and Environmental Engineering. This new Board of Studies will give advice on and approval of changes to the faculty core module MUDE.

Another change is the recruitment procedure for new members, there will now be open vacancies for both lecturers and students and there is a profile description for lecturer and student member roles

to make the procedure more transparent. The term of appointment for student will run from November to November, instead of September to August.