



Board of Studies (CEG)

Annual Report

MSc & BSc AES 2022-2023

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Preface

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 2022-2023. 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.

Composition of the Board

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 2022-2023 the Board consisted of:

Staff members	Students member
Masoud Soleymani Shishvan	Rosita van de Ven
Kees Weemstra	Ayush Jha
Stephan de Roode	Mathias Ruhe
Guillaume Rongier	Karian Bruyndonckx
Anne-Catherine Dieudonné	Travis Hogan
Sandra Verhagen: Director of Studies AES	
Jawed Dawar (Education. Support): Secretary to the Board	

The Board has undergone some changes in the academic year 2022-2023. The following changes are worth mentioning:

- From October 2022 a new secretary is appointed to the Board, Mr. Jawed Dawar as successor of MS Eva van der Kruk who has left the TU Delft.
- New student members have joined the Board of Studies.
- Three new staff members have joined the Board of Studies.
- Sandra Verhagen has resigned as the member and the chair of the Board of Studies. Since February 2023 Sandra has accepted the position of the Director of Studies for AES (MSc & BSc).
- Jan Kees Blom has stepped down as the Director of Studies AES.

The Board of Studies will have some more mutations in the academic year 2023-2024.

- The current secretary to the Board of Studies Mr. Jawed Dawar will leave the TU Delft at the end of the academic year 2022-2023. At the start of the academic year 2023-2024 a new secretary must be appointed.
- Mr. Masoud Soleymani Shishvan was the chair of the Board of Studies during the academic year 2022-2023.
- At the start of the next academic year MS. Anne-Catherine Dieudonné will be the chair of the Board. It must then be decided whether she remains the chair till the end of her term or each year a new chair will be appointed.
- The Board will also have five new student members. These five places will be filled by an open call solicitation which will be organised by the EMT.

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.

The BoS started in September and had nine meetings in which a substantial number of requests for advice were discussed.

Important Items 2022-2023

Prominent items relate to education quality, changes in the BSc and MSc programme, and the redesign of the MSc.

1. *Education quality*
2. *BSc programme*
3. *MSc programme*
4. *Additional Board of Studies*

1. Education quality

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.

2. BSc programme

2.1 Changes to Bachelor Programme for 2023-2024

The EMT and the Director of Studies have drafted a position paper on the 'redesign' of the Bachelor programme Applied Earth Sciences. The idea is to restructure the bachelor programme in order to make the programme more future proof and attractive for new students. At the moment, the project is in the brainstorm phase. The Board of Studies is updated regularly on this project.

However, some quick wins are already implemented in the first year of the project. The Board of Studies is intensively consulted about these changes. The Board of Studies has approved the proposed changes. The changes are:

- Restructuring and rescheduling the mathematics courses throughout the first academic year of the bachelor's degree.
- Modifications and changes in some individual courses.

The Board of Studies has approved these improvements of the bachelor's degree.

2.1 Changes to Bachelor courses for 2023-2024

Three courses of the BSc will be subject to changes in 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 on specific request of various lecturers and students within the programme. It will ensure students will meet some minimum requirements when it comes to (Python) programming skills, which they will benefit from in the remainder of the programme. The module will not be grade assessed by means of an exam and/or assignment (merely pass/fail). The success of this approach (or lack of it) 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 Zaaijer. 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. MSc 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 (e.g., 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. Additional 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 each (MSc programme associated) Board of Studies. This new Board of Studies will give advice on and approval of changes to the 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.