

# Annual Report Academic year 2019-2020 Programme Committee CSE/ChE

## Members

The Programme Committee consists of four teachers and four student members (see table 1). The student members are chosen through an election which is held during the TOSTIS activity organized by the study association C.T.S.G. Alembic. Teacher members are appointed in consideration with the other members and the programme director

**Table 1: Educational Committee members**

	Name	Function or Group	Date of taking office
<b>Teacher Members</b>	dr.ir. W.M. de Vos (chair)	Membrane Science and Technology	November 2017
	Prof.dr.ir. P. Jonkheijm	Molecular Nanofabrication	May 2015 – January 2020
	prof.dr.ir. M. Huijben	Inorganic Materials Science	September 2014
	Dr. J.A. Faria Albanese	Catalytic Processes and Materials	September 2019
	prof.dr.ir. J. Huskens	Molecular Nanofabrication	February 2020
<b>Student Members</b>	R. Kersten	Student B-CSE	September 2019
	J.B. Roman	Student M-ChE	September 2019
	P.S. Duenas Robles	Student M-ChE	September 2018
	L. Pieters	Student B-CSE	September 2019
<b>Advise, support, regular guests</b>	prof.dr.ir. J.E. ten Elshof	Programme Director	<i>Not applicable</i>
	A.S. Elbersen – Grote	Study Advisor and Programme Coordinator (ChE)	<i>Not applicable</i>
	dr.ir. L.E. Krab-Hüsken	Programme Coordinator (CSE)	<i>Not applicable</i>
	drs. H.J. van den Hengel	Coordinator Quality Assurance	<i>Not applicable</i>
	J.J.H. Bruggeman	Commissioner of Educational Affairs Study Association C.T.S.G. Alembic	<i>Not applicable</i>

## Meetings

On the following dates, a meeting took place:

- 10<sup>th</sup> of October 2019
- 21<sup>st</sup> of November 2019
- 23<sup>rd</sup> of January 2020
- 19<sup>th</sup> of March 2020
- 7<sup>th</sup> of May 2020
- 4<sup>th</sup> of June 2020
- 2<sup>nd</sup> of July 2020

On the next pages, a summary of each of these meetings can be found.

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<b>Meeting October 10<sup>th</sup> 2019</b>	
<b>Educational evaluation</b>	The Chemical Process Analysis course was received well by students. The Electrochemical Engineering course was received well by students. It is relevant to a broad range of programs and hence will be included in other curricula as well. The Bachelor Assignment was rated quite positively although the response rate was not high and had a large spread.
<b>Discussions regarding curricula</b>	The general idea of 2.5 ECTS courses is received well. Students like to be able to follow many different courses which is now possible.
<b>General education</b>	The plans for the quality agreements were discussed briefly. It was decided to discuss the influence of TOM 2.0 on the CSE programme at a later meeting. A point is raised about the influx of (mostly international) students due to the Twente Pathway programme. This might have a big influence on the student culture. This will be discussed during the next meeting.
<b>Other business</b>	Jimmy Faria will replace Boelo Schuur in the programme committee as representative from the process and catalysis cluster. It was decided to publish all documents related to the programme committee on their Canvas page. Additionally, it was decided to also publish the agenda on the general Canvas page for ChE/CSE students with a note that they can contact the committee for the minutes. Wiebe de Vos replaces Boelo Schuur as chairman of the committee.

<b>Meeting November 21<sup>st</sup> 2019</b>	
<b>Educational evaluation</b>	The Numerical Methods for Engineers course was received well by students although it was also perceived as difficult. Both Membrane Materials and Membrane Processes were received well by students. The enrollment number was higher than what the lecturer anticipated which is a positive sign. The Lab Course SPT course was received well by students.
<b>Discussions regarding curricula</b>	The OLC has decided to put forward the advice to no longer allow bachelor students to do an internship instead of the bachelor's assignment. However, it is also stated that it should more clearly be communicated that it is possible to do an internship during the minor.  More courses will be made available as an elective during the eleventh module.
<b>General education</b>	The Twente Pathway College is discussed into detail. Some members worry that the selection is not specific enough which would result in a high dropout rate in the first year of CSE.  The action plan 2020 Study Programme is discussed. A point was raised concerning the shift in male/female and native/international student ratio's changing. Also, the joint interdisciplinary programme for MME students together with Mechanical Engineering is introduced and discussed.  The results from the Pizza Evaluation are discussed. The most important point raised concerns professionalization of students during the bachelor's phase. This will be discussed more elaborately during a later meeting.
<b>Other business</b>	Jurriaan Huskens replaces Pascal Jonkheijm as member of the programme committee.  The NSE results are discussed into some detail.

<b>Meeting 23<sup>rd</sup> of January, 2020</b>	
<b>Educational evaluation</b>	<p><b>M3 2018-2019</b> There are no reactions received on this module. This might be caused by a lack of interest of students to join teacher-student panels. It is seen more often that these evaluation sessions are not well received. The format of these panel meetings might want to be changed. This will be discussed later. The OLC comments further on the goal of the project and the low passing rate of Linear Algebra.</p> <p><b>M7 2018-2019</b> It is remarked that Nanochemistry does not seem to have improved over the years. This course will be as of next year moved to module 11 to become an elective. M7 is going to be restructured because of this.</p> <p><b>M11 2018-2019</b> There will be more electives this year and possible more in the coming years. No further remarks by the OLC.</p>
<b>Discussions regarding curricula</b>	<p><b>Electives M11</b> In this module there is an elective space of 5 EC. The current three choices do not cover the interest of all students, so more choices are desired by students. Polymer Physics and Bio-nanotechnology are added to this list. Also, registering for other courses is not a default option when registering for the module. This will be changed in Osiris. It is pointed out that students cannot take the master course again in their masters.</p>
<b>General education</b>	<p><b>TOM 2.0</b> Everything is going according to plan. In September, the system will be working and active.</p> <p><b>Learning assistants</b> Student assistants that will be given a didactic training, could be helpful in our program. The funding for this is taken from the quality agreement. A pilot is being held.</p>
<b>Other business</b>	<p><b>Annual report</b> The annual report is well received.</p> <p><b>Meeting with faculty council</b> The OLC members present summarized the most important points that came up during the meeting. The evaluation of the quality documents was the most important one. The faculty council oversees evaluating the allocation of the funds for teaching we get from the government. It can only be used to improve the quality of teaching. The OLC will be involved in this evaluation. The OLC planned with the FC to have two meetings a year, one to discuss quality and another to discuss general educational aspects.</p>

<b>Meeting 19<sup>th</sup> of March, 2020</b>	
<b>Educational evaluation</b>	<p><b>M8A 2018-2019</b> No remarks by OLC. <b>M8B 2018-2019</b> No remarks by OLC. <b>M4 2018-2019</b> This module is not as favorably rated, but any real problems have not been found. Some suggestions are being given. <b>Fluid dynamics pencasts</b> Only positive comments are heard by the OLC and staff members.</p>
<b>Discussions regarding curricula</b>	-
<b>General education</b>	<p><b>Multidisciplinary master specialization MSE</b> The preliminary plan is being discussed. The new track will be based on courses that already exists. The track should make students more aware of the possibilities they have. It will be more engineering orientated than the original MME-track. The OLC states that it might not be discriminative enough from the MME-track and suggest that students should follow multidisciplinary courses, in which the choice of electives is crucial. There are also some remarks about the structure of the final project.</p> <p><b>Panel Meeting ChE CPE</b></p>

	<p>Only four students were present, but they are all satisfied with the program.</p> <p><b>Panel Meeting ChE MME</b> A lot of students were present. The characterization course again received negative feedback.</p>
<b>Other business</b>	<p><b>Name change of the masters</b> All OLC members agree with the name change in the master of ChE, so that it will have the same name as the bachelors.</p> <p><b>Impact of Coronavirus</b> The main difficulties are currently: exams, master and bachelor assignments, and international students. Also, doing lab work is still impossible in the current settings. The grades of first/second-year students are determined on the grades they obtained already. All theory lessons will continue online as of next week.</p>

<b>Meeting 7<sup>th</sup> of May, 2020</b>	
<b>Educational evaluation</b>	<p><b>M5 2019-2020</b> No remarks by OLC. <b>M1 2019-2020</b> No remarks by OLC. <b>M6 2019-2020</b> No remarks by OLC.</p>
<b>Discussions regarding curricula</b>	<ul style="list-style-type: none"> <li>• The amount of electrochemistry classes in Module 4 should be increased, however, the knowledge from the analytical chemistry should not be overlooked in the Bachelor programme. The changes will be applied in 2021.</li> <li>• OLC likes the idea of MSE track, however, would like to see a control mechanism to check the multidisciplinary nature of the master assignment.</li> </ul>
<b>General education</b>	<ul style="list-style-type: none"> <li>• The process of the name change to CSE is on track.</li> <li>• <b>General BSc EER</b> – Remarks found and will be communicated with the faculty council.</li> <li>• <b>General MSc EER</b> – NV will be entered in OSIRIS and can only have a consequence in awarding cum laude.</li> <li>• <b>ChE specific BSc EER</b> – The only change is the introduction of electrochemistry in Module 4. No further remarks.</li> <li>• <b>ChE specific MSc EER</b> – OLC summed up the changes and approved the document.</li> </ul>
<b>Other business</b>	<p><b>Corona virus</b> – All the courses are running as well as possible now. The situation with the practicals and BSc and MSc assignments are unclear. A small survey among the international students was conducted and they are concerned about the master thesis, timeline of the projects, extensions, financial problems, and health problems. Some problems can be discussed with the study advisers, but the main decisions are made by the university and they are not announced yet.</p>

<b>Meeting 4<sup>th</sup> of June, 2020</b>	
<b>Educational evaluation</b>	<p><b>M2 2019</b> – Only 49% of students passed the module. The oral exam for some students was held in Dutch and that is not allowed anymore since the program is totally in English. Owing to Corona, the panel meeting was not held, but the lecturers did not send the feedback via Email, and they were asked to. The main issue is still mathematics and a lot of students did not finish both cases that are obligatory to pass the module. The difference is huge between M1 and M2 considering the passing rate.</p> <p><b>Advanced Molecular Separations</b> – Very good scores.</p>

	<p><b>Advanced Chemical Reaction Engineering</b> – The course is well evaluated, and the reaction of the lecturer was in Dutch.</p> <p><b>Transport in Fluids</b> – 4/16 students responded. The lecturers want to implement changes regarding Matlab.</p> <p><b>Membranes for gas separation</b> – A high response rate since W.M. Vos asked the students to respond via Email.</p>
<b>Discussions regarding curricula</b>	-
<b>General education</b>	<ul style="list-style-type: none"> <li>The program is scoring low in professionalization. The study association Alembic already organizes a lot of company visits and study cases, however, students do not see this as a part of educational program, but as an extra, non-mandatory activity. Students would like to hear what the role of a chemical engineer is, but the companies overall present who they are and what they do. The suggestion is to invite a fresh alumnus who has 1-2 year experience to provide a speech. Students are also not aware that there is an option to do an internship during the minor. Moreover, a competition (such as in Eindhoven) can be organized at the UT. To conclude, the activities could be a collaboration between Alembic and the programme.</li> </ul>
<b>Other business</b>	<ul style="list-style-type: none"> <li>J. Sweers, J. van Beek, and F. Nieuwenhuijse are also joining this meeting in order to give input for the discussion regarding professionalization.</li> <li>Corona virus – The practicals and the BSc and MSc assignments are the priority as well as the exams and social activities for the first year students. An influx from Navitas of 15 non – EU bachelor students and the influx of other international students is likely to be lower. The Dutch students still have time to enroll.</li> <li>There will be online presentations for the BSc assignment on the 2nd and 3rd of July.</li> <li>There is an improvement for international master students and the general mood is better.</li> <li>Non-EU students will be able to enrol for just a few months the next academic year to finish the assignments plus the reduced fee. Master students will receive 530 euros from the government. Dutch students also get a reduced fee.</li> </ul>

<b>Meeting 2<sup>nd</sup> of July, 2020</b>	
<b>Educational evaluation</b>	<p><b>B1 M2</b></p> <ul style="list-style-type: none"> <li>The discussion of the M2 evaluation with the lecturers has taken place. The passing rate of the module is low, due to a higher required level of mathematics and abstract thinking, and it is typically the module wherein the students decide to leave the programme. A part of the students did not put enough effort in group work and performed bad at the oral exam. It was concluded this was because this is the only oral exam in the bachelor programme. By providing the students with a list of preparatory questions, students will know what to expect. Also, it was decided the oral exams can no longer take place in Dutch.</li> </ul>

<b>Discussions regarding curricula</b>	-
<b>General education</b>	The general section of the bachelor EER has been finalized and approved.
<b>Other business</b>	<p><b>OLC Next Year</b>  J.A. Faria Albanese, W.M. de Vos, M. Huijben and J. Huskens remain in the OLC upcoming year representing the teachers. J.B. Roman, R. Kersten and L. Pieters will try to stay in the OLC upcoming year representing the students, by getting reelected by Alembic. P.S. Duenas Robles will leave the OLC.</p> <p><b>Corona Measures</b>  The study schedules are nearly finished; The master students will have a morning per week scheduled for online education, the bachelor students will have more physical hours. The most important physical education will be tutorials and exams. Organizing a practical for all students proved to be an issue last module, but a plan has been made where every student can participate.  A discussion about evening lectures took place, where was concluded that because it has many advantages and disadvantages, the decision could only be made in consult with the responsible teachers.</p> <p><b>International Master Students</b>  Emails were sent to internationals to find out whether they will come in September and that they must be here before October 15<sup>th</sup>. An overview of present students is needed to plan on campus hours in the master for electives. A proposition was made to offer international Master students a host research group where they can be embedded for practical work.</p>