

# Quality Agreements @ EEMCS

Plans for Tranche 2, 2022-2024

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This document presents and explains the plans and budgets at the EEMCS faculty for the second tranche of the Quality Agreements, for the period 2022-2024. It supersedes the previous “*EEMCS Quality Improvement Education*” of July 2019. We refer to that document for a thorough explanation of the context and the EEMCS educational philosophy:

<https://www.utwente.nl/en/eemcs/educational-quality/qualityagreements/>

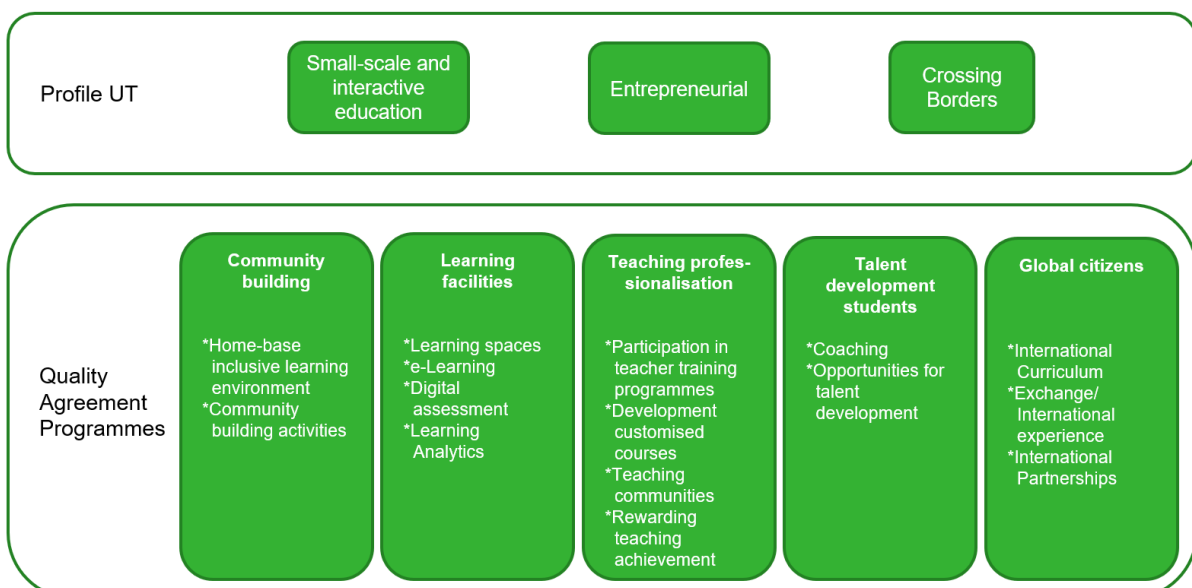
## 1. How to read this document?

This document serves several purposes.

- Firstly, to clearly present the measures for Tranche 2, containing all information required in the UT format (including budget), in a way that can be understood without reference to previous documents;
- Secondly, to establish the link back to the Tranche 1 plans, explaining how the measures have evolved. Some measures are discontinued, whereas others have undergone a shift in focus or a choice in actual realisation that necessitates a renaming to better capture the future plans;
- Thirdly, to provide an overview of the process regarding evaluation and assessment of the Quality Agreements for the coming years.

## 2. UT programmes and the embedding of EEMCS Quality Agreement measures, 1<sup>st</sup> Tranche: 2019-2021

The UT has defined the following five *quality agreement programmes*. This figure also shows how the programmes match with the university’s educational profile:



As Faculties had been given freedom of developing their educational quality measures within one or more of these programmes, EEMCS put emphasis mostly on the UT-themes of ‘learning facilities’, ‘teaching professionalization’ and ‘talent development’. Based on this we formulated 10 measures for the EEMCS Quality Agreements 1<sup>st</sup> Tranche:

	<b>Measure 1<sup>st</sup> Tranche</b>	<b>Community building</b>	<b>Learning facilities</b>	<b>Teaching professionalization</b>	<b>Talent development</b>	<b>Global citizens</b>
M1	Create additional project rooms, well-equipped, including support staff	<b>X</b>	<b>X</b>			
M2	Video lectures		<b>X</b>			
M3	Micro lectures		<b>X</b>			
M4	Hire technical staff to develop software for digital testing and programming education		<b>X</b>			
M5	Hire additional staff for programme coordination		<b>X</b>			
M6	Professional mentoring of students (in academic skills)				<b>X</b>	
M7	Student assistants with educational competencies				<b>X</b>	
M8	Introduce UTeachers Academy at EEMCS			<b>X</b>		
M9	Additional training facilities for teachers			<b>X</b>		
M10	Development of international curriculum in BSc and MSc programmes					<b>X</b>

For a full description and motivation of the Tranche 1 measures, see the previous report on *EEMCS Quality Improvement Education* of 2019. A more extensive description of the progress in each of the measures can be found in the *Progress Report EEMCS Quality Agreements* (Nov 2020);

<https://www.utwente.nl/en/eemcs/educational-quality/qualityagreements/>

### 3. EEMCS Quality Agreement measures for 2<sup>nd</sup> Tranche: 2022-2024

The UT Quality Agreements were evaluated in December 2019, as part of the Institutional Audit (ITK). Though very enthusiastic about the content and developing process (bottom-up) of the plans, the panel came with a point of advice. As there were *134 measures* in total for the institution, we were advised to see if some clustering of measures would be possible.

In the end, the total number of measures can be reduced not only by clustering but also by discontinuation (if the targets have been met, the measure is no longer considered necessary, or some other source of funding has been identified). By discontinuing some of the Tranche 1 measures in our faculty, we also keep them more manageable and the money will be less scattered as a consequence. Nevertheless, we identified also a strong need for *one (M11)* additional measure in our faculty.

The following elaborates on the status of the measures of tranche 1 in place at EEMCS, explaining how the measures have evolved. Some measures will be continued, others are discontinued, whereas some have undergone a shift in focus or a choice in actual realisation that necessitates a renaming to better capture the future plans.

**M1. Support for educational labs** (was: *Create additional project rooms, well equipped, including technical support staff & education support staff*).

**Status:** Most of the sub-projects were successfully initiated under this measure, and there is a clear need for continuation and expansion within other study programmes.

**Plan:** To be continued in tranche 2 and extended to (i) other study programmes, (ii) home-lab equipment for students (also due to lessons learned during the Covid-19 pandemic) and (iii) specialised hardware or software for personal use during one or more courses. As the labs can be seen as a kind of ‘home base’ for students, the measure was and is also placed in the ‘community building’ category.

**Budget:**

	2022	2023	2024
Datascience-lab	*	*	*
ITech-lab	*	*	*
EE-lab (Welpzaal)	*	*	*
Robotics-lab	*	*	*
Personal equipment for students	*	*	*
Total Measure 1	400	400	400

\*Variable amount: depending on specific needs

**M2. Video lectures**

**Status:** A larger number of lectures than foreseen were recorded during the Covid-19 period, though the use of the recordings is hampered by the lack of indexing and hence reduced findability.

**Plan:** To be discontinued in tranche 2, as the recording of lectures has now been defined (as of summer 2021) as a UT-wide ambition. Furthermore, the sharply increased experience in online education has shown that the didactic value of recorded lectures is low. Indexing recorded lectures is therefore put on hold.

M3. **Micro-lectures**

**Status:** Successfully adopted in some study programmes (primarily math-line). There is ample room for expansion to other programmes, to be embedded in the concept of blended learning.

**Plan:** To be continued and expanded in tranche 2. Also in this measure, teachers should get aid in working with our new 'DIY video studio' on both the didactical and technical side.

**Budget:**

	2022	2023	2024
Measure 3	80	80	80

M4. **Educational support software** (was: *Hire additional technical staff to develop software that will be used for digital testing and programming education.*)

**Status:** This aims to support any aspect of our educational process through the use of dedicated software. This applies to educational activities such as lectures, tutorials and lab sessions, as well as digital testing and automated support for assessment, as well as quality assurance and processes in educational administration. The development and deployment of software is explicitly part of this area. EEMCS has a strong need for such measures as the nature of the study programmes fits well with using digital technologies, and moreover, the increase in student numbers makes the potential scaling benefit an attractive aspect of such technologies. A number of sub-projects were started within this measure, and are still ongoing. Moreover, further need for support software has been identified.

**Plan:** To be continued and expanded in tranche 2.

**Budget:**

	2022	2023	2024
Measure 4	120	170	220

M5. **Programme coordination** (was: *Hire additional staff for programme coordination*)

**Status:** This aims to improve the conditions under which teachers can carry out their tasks, by taking some of the administration from their shoulders and organising it on the programme level; or by gathering expertise in a particular domain, such as e-learning.

EEMCS has a strong need for such measures because of the growth in several of the programmes, which has threatened to overload module coordinators and teachers. The coordination had been strengthened mainly for the Bachelor programmes (programme module support staff for every degree programme) and lecturers are supported by a dedicated Elearning specialist

**Plan:** To be continued in tranche 2, continuation of module support staff and hire a second Elearning specialist for the faculty.

**Budget:**

	2022	2023	2024
Measure 5	300	300	300

M6. **Embedding of Academic Skills** (was: *Professional mentoring of students*)

**Status:** Note that the scope of this measure has evolved and no longer covers mentoring per se: instead, it concerns the entire academic skills line. This was successfully implemented in B-EE, is underway for B-BIT, and is planned for B-TCS. For B-CreaTe there is a full-fledged professional development learning line with professional mentors in it.

**Plan:** To be continued in tranche 2, possibly also extended to B-AM.

**Budget:**

	2022	2023	2024
Measure 6	110	110	110

M7. **Student assistants with educational competencies**

**Status:** This has been successfully introduced in the form of an overhaul of the basic didactic skill course, to be made mandatory for as many TAs as possible (degree programmes have to develop a policy for that). The higher levels of ‘tutor’ and ‘expert’ course are under development at the CELT department.

**Plan:** Discontinued in tranche 2. As it turns out, several faculties have defined a similar measure and CELT is the department that has to provide the skill courses for each faculty, there is an opportunity to cluster these measures and let CELT be in charge for the second tranche. As a result, the financial needs for the second tranche can be covered by the *central funds* of the Quality Agreements (not the faculty budget).

M8. **Introduce UTeachers Academy@EEMCS**

**Status:** The EEMCS UTeachers Academy has been successfully introduced, and comprises a steady membership. An overview can be found [here](#).

**Plan:** The Uteachers Academy will be discontinued as a measure for tranche 2, as the financial needs are relatively small and can easily be covered by other funds. Of course the Uteachers Academy will receive full support from the Faculty Board to thrive in the future.

M9. **Training for teachers** (was: *Additional training facilities for teachers*)

**Status:** A number of educational personnel have enrolled in the LOL, SEQ (Examination) and SUTQ courses.

**Plan:** To be continued in tranche 2.

**Budget:**

	2022	2023	2024
Measure 9	50	50	50

M10. **Development of international curriculum in our BSc and MSc programmes)**

**Status:** Successfully concluded for B-CREATE. Besides regular degree programme assessments, the NVAO also offers an assessment for ‘internationalisation’: The Certificate for Quality in Internationalization (CeQuInt): <http://ecahe.eu/home/internationalisation-platform/certification/>. CreaTe has acquired the CeQuInt certificate in March 2021, of which we are very proud! There are no concrete plans for other degree programmes in our faculty to strive for the certificate.

**Plan:** Discontinued in tranche 2. Of course B-CREATE will receive full support from the Faculty Board to keep the CeQuInt Certificate in the future. The financial needs are relatively small and can be covered by other funds.

**M11 Educational Innovation (=new measure).**

**Status:** There has been a strong tradition of innovative projects within our faculty, resulting in pilots in education and often lecturers competing for external grants to gain funds to elaborate on innovative ideas (e.g. Comenius grants). To not let this work go to waste if a project is judged to be of high quality and yet is not granted due to low acceptance rates, we propose to create a faculty fund that will allow the proposers to nevertheless go ahead with their projects. In other words, this serves as a guarantee fund for high-quality but nevertheless rejected proposals. Having this available as a backup will motivate our teachers to apply for such external grants.

**Plan:** to add this measure to our faculty framework of measures and develop a procedure for distribution of the budget and evaluation of the outcomes.

**Budget:**

	2022	2023	2024
Measure 11	100	100	150

### Summary measures, Second Tranche

To summarize the above for the second tranche, we use the same table as before, placing each measure for the second tranche in one of the UT Quality Agreement programmes, fitting the profile of the Institution. Please note that the numbers of the measures are kept the same as in the first tranche, to avoid confusion and facilitate the financial report of the projects over time. Also note that, as before, we keep the emphasis mostly on the UT-themes of ‘learning facilities’, ‘teaching professionalization’ and ‘talent development’.

	Measure 2 <sup>nd</sup> Tranche	Community building	Learning facilities	Teaching professionalization	Talent development	Global citizens
M1	Support for educational labs		X			
M3	Micro lectures		X			
M4	Educational support software		X			
M5	Programme coordination		X			
M6	Embedding of Academic Skills				X	
M9	Training for teachers			X		
M11 new	Educational Innovation			X		

## Summary budget, Second Tranche

	2022	2023	2024
Measure 1	400	400	400
Measure 3	80	80	80
Measure 4	120	170	220
Measure 5	300	300	300
Measure 6	110	110	110
Measure 9	50	50	50
Measure 11	100	100	150
Total expenditures 7 measures	1160	1210	1310
Allocated to reserve (amount and percentage of total budget) <sup>1</sup>	55 (4.5%)	114 (8.6%)	244 (15.7%)
Available budget estimate (depending on influx of students)	1215	1324	1554

### 4. Process and involvement participation

As we have done during the first tranche, also for the years 2022-2024 we will involve the Faculty Council and Programme Committees during the second tranche. The Faculty Council will be involved in the regular Planning and Control cycle where the EEMCS Quality Agreements are part of the annual plan and budget. The monitoring process is worked out by means of the MARAP (Management Report, a biannual update of the progress and expenditures). Every year in autumn, there will be a meeting of the vice dean education with the chairs of the Programme Committees to reflect on the plans. The Chairs will eventually discuss the plan within their Programme Committees, also involving the study associations and provide us with feedback. This setup leaves room for additional initiatives by diverse stakeholders as long as they fit within the faculty framework of the second tranche.

As the Quality Agreements are subjected to three audits, we summarize the process by means of the following picture (next page).

In 2019: the 'plan assessment' ended in approval the of the plans

In 2022: the 'midterm assessment on progress' is scheduled.

In 2025: the 'final evaluation on progress' is scheduled, linked to the next Institutional Audit (ITK).

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<sup>1</sup> We allocated a 'reserve' into the budget to be flexible the coming years. As a result we will be able to slightly adjust the budgets of the individual measures to changed circumstances and besides we will be able to compensate if the influx of students will grow less than predicted. Please note that the amount of money in 'reserve' approximately doubles each year as the more we go into the future, the more uncertainty we will face.

2018	2019	2020	2021	2022	2023	2024	2025
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**Duration of Quality Agreements**

<i>December 2018</i> Completion UT plan on Quality Agreements	<i>December 2019</i> Plan assessment by panel parallel to Institutional Audit	<i>2022</i> Mid-term assessment on progress ≤2021 by NVAO based on annual reports	<i>2025</i> Final evaluation on progress ≤2024 by panel parallel to Institutional Audit
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# Quality Agreement Measures and Initiatives

EEMCS, January 2022

This is a companion document to the Tranche 2 Quality Agreement plans for EEMCS. An important element of that plan is to accommodate new initiatives under the pre-defined measures that can be proposed in the course of the period covered by this tranche (2022-2024). Such initiatives can be proposed by any party, be it Programme Committees, Study Associations, teachers or Programme Management. This document presents and explains the measures with an eye to clarifying what type of initiatives fit their purpose.<sup>1</sup>

## M1: Support for educational labs

This measure encompasses any initiative that helps create or maintain hands-on education within our study programmes. The “labs” in the title should be interpreted broadly: not only the equipment permanently installed in physical laboratory spaces, but also equipment for use by students at home can be (partially or wholly) financed by this. Moreover, technical staff necessary for the running of (physical) laboratories also falls under this measure.

*Examples of initiatives previously placed in this measure include:* maintenance of the EE lab (“welpzaal”) and ITECH lab, setting up Data Science and Robotics labs, as well as (partially) financing at-home equipment for EE and TCS students.

## M3: Micro lectures

Micro-lectures (which can be defined as short, 5 or 10-minute videos explaining a single topic within a module or course) have proved to be among the most effective ways to compensate for the recent severe restrictions to on-campus education; so much so, that they are most likely here to stay. Creating micro-lectures, however, is known to be a time-consuming effort that also requires the right recording equipment or the use of a studio. Initiatives under this measure can be used to compensate for time or to buy equipment; the latter can be either for personal use or in the form of the planned, faculty-wide Do-It-Yourself studio. Note that, after having financed the creation of micro-lectures in the math line (for all UT programmes) in Tranche 1, we are now in particular looking towards modules within the EEMCS programmes.

*Examples of initiatives previously placed in this measure include:* creating a series of micro-lectures for the math line, as well as for the Software Systems module of TCS.

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<sup>1</sup> The non-consecutive numbering of the measures is due to the fact that some Tranche 1 measures were discontinued; for the sake of traceability, we have maintained the numbers of the remaining ones.

#### M4: Educational support software

Our education relies more and more on automation, in all aspects of its organisation. From scheduling Teaching Assistant support to aiding in the assessment of (digital) tests to registering the examination process as a part of quality assurance, with the ever-growing number of students as well as the ever-stricter demands on accountability it is no longer enough to leave it to individual teachers to invent and apply their own solutions: we need to create and maintain software to help them in a uniform and systematic manner. Initiatives under this measure are meant to pay for the effort involved in this, or for the code itself in case it has been developed by other parties.

*Examples of initiatives previously placed in this measure include:* the acquisition of the Horus and Hathor code, as well as manpower for maintaining these systems, for streamlining the Networking Systems module in TCS, for entering and processing test logs, and for scheduling the teacher capacity in the math line.

#### M5: Programme coordination

The complexity of our educational system, in all its facets, as well as the growing number of students, demand more of the programme management teams than in the past. To meet these demands, the coordination needs to be upheld and, in some cases, strengthened, both on a programme-specific and on a faculty-wide basis. Initiatives under this measure are meant to pay for the manpower involved in such coordination, especially to cover temporary gaps caused by new or unforeseen developments. Note that we have calculated the budget in Tranche 2 to cover exactly these costs; we do not expect that there will be any budget left over for new initiatives.

*Examples of initiatives previously placed in this measure include:* Module support functionary for the EEMCS Bachelor programmes, as well as EEMCS E-learning specialists.

#### M6: Embedding of Academic Skills

Here we use the term Academic Skills (AS) loosely, including also what may otherwise be thought of as *professional* skills. In this sense, AS include (among others): collaboration skills, time management, intercultural awareness, academic reading and writing, and reflection. These are typically taught as part of the Bachelor programme, and are increasingly relevant as more and more (especially international) students take the Bachelor degree as a final qualification, rather than as a station on the way to a Master degree. However, it is widely recognised that the degree to which AS education is appreciated and successful strongly depends on the embedding and integration with the more content-oriented part of the programme. Initiatives under this measure are meant to improve that embedding - which mostly means paying for the effort involved.

*Examples of initiatives previously placed in this measure include:* Hiring expertise to help in redefining the B-BIT and B-EE AS lines.

## M9: Training for teachers

All our teachers are required to obtain a University Teaching Qualification. This is a good start; however, in their subsequent career we want to enable our teachers to continually refresh and improve their skill set. This measure is meant to finance any initiative that broadens the palette of choices for further teacher qualification, or enables more teachers to take advantage of that palette.

*Examples of initiatives previously placed in this measure include:* Paying courses that our teaching staff has been registered for, such as the LOL or SUTQ.

## M11: Educational Innovation

Our teachers are asked to reflect from year to year on their courses, and improve them where necessary. However, true leaps of innovation require special effort, which needs to be accommodated (where taken) and stimulated (where not). Initiatives under this measure are meant to provide such stimulation; for instance, by financing educational innovation projects that were submitted for external funding, and received good reviews but were not or only partially rewarded due to a low acceptance rate.

*Since this is a new measure, there are no concrete examples of current initiatives. Examples of innovation projects of the kind referred to above are:* Comenius or BIG proposals that were highly ranked but nevertheless rejected; CBL proposals that could not be fully funded.

## Budget estimate 2022

The following is a very rough overview of what budget we expect to be available in 2022 for new initiatives under the various measures, added at the request of the Faculty Council. Note that, as this document is not produced as part of the regular planning and control cycle and at the moment of writing the financial year 2021 has not yet been finalised, many of the figures are best-guess estimates, and no firm commitment can be based on them.

Measure	Name	Budget	Committed	Projected	Remainder
M1	Support for educational labs	400	162	140	98
M3	Micro lectures	80	0	20	60
M4	Educational support software	120	102	0	18
M5	Programme coordination	300	300	0	0
M6	Embedding of Academic Skills	110	20	40	50
M9	Training for teachers	50	40	0	10
M11	Educational Innovation	100	0	50	50
M?	Reserve	55	0	0	55
<b>Total</b>		<b>1215</b>	<b>624</b>	<b>250</b>	<b>341</b>

The table should be read as follows:

- **Budget:** the total budget allocated to this measure
- **Committed:** the salary costs for 2022 of personnel hired for this measure
- **Projected:** a prediction of other costs, based on experience from previous years or expected developments for 2022
- **Remainder:** amount available for new initiatives, calculated as Budget - Committed - Projected