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1 Starting situation and aim

Decision of the Board (LA)	At the end of January 2019, the Board (LA) approved all the profile descriptions that had been submitted ¹ . Now that this decision has been taken, the first phase of the MSE redesign process has been completed and the basis provided for the second phase "Compilation of module recommendations".
Aim: Modules per profile	<p>In Phase 2, the central Theory Modules (TSM, FTP and CM modules²) are defined for each profile. In so doing, the following aims are pursued:</p> <ul style="list-style-type: none"> ▪ Definition of the TSM modules for each profile ▪ Examination of the current FTP modules offered (allocation per profile) ▪ Examination of the current CM modules offered (allocation per profile) ▪ Creation of an appropriate basis for compiling the module descriptions for new modules and for changes of existing modules ▪ Clarification of locations for holding the small profiles
Basis for Phase 3	The module recommendations then serve as a basis for working out the timetable and the detailed descriptions of the individual modules that are to be compiled by the module groups. The modules that are being offered should thus be submitted by June 2019.

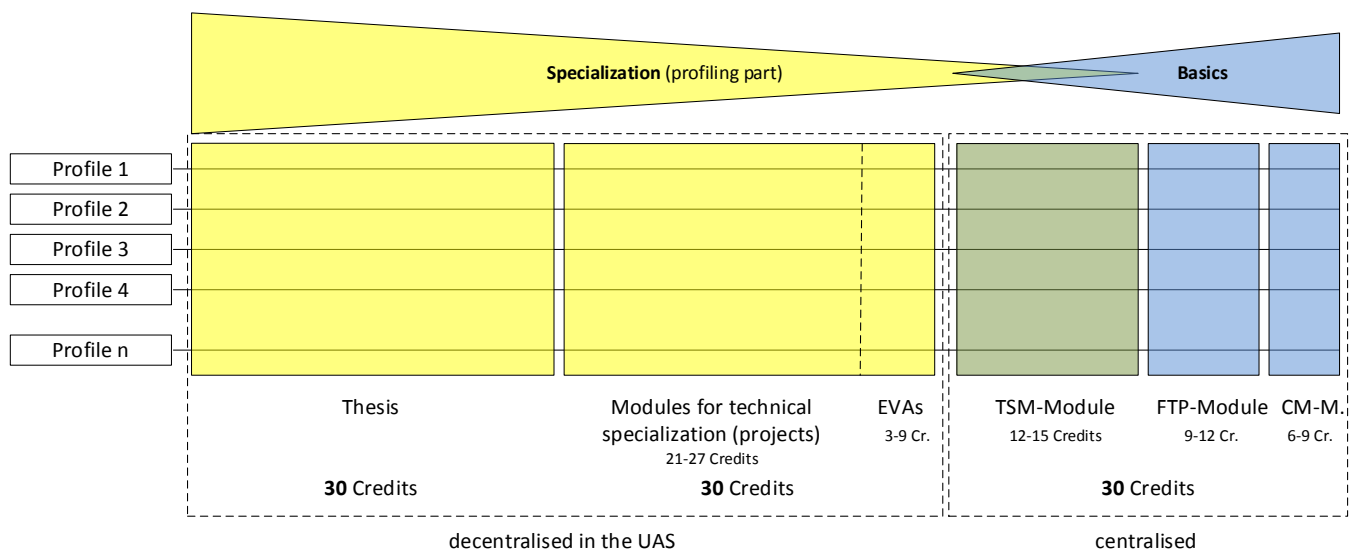


Figure 1: MSE Structure
Source: Concept MSE Redesign, Chapter 4, Page 1

¹ Aviation, Business Engineering, Computer Science, Data Science, Electrical Engineering, Energy & Environment, Mechanical Engineering, Mechatronics and Automation, Medical Engineering, Photonics, Building Technologies, Civil Engineering, Geomatics, Raumentwicklung und Landschaftsarchitektur

² TSM (Technical Scientific Modules), FTP (Fundamental Theoretical Principles), CM (Context Modules)

2 Project schedule

- Project phases** The implementation of the MSE Redesign concept can be roughly divided into four phases up to the time at which the new timetables are published (cf. figure 2):
- Phase 1:** Compilation of the profile descriptions (PCOs)
- Phase 2:** Compilation of the module recommendations for central Theory Modules (PCOs)
- Phase 3:** Compilation of the timetable (Coordination Office MSE CH)
Compilation of the module descriptions (Module Groups)
- Phase 4:** Compilation of the final documentation (Coordination Office MSE CH, Project Management)

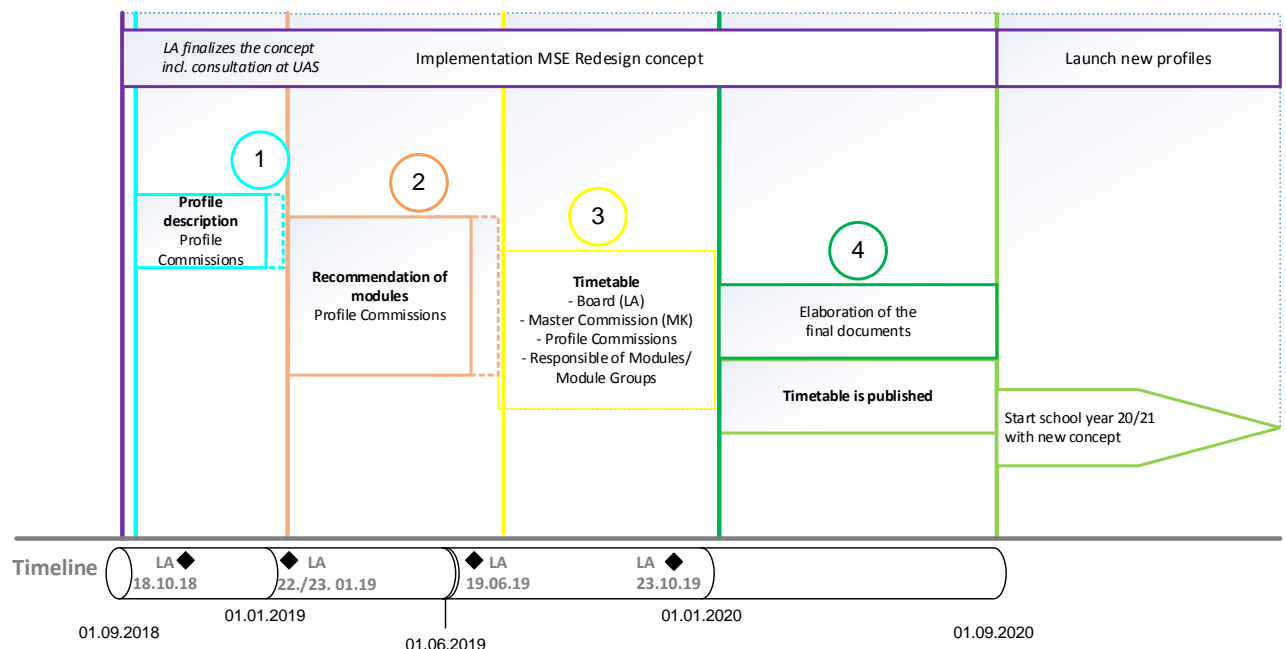


Figure 2: 4 phases of the introduction of the MSE Redesign

Unchanged project team

The project team remains unchanged for the second phase. The list of those Responsible for the Profiles (R-PCOs) is attached to the Project Assignment (cf. Annex). Changes are constantly updated and saved on SwitchDrive under NEU_MSE_Redesign / Documentation

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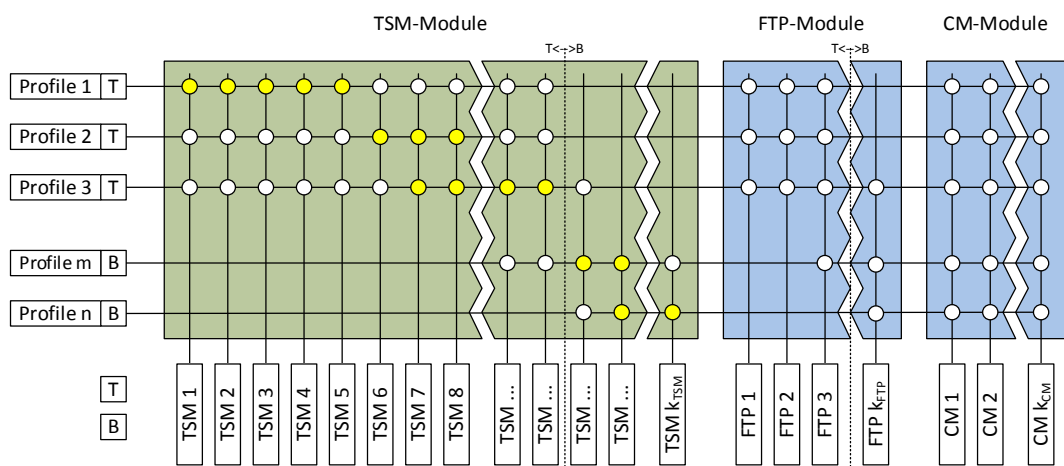
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3 Project assignment

3.1 Assignment

- Task** Each Profile Commission (PCO) defines the TSM, FTP and CM modules for their profile for which lectures are held at central locations³. The module offer should be guided by technical coherence.
- Procedure**
- 1) Compilation of the modules to be offered for one's own profile**
The current offer of Theory Modules serve as a basis. The PCO decides whether a module is to be maintained or needs to be adapted, or whether a new module should be defined.
 - 2) Checking for the exploitation of synergies with other profiles**
Meaningful synergies from the technical point of view should be exploited. The TSM modules can be used for particular profiles on account of their technical specialisation. FTP modules impart theoretical knowledge and should be designed in such a way that they are suitable for more than one profile (at least three profiles). Additional competences are taught in the CM modules. These are fundamentally suited to a larger number of profiles.
 - 3) Formulation of the module specifications**
The following information is required by the PCOs for the compilation of new module descriptions or the revision of existing module descriptions⁴ (cf. Annex):
 - Module name (incl. module category)
 - Central location for holding the module
 - Aims
 - Pre-requisites (entry-level competencies)
 - Desired contents (keywords)

Fig. 3 - Basic principle of the link between Profile & Modules



Source: Concept
MSE Redesign,
Chap. 4, Page 5

- Recommended modules (belong to own profile)
- Further modules (belong to other profiles)

³ Central locations for the lectures for central Theory Modules are Lausanne, Zurich and, on a reduced scale, Bern and Lugano.

⁴ The module descriptions are compiled by the existing module groups or groups that are to be newly created. The module codes are fundamentally being retained. New module codes will be determined by the Coordination Office MSE CH. The module language will be finally determined jointly by the Master Commission (MK) and the module group.

Maximum number of Theory Modules	The maximum number of Theory Modules to be defined per profile has been specified by the Board (LA). The numbers are based on estimates of student numbers from the Master Commission (MK, status January 2019) and can be seen in the Annex.
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3.2 Framework conditions

Definition of TSM, FTP, CM modules	<p>The TSM, FTP and CM modules are defined in the FTAL⁵ framework concept. When the central Theory Modules are allocated to a module type, the definitions must be taken into account:</p> <p><u>Technical Scientific Modules (TSM)</u>: “Technical scientific specialisation with the aim of broadening competence specific to the specialist area.”</p> <p><u>Fundamental Theoretical Principles (FTP)</u>: “Theoretical foundations such as higher mathematics and statistics, natural sciences, etc., with the aim of expanding the abstract scientific depth of the Master's students and enabling them to create the link between abstraction and application that is important for innovation and to sharpen their abstract view of the application by virtue of the reflection competence acquired.”</p> <p><u>Context Module (CM)</u>: “The non-technical modules provide students with “additional competences” in the fields of technology management, business administration, communication, project management, patent law and contract law, etc.”</p>
Same TSM modules for a profile	If the central Theory Modules of a profile are offered at several central locations, at least 4 of the TSM modules must be identical for all the locations.
FTP modules	The FTP modules can be divided up into the two fields of education “Technology & IT” and “Construction & Planning”, since the requirements on the modules can be different.
Conceptual specifications Central Modules	<p>The following conceptual specifications apply for each Theory Module:</p> <ul style="list-style-type: none"> ▪ Theory Modules aim to broaden knowledge ▪ Theory Modules are independent; they don't build upon each other ▪ Theory Modules are taught at central locations ▪ Classes are held exclusively in regular classrooms ▪ Each Theory Module belongs to a category: TSM, FTP or CM (see definition) ▪ Each Theory Module counts 3 ECTS ▪ Each Theory Module consists of 2 lecture periods and 1 tutorial period ▪ Lecture periods are unlimited regarding the size of class ▪ Tutorial periods have a limited class size of up to 35 (in the case of bigger classes a sequential period is held) ▪ 2 lecturers can teach in a Theory Module
Language	For each profile the language regarding to the location («location language») should be proposed by the respective PCO.

⁵ Source: “Master of Science in Engineering, Rahmenkonzept der FTAL vom 10. Oktober 2006” Page 8ff

3.3 Documents

Existing Theory Modules offered	The current Theory Modules offered are available as a basis for discussion (cf. Annex). An initial triage can be performed on this basis (retain, adapt, new).
“Module recommendation” template	A template has been made available by the Profile Commission for the selection of the central Theory Modules and the setting out of priorities (handout KickOff).
“Module specifications” template	The Profile Commission has a template available for the module specifications (cf. Annex).

3.4 Results

Module list per profile and location	For each profile, there is a Theory Module list for each of the locations at which the module will be held (cf. handout KickOff).
Module specifications	Module specifications are available for each new central Theory Module or for each central Theory Module that is to be adapted (cf. Annex).

















3.5 Deadlines and submissions Phase 2

Module recommendations by June '19	The module recommendations are to be worked out by June 2019. After the launch event in February 2019, three consolidation meetings are planned with the Profile Commissions. The recommendations regarding the modules to be offered are to be submitted to the Master Commission and the Board (LA) for approval in June. The following schedule is aimed at from the current perspective.
Procedure	All the Profile Commissions submit a proposal for a decision to the Master Commission. Prior to a decision being taken, the Theory Modules offered must be checked by the Coordination Office MSE-CH to ensure they can be successfully studied.
Individual responsibility C-PCOs & R-PCOs	Internal coordination within the PCO is the responsibility of the coordinators (C-PCOs). Those Responsible for the profiles are in charge of coordination with their own universities.
Organisation of meetings	The organisation of the Profile Commissions is again performed on a decentralised basis through the coordinators of the PCOs. The KickOff and consolidation meetings are organised by the project management.

MSE Redesign I Assignment Phase 2 Module recommendations

Project assignment

Schedule

Time		Subject	Aim	Participants	Lead
CW 7 15.02.19		KickOff Phase 2	Project assignment	C-PCOs R-PCOs(poss)	PL
CW 10		Feedback with interim status of work (by phone)	Current working status		C-PCOs
CW 11 12.03.19		Intermediate submission	Preparations for consolidation meeting		C-PCOs
CW 11 15.03.19		Report to the Board (LA)	Information	LA	PL
CW 12 22.03.19		1st Consolidation Meeting (half a day)	First approach Theory Modules per profile (TSM, FTP, CM)	C-PCOs	PL
CW 14		Feedback with interim status of work (by phone)	Current working status		C-PCOs
CW 15 tbd		Evtl. intermediate submission	Preparations for consolidation meeting and dispatch to MK		C-PCOs
CW 16/17 tbd		2nd Consolidation Meeting (half a day)	Confirmation Theory Modules per profile Information for "module constellations"*	C-PCOs	PL
CW 17/18 tbd		Report MK	Information MK	MK	PL
CW 21 tbd		3rd Consolidation Meeting (half a day)	Final consolidation Theory Modules Information for "module constellations"*	C-PCOs	PL
CW 21 24.05.2019		Report MK	Information MK	MK	PL
CW 23 03.06.2019		Submission	Submission for approval		C-PCOs
CW 23 07.06.2019		Recommendation Coordination Office MSE-CH	Check to ensure Theory Modules can be successfully studied		PL
CW 24 tbd		Decision of Master Commission	Approval	MK	PL
CW 25 19.06.2019		Report LA	Final decision	LA	PL
CW 26		Feedback to PCOs	Information		PL

* Additional information from the PCOs for the compilation of the timetable should be known at the meeting:
e.g. which modules are not to be scheduled in parallel, etc.

4 Annex

Annex A – List of Responsibles of the Profile Commission

Annex B – Existing Theory Modules offered

Annex C – Current module descriptions

Annex D – Template “Module specifications”

Annex E – Maximum number of Theory Modules by LA

Annex F – Proposed change to module group TSM_AdvContr
