Valid from 2024.HS

Module description: Bachelor Thesis: Energy and Environmental Engineering

Module Code	t.BA.EU.BA.19HS
ECTS Credits	12
Language of Instruction/Examination	German
Organizational Unit	MEA Ltg.
Module Coordinator	Franz Baumgartner
Legal Framework	The module description is part of the legal basis in addition to the general academic regulations. It is binding. During the first week of the semester a written and communicated supplement can specify the module description in more detail.
Module Characteristic	Type 7 Bachelor's thesis
Module Description	Within this bachelor thesis you perform your individual analyses of a topic which is centred in the topic of your chosen study specification of the energy and environmental technology studies in close collaboration with the partner from industry and the supervising lecturer
Module Content	• The bachelor thesis consists of the independent processing of an extensive, practice-oriented technical-scientific task to be solved. The task is centred at an research or development topic of an institute or in industry. • The work steps that the students work on include analyzing the problem and structuring and planning the workflow with a schedule. Depending on the problem, experimental investigations and / or modelling and simulation are required. The students can check the results critically and are able to assess whether the set goals are achieved, or the requirements of the task are met. The results lead to the solution of the task. • During the bachelor thesis, the students regularly report their progress and discuss the further course, whereby the lecturers or partners from industry can also add new sub-goals and dates in justified cases. Project implementation and results are documented in a technical report. The summary must be written in German and English. The final results are also presented in a short talk.
Prerequisite Knowledge	https://gpmpublic.zhaw.ch/GPMDocProdDPublic/2_Studium/2_02_Grundlagen_Studium/T_CL_Modulauspraegungen_SM2025.pdf

Module description: Bachelor Thesis: Energy and Environmental Engineering

Learning Objectives (Competences)

Students...	Competencies	Taxonomies
The students are able to critically review, evaluate and develop the interim results in order to achieve the objectives of the task.	M, F	K6
The students can understand the task independently and plan the workflow	F, M	K2
The students have the ability to document the results in a technical report and to present them orally	SE, SO, M	K5
The students practice engineering thinking and acting on a practical problem from the area of their chosen focus in the energy and environmental technology course, which is posed and worked on in close cooperation with industry if possible	SE, M, F, SO	K6
The students generally work together in a team of two and communicate with the client and the supervising lecturer	SO, SE	K4
The students gain competence to independently acquire technical and scientific knowledge and research findings from literature and specialist publications	F, M	K4
The students can incorporate the knowledge and skills acquired during their studies into practical problem solving and develop new solutions in connection with their new findings from literature research	SE, F, M, SO	K5

Performance Assessment

End-of-module exam	Assessment	Length (min.)	Weighting	Form
other	Grade		100	acc. to module agreement

Performance assessment during the semester	Assessment	Length (min.)	Weighting	Form
-	-	-	-	-

Classroom Attendance Requirement

None

Learning material

Comments