Notes on the module handbook of the department Mechanical and Process Engineering

Die hier dargestellten veröffentlichten Studiengang-, Modul- und Kursdaten des Fachbereichs Maschinenbau und Verfahrenstechnik ersetzen die Modulbeschreibungen im KIS und wuden mit Ausnahme folgender Studiengänge am 28.10.2020 verabschiedet.

Ausnahmen:

- BSc. Bio- und Chemieingenieurwissenschaften (Stand WS 20/21): https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MH_BSc_BCI.pdf (https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MH_BSc_BCI.pdf)
- BEd. Lehramt Metalltechnik (Stand WS 19/20): https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MHB_Bachelor_Lehramt_Metalltechnik.pdf (https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MHB_Bachelor_Lehramt_Metalltechnik.pdf)
- MSc. Bio- und Chemieingenieurwissenschaften (Stand WS 20/21): https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MH_Msc_BCI.pdf (https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MH_Msc_BCI.pdf)
- MEd. Lehramt Metalltechnik Werkstoffe und Fertigung (Stand WS 19/20): https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MHB_Master_Lehramt_Metalltechnik_-_Werkstoffe_und_Fertigung.pdf (https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MHB_Master_Lehramt_Metalltechnik_-_Werkstoffe_und_Fertigung.pdf)
- MEd. Lehramt Metalltechnik Maschinen- und Fahrzeugtechnik (Stand WS 19/20): https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MHB_Master_Lehramt_Metalltechnik_-_Fahrzeugtechnik.pdf (https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MHB_Master_Lehramt_Metalltechnik_-_Fahrzeugtechnik.pdf)
- MEd. Lehramt Metalltechnik Verfahrenstechnik (Stand WS 19/20): https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MHB_Master_Lehramt_Metalltechnik_-_Verfahrenstechnik.pdf (https://www.mv.uni-kl.de/fileadmin/mv/Studium_Lehre/Modulhandbuecher/MHB_Master_Lehramt_Metalltechnik_-_Verfahrenstechnik.pdf)

Module MV-LTD-M200-M-4

chemPLANT project (M, 5.0 LP)

Module Identification

Module Number	Module Name	CP (Effort)
MV-LTD-M200-M-4	*chemPLANT project*	5.0 CP (150 h)

Basedata

CP, Effort	5.0 CP = 150 h
Position of the semester	1 Sem. in SuSe
Level	[4] Bachelor (Specialization)
Language	[DE] German
Module Manager	Hasse, Hans, Prof. Dr.-Ing. (PROF | DEPT: MV) (/staff/314/)
Lecturers	Hasse, Hans, Prof. Dr.-Ing. (PROF | DEPT: MV) (/staff/314/)
Area of study	[MV-LTD] Engineering Thermodynamics
Reference course of study	[MV-88.B10-SG] M.Sc. Energy and Process Engineering (/mhb/FB-MV/cos-573/)
Livecycle-State	[NORM] Active

Courses

Type/SWS	Course Number	Choice in Module-Part	SL	PL	CP	Sem.
2L	**MV-LTD-86060-K-7** (/mhb/courses/MV-LTD-86060-K-7/)	WP	-	PL1	5.0	SuSe

- About **[MV-LTD-86060-K-7]**: Title: "chemPLANT project"; Presence-Time: 28 h; Self-Study: 122 h
- About **[MV-LTD-86060-K-7]**:

> Notes on preparation for the module:
> Interest in plant design, conceptual design and process technology as well as creative thinking and the ability to work in a team should be present.
> The time schedule regarding the registration deadline and the publication of the assignment varies from year to year and can be requested from the supervisors of the chair.

Examination achievement PL1

- Form of examination: **combination of talk and written elaboration**
- Examination Frequency: Examination only within the course
- Examination number: 11055 ("chemPLANT project")

Evaluation of grades

To determine the grade, the supervisor will evaluate the final report, presentation and poster. The grade also includes the presentation at the ProcessNet annual conference, as well as the level of commitment and cooperation of the individual student within the group.

Contents

From [MV-LTD-86060-K-7] chemPLANT project (/mhb/courses/MV-LTD-86060-K-7/):

Content The chemPLANT competition gives students the opportunity to demonstrate their theoretical knowledge and skills in the broad spectrum of process engineering in a practical task (plant design / process planning). The task is set by a consortium of industrial companies. The teams of 2 to 5 students have 3.5 months to submit their results, which are then presented to a jury at a conference. Creativity and procedural thinking are required in finding the innovative solutions.
Possible topics are:

- Digitalization and Industry 4.0
- Process planning and conceptual design of new plants
- Sustainability in the chemical industry

The evaluation of the developed solution is based on technical correctness, creativity, consideration of ecological and economic aspects and style and language of the written elaboration.

A supervisor will be assigned to students to coordinate the process of the module; however, the supervisor does not cooperate in solving the tasks from the chemPLANT competition.

Competencies / intended learning achievements

From [MV-LTD-86060-K-7] chemPLANT project (/mhb/courses/MV-LTD-86060-K-7/)**:**

Building on the knowledge acquired so far in their studies, the students are to develop a creative solution to a practical design problem from the chemical industry. Students are expected to develop a creative solution to a real-world design problem from the chemical industry based on their knowledge acquired over the course of their studies. The focus is on the independent work on the problem by the group and the cooperation of the individual students within the group. The students deepen their theoretical knowledge and gain extensive practical experience.

Literature

From [MV-LTD-86060-K-7] chemPLANT project (/mhb/courses/MV-LTD-86060-K-7/)**:**

Will be announced by the supervisor

Requirements for attendance (informal)

Broad basic knowledge (the Bachelor's degree should be completed as far as possible. In the Master's programme, participation is possible at any time).

Requirements for attendance (formal)

None

References to Module / Module Number [MV-LTD-M200-M-4]

Module-Pool	Name
[MV-ALL-MPOOL-6 (/mhb/modulepools/MV-ALL-MPOOL-6/)]	Wahlpflichtmodule allgemein
[MV-BioVT-MPOOL-6 (/mhb/modulepools/MV-BioVT-MPOOL-6/)]	Wahlpflichtmodule Bioverfahrenstechnik
[MV-EVT-MPOOL-6 (/mhb/modulepools/MV-EVT-MPOOL-6/)]	Wahlplichtmodule Energie- und Verfahrenstechnik