TECHNISCHE UNIVERSITÄT KAISERSLAUTERN

Module Handbook (https://modhb.uni-kl.de/)

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-CCE-26-M-4

Introduction to Polymer Technology (M, 3.0 LP)

Module Identification

Module Number	Module Name	CP (Effort)
MV-CCE-26-M-4	*Introduction to Polymer Technology*	3.0 CP (90 h)

Basedata

CP, Effort	3.0 CP = 90 h
Position of the semester	1 Sem. in WiSe/SuSe
Level	[4] Bachelor (Specialization)
Language	[DE] German
Module Manager	Schlarb, Alois, Prof. Dr.-Ing. (PROF | DEPT: MV) (/staff/324/)
Lecturers	Schlarb, Alois, Prof. Dr.-Ing. (PROF | DEPT: MV) (/staff/324/)
Area of study	[MV-CCE] Composite Engineering
Reference course of study	[MV-82.103-SG] B.Sc. Mechanical Engineering (/mhb/FB-MV/cos-508/)
Livecycle-State	[NORM] Active

Notice

Accompanying the lecture, a seminar is offered in which the theoretical knowledge can be deepened by working on practical tasks.

Courses

Type/SWS	Course Number	Choice in Module-Part	SL	PL	CP	Sem.
2V	**MV-CCE-86973-K-4** (/mhb/courses/MV-CCE-86973-K-4/)	P	-	PL1	3.0	WiSe/SuSe

- About **[MV-CCE-86973-K-4]**: Title: "Introduction to Polymer Technology"; Presence-Time: 28 h; Self-Study: 62 h

Examination achievement PL1

- Form of examination: **written or oral examination**
- Examination Frequency: each semester
- Examination number: 10973 ("Introduction to Polymeric Materials")

Written (60 minutes) or oral (30 minutes) examination, will be announced at the beginning of the course.

Evaluation of grades

The grade of the module examination is also the module grade.

Contents

From [MV-CCE-86973-K-4] Introduction to Polymer Technology (/mhb/courses/MV-CCE-86973-K-4/):

- Application, meaning and history of plastics
- Chemical structure and manufacturing process
- State regions and morphologie
- Mechanical behavior
- Rheology of plastic melts
- Rheologie von Kunststoffschmelzen
- Processing techniques
- Introduction to reinforced plastics

- Introduction to designing with plastics
- Recycling

Competencies / intended learning achievements

From [MV-CCE-86973-K-4] Introduction to Polymer Technology (/mhb/courses/MV-CCE-86973-K-4/)**:**

Students are able to

- name plastic properties
- explain the morphology and manufacturing process of plastics
- outline the advantages and disadvantages of implementing plastics in design
- describe reinforced plastics

Literature

From [MV-CCE-86973-K-4] Introduction to Polymer Technology (/mhb/courses/MV-CCE-86973-K-4/)**:**

- Baur, E.; Osswald, T.A.; Rudolph, N. (Hrsg.): Saechtling-Kunststoff-Taschenbuch, Carl Hanser Verlag, München 2013
- Ehrenstein, G.W.: Polymer-Werkstoffe, Carl Hanser Verlag, München 2011
- Hopmann, Chr.; Michaeli, W.: Einführung in die Kunststoffverarbeitung, Carl Hanser Verlag, München 2015
- Erhard, G.: Konstruieren mit Kunststoffen, Carl Hanser Verlag, München 2008

Requirements for attendance (informal)

None

Requirements for attendance (formal)

None

References to Module / Module Number [MV-CCE-26-M-4]

Course of Study	Section	Choice/Obligation
[MV-82.103-SG] B.Sc. Mechanical Engineering (/mhb/FB-MV/cos-508/)	Material Science and Technology	[P] Compulsory
[WIW-82.789-SG] B.Sc. Business Studies with Technical Qualifications (/mhb/FB-WIW/cos-524/)	Field of study Mechanical Engineering	[WP] Compulsory Elective
[WIW-82.?-SG#2021] B.Sc. Business Studies with Technical Qualifications 2021 [2021] (/mhb/FB-WIW/cos-682/)	Technical Profile Area	[WP] Compulsory Elective

Module-Pool	Name
[MV-BCI-BSc-MV-MPOOL-4 (/mhb/modulepools/MV-BCI-BSc-MV-MPOOL-4/)]	Wahlpflichtmodule MV für Bachelor BCI