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, bzw. am 13.01.2021 verabschiedet.

Ausnahmen:

- 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)
- 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)

Course MV-PAK-86553-K-4

Computer Aided Production Engineering I (2V+1U, 3.0 LP)

Course Type

SWS	Type	Course Form	CP (Effort)	Presence-Time / Self-Study	
-	K	Lecture with exercise classes (V/U)	3.0 CP		48 h
2	V	Lecture		28 h	
1	U	Lecture hall exercise class		14 h	
(2V+1U)			3.0 CP	42 h	48 h

Basedata

SWS	2**V**+1**U**
CP, Effort	3.0 CP = 90 h
Position of the semester	1 Sem. in SuSe
Level	[4] Bachelor (Specialization)
Language	[DE] German
Lecturers	Ruskowski, Martin, Prof. Dr.-Ing. (PROF | DEPT: MV) (/staff/322/) Wagner, Achim, Dr.-Ing. (EXT | DEPT: MV) (/staff/283/)
Area of study	[MV-WSKL] Machine Tools and Control Systems
Additional informations	Informations about the course (https://www.mv.uni-kl.de/wskl/lehre/)
Livecycle-State	[NORM] Active

Contents

- System theory
- System description techniques, procedure models, structured and object-oriented methods, modelling languages (UML & useML)
- Insights into modern methods: Digital Factory, metamodeling, Useware development process
- Problem-solving cycle: situation analysis, formulation of goals, synthesis/analysis, evaluation/decision making
- Project management & creativity techniques

Competencies / intended learning achievements

1. Lecture:

The students will be able to

- report discipline-specific knowledge of the application of methods in the problem-solving cycle.
- recognize problems close to reality and to structure them into phases for solving.
- methodologically develop solution approaches.
- justify and combine methodological procedures in the problem-solving cycle.
- evaluate solution approaches for relevant UseCases

2. Exercise:

The students will be able to

- report methodological knowledge of system design and system modelling.
- explain and compare methodological tools and approaches.
- choose methods for system modelling and solving problems.
- analyse practical problems and relate them to methods.
- combine approaches in the problem-solving cycle.
- defend and evaluate solution approaches in collaboration with fellow students.

Literature

To be announced in the lecture

Materials

PowerPoint presentations, paper (script, exercise material); material and notifications via email.

Requirements for attendance (informal)

None

Requirements for attendance (formal)

None

References to Course [MV-PAK-86553-K-4]

Module	Name	Context	
[MV-WSKL-27-M-4 (/mhb/modules/MV-WSKL-27-M-4/)]	Computer Aided Production Engineering I	P: Obligatory	2V+1U, 3.0 LP