

Module Handbook

TUK MODHB Homepage

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 wurden 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
- 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
- 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
- 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

Module MV-WSKL-242-M-4

Computer Aided Production Engineering II (M, 3.0 LP)

Module Identification

| Module Number | Module Name | CP (Effort) |
|-----------------|---|---------------|
| MV-WSKL-242-M-4 | <i>Computer Aided Production Engineering II</i> | 3.0 CP (90 h) |
| MV-PAK-242-M-4 | <i>Computer Aided Production Engineering II</i> | 3.0 CP (90 h) |

Hint concerning Module Number MV-PAK-242-M-4:
PAK number no longer current

Basedata

| | |
|----------------------------------|---|
| CP, Effort | 3.0 CP = 90 h |
| Position of the semester | 1 Sem. in WiSe |
| Level | [4] Bachelor (Specialization) |
| Language | [DE] German |
| Module Manager | Ruskowski, Martin, Prof. Dr.-Ing. (PROF DEPT: MV) |
| Lecturers | Ruskowski, Martin, Prof. Dr.-Ing. (PROF DEPT: MV) Wagner, Achim, Dr.-Ing. (EXT DEPT: MV) |
| Area of study | [MV-WSKL] Machine Tools and Control Systems |
| Reference course of study | [MV-88.B78-SG] M.Sc. Production Engineering in Mechanical Engineering |
| Lifecycle-State | [NORM] Active |

Courses

| Type/SWS | Course Number | Choice in Module-Part | SL | PL | CP | Sem. |
|----------|------------------|-----------------------|----|-----|-----|------|
| 2V+1U | MV-PAK-86554-K-4 | P | - | PL1 | 3.0 | WiSe |

- About [MV-PAK-86554-K-4]: Title: "Computer Aided Production Engineering II"; Presence-Time: 42 h; Self-Study: 48 h

Examination achievement PL1

- Form of examination: **oral examination (20-30 Min.)**
- Examination Frequency: each semester
- Examination number: 10555 ("System Design and Modelling II")

Evaluation of grades

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

Contents

From [MV-PAK-86554-K-4] Computer Aided Production Engineering II:

- Development of microcontrollers and PCs
- Industrial control units
- Operating systems
- Data transfer and network technology
- Digital Factory
- Corporate networks
- Computer system for manufacturing

Competencies / intended learning achievements

From [MV-PAK-86554-K-4] Computer Aided Production Engineering II:

The students will be able to

- explain basics of architectures and applications of IT-systems in the production.
- name the steps of development for the usage of computers in production environments.
- name possible applications and potentials of the digital factory.
- explain requirements of software in the industrial environment.
- explain requirements of control units and real-time software.

Literature

From [MV-PAK-86554-K-4] Computer Aided Production Engineering II:

- Weck, M.: Werkzeugmaschinen Band 4: Automatisierung von Maschinen und Anlagen, Springer-Verlag, Berlin, 2006
- Vetter, M.: Strategie der Anwendungssoftware Entwicklung, Teubner Verlag, 1997
- Denert, E.: Software Engineering, Springer-Verlag, Berlin, 1991
- Sloman M; Kramer J.: Verteilte Systeme und Rechnernetze, Hanser Fachbuchverlag, 1988
- Kerner H.; Bruckner G.: Rechnernetzwerke. Systeme, Protokolle und das ISO-Architekturmodell, Springer-Verlag, Berlin, 1986

Requirements for attendance of the module (informal)

Recommended:

Modules:

- [MV-WSKL-27-M-4] Computer Aided Production Engineering I (M, 3.0 LP)

Requirements for attendance of the module (formal)

None

References to Module / Module Number [MV-PAK-242-M-4]

| Module-Pool | Name |
|---------------------|---|
| [MV-ALL-MPOOL-6] | Wahlpflichtmodule allgemein |
| [MV-MBINFO-MPOOL-6] | Wahlpflichtmodule Maschinenbau mit angewandter Informatik |
| [MV-PE-MPOOL-6] | Wahlpflichtmodule Produktentwicklung im Maschinenbau |
| [MV-PT-MPOOL-6] | Wahlpflichtmodule Produktionstechnik |

References to Module / Module Number [MV-WSKL-242-M-4]

| Module-Pool | Name |
|-----------------------------|---|
| [MV-MV-SIAK-DT-ENG-MPOOL-6] | SIAK Zertifikat "Digitale Transformation" - Module MV "Engineering" |