

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

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Module WIW-POM-MS-M-7

Manufacturing Systems (M, 6.0 LP)

Module Identification

Module Number	Module Name	CP (Effort)
WIW-POM-MS-M-7	<i>Manufacturing Systems</i>	6.0 CP (180 h)

Basedata

CP, Effort	6.0 CP = 180 h
Position of the semester	1 Sem. in WiSe
Level	[7] Master (Advanced)
Language	[DE] German
Module Manager	Sahling, Florian, Prof. Dr. (PROF DEPT: WIW) (/staff/53/)
Lecturers	Kohlmann, Pierre, M. Sc. (WMA DEPT: WIW) (/staff/602/)
Area of study	[WIW-POM] Production Management
Reference course of study	[WIW-88.21-SG] M.Sc. Business Studies (/mhb/FB-WIW/cos-534/)
Lifecycle-State	[NORM] Active

Courses

Type/SWS	Course Number	Choice in Module-Part	SL	PL	CP	Sem.
2V	WIW-POM-LP-K-7 (/mhb/courses/WIW-POM-LP-K-7/)	P	-	PL1	3.0	WiSe
2V	WIW-POM-SIP-K-7 (/mhb/courses/WIW-POM-SIP-K-7/)	P	-	PL1	3.0	WiSe

- About **[WIW-POM-LP-K-7]**: Title: "Performance analysis of production systems"; Presence-Time: 30 h; Self-Study: 60 h
- About **[WIW-POM-SIP-K-7]**: Title: "Simulation of production systems"; Presence-Time: 30 h; Self-Study: 60 h

Examination achievement PL1

- Form of examination: **written exam (Klausur) (180 Min.)**
- Examination Frequency: each semester

Evaluation of grades

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

Contents

From [WIW-POM-LP-K-7] Performance analysis of production systems (/mhb/courses/WIW-POM-LP-K-7/):

- Introduction to queuing theory
- Markov chains
- Configuration of flow lines

From [WIW-POM-SIP-K-7] Simulation of production systems (/mhb/courses/WIW-POM-SIP-K-7/):

- Modelling of stochastic processes
- Implementation of simulation models using a commercial simulation software

Competencies / intended learning achievements

Upon successful completion of the module, students will be able:

- to decide on the selection of quantitative approaches for production systems,
- to formulate and solve queuing models,
- to implement different configuration of production systems in a simulation software,
- to evaluate different configurations of production systems.

Literature

From [WIW-POM-LP-K-7] Performance analysis of production systems (/mhb/courses/WIW-POM-LP-K-7/):

Curry und Feldman (2011): Manufacturing Systems Modeling and Analysis, 2. Aufl., Springer Verlag Heidelberg.

From [WIW-POM-SIP-K-7] Simulation of production systems (/mhb/courses/WIW-POM-SIP-K-7/):

- Modelling of stochastic processes
- Implementation of simulation models using a commercial simulation software

Requirements for attendance (informal)

None

Requirements for attendance (formal)

None

References to Module / Module Number [WIW-POM-MS-M-7]

Module-Pool

Name

[WIW-POM-MPOOL-7 (/mhb/modulepools/WIW-POM-MPOOL-7/)] Field of Specialization: Produktionsmanagement