

## Module Handbook

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# Course INF-31-52-K-6

Product Line Engineering (2V+1U, 4.0 LP)

## Course Type

SWS	Type	Course Form	CP (Effort)	Presence-Time / Self-Study
-	K	Lecture with exercise classes (V/U)	4.0 CP	78 h
2	V	Lecture		28 h
1	U	Exercise class (in small groups)		14 h
(2V+1U)			4.0 CP	42 h 78 h

## Basedata

SWS	2V+1U
CP, Effort	4.0 CP = 120 h
Position of the semester	1 Sem. in WiSe
Level	[6] Master (General)
Language	[DE] German
Lecturers	Becker, Martin, Dr. (WMA   DEPT: INF)
Area of study	[INF-SE] Software-Engineering
Lifecycle-State	[NORM] Active

## Possible Study achievement

- Verification of study performance: **proof of successful participation in the exercise classes (ungraded)**
- Details of the examination (type, duration, criteria) will be announced at the beginning of the course.

## Contents

- Basic concepts of product lines (commonality, variability, decisions)
- Role and concepts of architectures (styles, patterns, and scenarios)
- Implementation technologies (MDA, Preprocessors, aspect-oriented development)
- Technology transfer (Adaptation and adoption of technologies, migration strategies)
- Reverse-Engineering (basic and detailed analyses, reconstruction of architectural views and structures)
- Domain analysis (product map, management of varying requirements and system characteristics)

## Literature

- Atkinson et. al., Component-based Product Line Engineering with UML. Addison-Wesley 2001.
- Weiss, Lai: Software Product-Line Engineering. A Family-Based Software Development Process Addison-Wesley, 1999.
- Clements: Software Product Lines. Practices and Patterns. Northrop, 2002.
- Victor Pankratius: Product Lines for Digital Information Products, Universitätsverlag Karlsruhe, 2007.
- F. van der Linden, K. Schmid und E. Rommes: Software Product Lines in Action: The Best Industrial Practice in Product Line Engineering. Springer, 2007.
- Pohl, Böckle, van der Linden: Software Product Line Engineering: Foundations, Principles and Techniques, Springer, 2005.

## Requirements for attendance (informal)

None

## Requirements for attendance (formal)

None

## References to Course [INF-31-52-K-6]

Module	Name	Context
[INF-30-52-M-7]	Software-Engineering 2	WP: Obligation to choose 2V+1U, 4.0 LP
[INF-31-52-M-6]	Product Line Engineering	P: Obligatory 2V+1U, 4.0 LP