

Modulbeschreibung

Software Product Line Engineering

Module numbers:	41.5024 [PVL 41.5025]
Language:	english
Study programme:	Dualer Master 2021 - Katalog AS: Anwendungs- und systemorientierte Module Dualer Master 2021 - Vertiefung SE: Software-Engineering Master 2021 - Katalog AS: Anwendungs- und systemorientierte Module Master 2021 - Vertiefung SE: Software-Engineering Dualer Master 2013 - Katalog AS: Anwendungs- und systemorientierte Module Dualer Master 2013 - Vertiefung SE: Software-Engineering JIM 2013 - Elective Catalogue J Master 2013 - Katalog AS: Anwendungs- und systemorientierte Module Master 2013 - Vertiefung SE: Software-Engineering Master 2006 - Katalog AS: Anwendungs- und systemorientierte Module Master 2006 - Vertiefung AE: Application Engineering MN Data Science 2022/2016 - Katalog M-I_I: Allgemeine Wahlpflicht Informatik
Type of course:	V+P = Lecture+Practical
Weekly hours:	2+2
Credit Points:	6
Exam:	oral exam
PVL (e.g. Practical):	not graded
Required knowledge:	Sound knowledge in Software-Engineering; good programming skills
Learning objectives:	The students shall achieve the following skills: • to recognize software product lines in real-life projects and to propose appropriate solutions for the development • to recognize and to handle variability in projects (including analysis, design, realization and management) • to use advanced modeling techniques to express variability in common modeling artifacts (esp. UML diagrams) • to implement and to model reusable software with variability • to transfer the techniques from product line development to 'normal' projects
Content:	Product lines in nowadays industrial projects • Benefits and prerequisites of product line development • Relationship of product lines and software engineering • Modeling software that contains variability • Mechanisms for developing software that contains variability • Systematic and generic approach to product line development (Product line practices framework)
Literature:	Software Product Lines : Practices and Patterns, P. Clements, L. M. Northrop, Addison Wesley, 2001 • Software Product Line Engineering: K. Pohl, G. Böckle, F. van der Linden, Springer, 2005
Lecture style / Teaching aids:	Seminaristic lecture using slides, books and scientific articles
Responsibility:	Ralf Hahn
Professional competencies:	• formal, algorithmic, mathematical competencies: low • analytical, design and implementation competencies: high • technological competencies: high • capability for scientific work: low
Interdisciplinary competencies:	• interdisciplinary expertise: basic economic competence