Module title	Software Engineering - Design
Module number	M17
Study programme	Computer Science
Applicability of the module to other study programmes	Applicable to other Computer Science Bachelor programmes
Duration of the module	1 semester
Status of the module	Compulsory module
Recommended semester during the study programme	4
Credit points (Cp) of the module	5
Prerequisites for module participation	None
Prerequisites for module examination	Passing of all attestations parallel to the unit „Exercises – Software Engineering – Design“ (Workload 24 hours)
Module examination	Written exam - 90 minutes

Intended learning outcomes /acquired competences of the module	- Knowledge and mastering of the basic principles and concepts of software design and implementation - Capability to critically assess and estimate the usage of the various methods of software design in the application development context - Understanding the roles of software developers and project managers - Enhanced proficiency in the software engineering of large software systems Extracurricular skills (20% of total workload): project- and teamwork, methods of project management, presentation techniques, ability to judge, English as the language of software engineering, socio-cultural importance of Computer Science, systems analysis and design, working in international teams
Contents of the module	Lectures Software Engineering – Design Exercises Software Engineering - Design
Teaching methods of the module	Lectures: Interactive lectures Exercises: Teamwork in small groups
Total workload	150 h (20% extracurricular skills)
Language of the module	English
Frequency of the module	Annually

Contents of the module	Lectures Software Engineering – Design Exercises Software Engineering - Design
Teaching methods of the module	Lectures: Interactive lectures Exercises: Teamwork in small groups
Total workload	150 h (20% extracurricular skills)
Language of the module	English

Frequency of the module	Annually

Name of the unit	Lecture Software Engineering – Design
Code	
Corresponding module	Software Engineering - Design
Lecturer	Kratz, Zöller-Greer, Schäfer, Wagner
Contents of the unit	- Software design process - Software design principles - Software design concepts - Software architecture - Object-oriented software design - System design process - Software design with patterns - Software Testing
Teaching methods	Seminarian lessons
Contact hours per week	2
Total workload of the unit (h)	70
Total time of contact hours (h)	30
Total time of examination incl. preparation (h)	10
Total time of practical training (h)	
Total time of self-study (h)	30
Language of the unit	English
Recommended reading	· Software Engineering: A Practitioner's Approach Roger S. Pressman. Mcgraw-Hill Higher Education; Auflage: 7th Revised edition. (1. April 2009) Current literature will be announced at the beginning of the semester
Type and form of assessment	Written exam 90 minutes

Grading of the assessment	Differentiated

Name of the unit	Exercise Software Engineering – Design
Code	
Corresponding module	Software Engineering - Design
Lecturer	Kratz, Zöller-Greer, Schäfer, Wagner
Contents of the unit	- Software design process - Software design principles - Software design concepts - Software architecture - Object-oriented software design - System design process - Software design with patterns - Software Testing
Teaching methods	Small group work
Contact hours per week	2
Total workload of the unit (h)	80
Total time of contact hours (h)	30
Total time of examination incl. preparation (h)	0
Total time of practical training (h)	30
Total time of self-study (h)	50
Language of the unit	English
Recommended reading	· Software Engineering: A Practitioner' Approach Roger S. Pressman ● Mcgraw-Hill Higher Education; Auflage: 7th Revised edition. (1. April 2009) Current literature will be announced at the beginning of the semester
Type and form of assessment	Prerequisite: attestations during the exercises

Grading of the assessment	undifferentiated
Further information	