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| Module Name | | **Software Quality** | | | | | | |
| Module Responsibility | | *Prof. Dr. Erwin Neuhardt* | | | | | | |
| Qualifica | tion Targets | *The students get to know different methods for describing and assuring software quality. They know tools and methods for examining software quality. They can apply these tools and methods to software projects. They can evaluate the efficacy of the methods in different application contexts.* | | | | | | |
|  | **Contents** | **Know** | **Understand** | **Apply** | **Analyse** | **Assess** | **Synthesize** |  |
|  | Definition of  software quality | x | x | x |  |  |  |  |
|  | Test methods | x | x | x | x | x |  |  |
|  | Static analysis | x | x | x | x | x |  |  |
|  | Software Metrics | x | x | x | x | x |  |  |
|  | Theoretical  background of static analysis | x | x |  |  |  |  |  |
| Module Contents | | *Definition of software quality, test methods for unit test, integration test, system test, static analysis, software metrics, tools and methods for examining software quality and measuring metrics* | | | | | | |
| Teaching Methods | | *Lecture (1 hour/week), tutorial (1 hour/week)* | | | | | | |
| Requirements for Participation | | *Skills and knowledge in Java programming and software engineering (at least 10 ECTS)* | | | | | | |
| Literature / Multimedia-based Teaching Material | | *Binder, Robert V.: Testing object-oriented systems: models, patterns, and* tools, Addison-Wesley, 2000  *w/o author: SonarCube Documentation, online at docs.sonarqube.org*  *Reichenbach, C.: Program Analysis Overview,*  https://www.youtube.com/watch?v=ABqLrCf5BsA Reichenbach, C.: Foundations of Dataflow Analysis, https://www.youtube.com/watch?v=fWoc2bZZ59A Reichenbach, C.: Computation,  https://www.youtube.com/watch?v=jnbMirDEByY | | | | | | |
| Applicability | | *Master of Applied Computer Science, Master Angewandte Medieninformatik* | | | | | | |
| Effort / Total Workload | | *Total 90 hours. Attendance: 30 hours, Self-Study: 40 hours, Exam Preparation 20 hours* | | | | | | |
| ECTS / Emphasis of the Grade for the final Grade | | *3 ECTS (Emphasis of the Grade for the final Grade 3/120)* | | | | | | |
| Performance Record | | *Written Examination* | | | | | | |
| Semester | | *2nd semester* | | | | | | |
| Frequency of Occurrence | | *Once during the academic year* | | | | | | |
| Duration | | *One semester* | | | | | | |
| Type of Course | | *Compulsory optional course from the area software engineering* | | | | | | |