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**Aktuelle Modulbeschreibung**

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| **Module Number:** | **11885** |
| **Module Title:** | **Software Testing** |
|  | Testen von Software |
| **Department:** | Faculty 1 - Mathematics, Computer Science, Physics, Electrical Engineering and Information Technology |
| **Responsible Staff Member:** | * Prof. Dr.-Ing. Heiner, Monika |
| **Language of Teaching / Examination:** | English |
| **Duration:** | 1 semester |
| **Frequency of Offer:** | On special announcement |
| **Credits:** | 8 |
| **Learning Outcome:** | Students acquire an overview of test strategies and their pros and cons reusability. Students will also gain some experience in using some representative test tools. |
| **Contents:** | First we discuss pros and cons of testing techniques, specifically in comparison with the verification approach, before we acquire an overview of known methods for a systematic software test. This includes a discussion of specific problems of testing object-oriented and concurrent software. |
| **Recommended Prerequisites:** | Knowledge of the content of the module   * 11884: Introduction into Concurrency |
| **Mandatory Prerequisites:** | No successful participation in module *12408 Testen von Software*. |
| **Forms of Teaching and Proportion:** | * Lecture / 4 Hours per Week per Semester * Exercise / 2 Hours per Week per Semester * Self organised studies / 150 Hours |
| **Teaching Materials and Literature:** | Will be provided at the beginnning of the course. |
| **Module Examination:** | Prerequisite + Final Module Examination (MAP) |
| **Assessment Mode for Module Examination:** | **Prerequisite:**   * Successful completion of exercise assignments (75% must be reached)   **Final module examination:**   * Written examination, 120 min. **OR** * Oral examination, 30-45 min. (with small number of participants)   In the first lecture it will be announced, if the examination will be offered in written or oral form. |
| **Evaluation of Module Examination:** | Performance Verification – graded |
| **Limited Number of Participants:** | None |
| **Part of the Study Programme:** | * M.Sc. / Cyber Security (research-oriented profile) / Prüfungsordnung 2017 * M.Sc. / Informatik (research-oriented profile) / Prüfungsordnung 2008 - 2. SÄ 2017 * M.Sc. / Informations- und Medientechnik (research-oriented profile) / Prüfungsordnung 2017 |
| **Remarks:** | * Study programme Computer Science M. Sc.: Compulsory elective module in complex "Practical Computer Science" (level 400). * Study programme Information and Media Technology M. Sc.: Compulsory elective module in complex "Dependable HW/SW-Systems". * Study programme Cyber Security M.Sc.: Compulsory elective module in complex "Computer Science   If there is no need that the module 11885 is taught in English, alternatively the german version 12408  "Testen von Software" may be offered instead.  Modules 11885 "Software Testing" and 12408 "Testen von Software" can not be combined. |
| **Module Components:** | * Lecture: Software Testing * Accompanying exercise * Related examination |
| **Components to be offered in the Current Semester:** | * [128130 Lecture Testen von Software / Software Testing - 4 Hours per Week per Semester](https://www.b-tu.de/qisserver3/rds?state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung&veranstaltung.veranstid=74540) * [128131 Exercise Testen von Software / Software Testing - 2 Hours per Week per Semester](https://www.b-tu.de/qisserver3/rds?state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung&veranstaltung.veranstid=74536) * [128132 Examination Testen von Software / Software Testing](https://www.b-tu.de/qisserver3/rds?state=verpublish&status=init&vmfile=no&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung&veranstaltung.veranstid=79512) |