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| Module Name | **IT-Security (adv. chapters)** |
| Module Responsibility | *Prof. Ralf C. Staudemeyer, Ph.D.* |
| Qualification Targets | *This course teaches students to improve their ability to understand and master current developments in IT-Security and Privacy-Enhancing Technologies (PET). Students learn research techniques that they will apply on pre-selected research topics. Aside from a comprehensive literature research, students will develop a scientific contribution. Results will be presented in form of a conference*  *contribution. This includes a presentation and an academic publication.* |
| Module Contents | *This course takes place in form of an academic conference. Students go thought the typical phases of a scientific contribution: extended abstract, review, camera ready version, full paper and 30minutes presentation. All presentations will be in the course of an internal conference-like event open to all university members near the end of the semester. A selection of the written contributions will be published in form of a technical report. Overall, the event comes with few meetings of all participants. Questions that arise during the processing of the individual research topics are clarified within working groups and with the lecturer at regular individual meetings.*  *Typical “hot” research topics are, for example, in the areas*  • *Security monitoring and visualization*   • *Internet-of-Things // Industry4.0*   • *Privacy-Enhancing Technologies*   • *Machine Learning in IT-Security* |
| Teaching Methods | *lecture (2 SWS), exercises (2 SWS)*  *students per course: restricted; exercises: 10* |
| Requirements for Participation | *Basic knowledge in IT-security and cryptography* |
| Literature / Multimedia-based Teaching Material | Selected sources for the preparation of current topics. |
| Applicability | *Master of Applied Computer Science (MACS) Master Angewandte Medieninformatik (MaI)* |
| Effort/  Total Workload | *Total 150 hours: Attendance: 60 hours, Self-study incl. exam preparation: 90h.* |
| ECTS/ Emphasis of the Grade for the final Grade | *5 CP (Emphasis of the Grade for the final Grade 5/120)* |
| Performance Record | |  |  | | --- | --- | | • • | *presentation (30min)*  *academic publication (5pages)* | |
| Semester | *2nd/ 3rd Semester (MACS/MaI)* |
| Frequency of Occurrence | *every semester* |
| Duration | *one semester* |
| Type of Course | *Obligatory course from the area IT-Security* |