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| Title of course | Distributed Systems (Verteilte Systeme) |
| Responsible instructor | <i>Prof. Dr. Martin Golz</i> |
| Learning objectives | <i>Students learn about important architectures which are relied on in the development of distributed systems. They know about the properties of different architectures. They learn about the different technologies for communication and cooperation in distributed systems and are able to apply these technologies in real world projects.</i> |
| Course contents | <i>Concepts and technologies for the development of distributed Systems:</i> - architectures and properties of distributed systems: client server-architectures, transparency - Programming concepts for the communication in distributed systems: sockets, remote procedure call, remote method invocation, component based distributed systems, message based distributed systems - Concurrent programming: java thread, synchronization and coordination, concurrent data structures, java executor framework |
| Teaching methods | Lecture (2 hours/week), tutorial (2 hours/week) |
| Prerequisites | <i>Skills and knowledge in Java programming and software engineering (at least 10 ECTS)</i> |
| Suggested reading | <i>Andrew S. Tanenbaum, Maarten van Steen, Distributed Systems, Published by Maarten von Steen, 2017</i> <i>Jendrock, E. et al.: The Java EE Tutorial, Enterprise Java Beans, online on docs.oracle.com</i> <i>w/o author: Sockets, Java Remote Method Invocation, Concurrency, online on docs.oracle.com</i> <i>Brian Goetz, Joshua Bloch, Joseph Bowbeer, Doug Lea, David Holmes, Tim Peierls, Java Concurrency in Practice, Addison-Wesley, 2006</i> <i>David A. Chappell, Richard Monson-Haefel, Java Message Service, O'Reilly 2009</i> |
| Applicability | <i>Master of Applied Computer Science, Master Angewandte Medieninformatik</i> |
| Workload | <i>Total 150 hours. Attendance: 60 hours, Self-Study: 60 hours, Exam Preparation 30 hours</i> |
| ECTS credit points and weighting factor | <i>5 CP (Emphasis of the Grade for the final Grade 5/120)</i> |
| Basis of student evaluation | <i>Written examination on PC</i> |
| Time | <i>1st Semester</i> |
| Frequency | <i>Once during the academic year</i> |
| Duration | <i>One semester</i> |
| Course type | <i>Obligatory subject</i> |
| Remarks | <i>Teaching language is English.</i> |

