

Programming Technologies Practice Syllabus, Fall 2017

Goal of the course

After completing the requirements of this course, participants should acquire skills in advanced Java programming. They should be able to design, implement and test simpler information systems.

Lab course topics

- Advanced Exception Handling
- Assertions
- Using the Reflection Framework
- Managing Meta-data, Annotations
- Java Date and Time
- Software Engineering
- Refactoring
- Developing Graphical User Interfaces (GUIs) with JavaFX
- Manipulating Data with Java Database Connectivity (JDBC)
- Processing XML documents
- JPA
- JUnit Testing
- Licensing
- Assembling the above components.

Requirements

- Regular appearance in the classes. **Only 3 missed classes allowed** (as a maximum).
- **Mid-term test** at the middle **and final test** at the end of the semester. **Both tests can be rewritten once** (exact schedule will be announced later).
- **Home assignment:** a project created in Java should be submitted which has a testable business logic, contains a GUI and reads and writes information from/to database or XML documents. Project topics should be consulted with your instructor. Deadline: mid December (exact schedule to be determined soon). Projects should be original developments for each students. Projects must be defended in order to prove originality. In questionable cases the teacher can give extra exercises to test the knowledge of the students in the topics required to create the home assignment.
- **Requirement of the signature: minimum 60% on the mid-term and minimum 60% on the final test plus successful defense of the home assignment project.**
- **Requirement of attending the final test: less than 4 missed classes.**