Offered by
ICT Engineering

IT-SDJ2

2.1

Software Development with UML and Java 2

ECTS
10

Prerequisites
Completed the 1st semester ICT Engineering course "Software Development with UML and Java 1" or a similar course. The course must be passed before graduation.

- IT-SDJ1

Main purpose
The purpose is to qualify the student to understand and master the concepts and techniques of object-ori-ented system development and programming, including Client/Server programming.
The course will provide students with the qualifications needed to understand how to:

- Implement solutions in Java using design patterns
- Implement solutions in Java using threads
- Develop client/server systems
- Test software using various testing techniques

Knowledge
The student should be able to understand:

- System architecture
- Different methods for testing
- Concurrency
- System deployment
- Design patterns
- Client/server structure

Skills
The student should achieve the skills:

- Implement design patterns in Java
- Test software using different testing techniques, including (but not limited to) JUnit testing, System testing, etc.
- Create jar files
- Implement thread-safe classes and multi-threaded programs
- Make programs communicate using client-server technologies

Competences
The student should be able to:

- Implement programs in Java using design patterns, and evaluate which to use
- Test software using relevant testing techniques
- Develop flexible java code using interfaces
- Implement thread-safe classes and multi-threaded programs
- Implement client-server systems

Topics

Teaching methods and study activities
The semester has 110 classroom lessons. These lessons will consist of teacher presentations and exercises.

The course will include one or more course assignment(s).

The course is held concurrently with Workshop in Basic Programming 2 (WS2).

CATEGORY 1
Participation of lecturer and students
Initiated by the lecturer
56 hours - 20%

- Lessons
- Exercises in class
- Exam

CATEGORY 2
Participation of students
Initiated by the lecturer
98 hours - 35%

- Exercise, assignments and hand-ins
- Project and group work
- Homework

CATEGORY 3
Participation of students
Initiated by students
70 hours - 25%

- Preparation for exam
- Self-study
- Group work
- Literature search

CATEGORY 4
Participation of lecturer and students
Initiated by students
56 hours - 20%

- Study guidance
- Study group meetings

Resources

Evaluation
Permit criteria's for attending examination:

Mandatory course activities completed

- A number of presentations

Course assignment handed in before deadline

Examination

- Individual oral examination without preparation based upon course work.
- The student will draw from a pool of previously known questions.
- The student will explain concepts and theories from the course, using the course work as reference.
- The student will start with a prepared presentation.
- External examiner.
- The course must be passed before graduation.

Grading criteria
Examinations account for 100% of final grade.

Additional information

Responsible
Troels Mortensen

Valid from

1.8.2018

Course type
ICT Engineering;Compulsory Course for all ICT Engineering;2. semester;

VIA University College

Campus Study Administration
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