Internet Technologies, C# and .NET

ECTS
5

Prerequisites

- IT-SDJ1
- IT-DBS1
- IT-RWD

Or similar courses. The course must be passed before graduation.

Main purpose
The purpose is to qualify the student to understand and implement the basic concepts of the C# programming language and the .NET developer platform.

Knowledge
The student should be able to understand:

- The fundamentals of .NET development and the common type system
- The C# programming language
- Web services
- Web applications
- Object-relational mapping
- Authentication and authorization
- Client-side vs. server-side programming

Skills
The student should achieve the skills:

- Implement console applications, web applications and web services with
  - Server-side C#-programming
  - Data persistence using object-relational mapping
  - User management, including authentication and authorization

- Create and consume class libraries
- Consume and expose web services
- Navigate and use the managed .NET API
- Understand security concerns of .NET applications
- Apply unit testing and TDD principles to .NET applications
- Use a command-line interface (CLI) toolchain
- Deploy .NET applications

Competences
The student should be able to:

- Master the fundamentals of the C# programming language and the .NET developer platform
- Develop .NET applications and services as a part of a distributed system, herein account for communication protocols used

Topics

Teaching methods and study activities
The semester has 56 classroom lessons - four lessons once a week for 14 weeks. These lessons consist of exercises and teacher presentations. The total workload of the student is expected to be around 140 hours. Referring to the Study Activity Model, the workload is distributed as follows:

CATEGORY 1
Participation of lecturer and students
Initiated by the lecturer
42 hours - 30%

- Lessons, scheduled
- Exercises in class
- Project guidance
- Exam

CATEGORY 2
Participation of students
Initiated by the lecturer
42 hours - 30%

- Exercises
- Project and group work
- Homework

CATEGORY 3

Participation of students
Initiated by students
42 hours - 30 %

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

CATEGORY 4
Participation of lecturer and students
initiated by students
14 hours - 10 %

- Study guidance

Resources
Online material

Evaluation
Permit criteria for attending examination:

- Group reports including student's name handed in before deadline.

Examination
Oral Examination

The examination is a joint exam with IT-SEP3 and IT-SDJ3.

Group presentation followed by individual examination.

Group presentation of the IT-SEP3 project - 5 minutes per person.

Individual examination - 35 minutes including examination in IT-SEP3, IT-DNP1 and IT-SDJ3.

Allowed tools: All

Internal exam.

Grading criteria
IT-SEP3 accounts for 50% of final grade.
IT-DNP1 accounts for 25% of final grade.
IT-SDJ3 accounts for 25% of final grade.

Additional information

Responsible

Jakob Knop Rasmussen

Valid from

1.8.2018

Course type

ICT Engineering;Compulsory Course for all ICT Engineering;3rd semester;