ERHVERVSAKADEMI
AARHUS

Course Description Frontend Programming

Introduction
This course description introduces the course Web Programming - Frontend Programming.

Purpose

The purpose of this core area is to develop students' competencies to develop contemporary web applications using programming paradigms and taking advantage of current, standardised protocols and the possibilities of the client/server model. Furthermore, students should develop an understanding of basic design and visual communication. This core area should also enable students to design simple user interfaces using aesthetic and communicative principles.

ECTS points

10 ECTS

1 ECTS-point equals 6,8 lectures. Within the 68 lectures, 8 lectures are included for project. It is expected that the student perform self-studies that amounts to 68 lectures.

Learning objectives

Knowledge

The goal is that the student has knowledge about:

- fundamental protocols of the World Wide Web
- advantages and limitations of client/server architecture
- particular characteristics, weaknesses and strengths of different media
- communication strategies

Skills

The objective is that the student has acquired skills to:

- program and implement a dynamic web application
- master basic design principles
- apply theories on user friendliness and the skills to plan and conduct user tests
- document program structures

Competences

The objective is that the student is competent to:

- analyse a development request with a view to constructing a web-based application
- select and apply suitable programming technologies for developing web-based applications — mainly focusing on the client side.

The subjects below are those included in the course in order to enable the student to obtain the above-described knowledge, skills and competences.

- HTML5 for markup of the frontend part of a web application
- CSS3 for layout of the frontend part of a web application
- CSS preprocessors and JavaScript task runners for automation of the frontend workflow
- CSS frameworks for prototyping the layout of a web application
- JavaScript and jQuery for interaction part of a web application
- JavaScript and jQuery for communication between browser and web server
- Design principles for designing web applications
- Communication principles for planning and creating web applications

2. Study activity

We use cases during each lecture and between the lectures to put theory into practice and shed light on related perspectives. It is a prerequisite to put effort and engagement into the problems arisen via the cases in order to obtain the intended benefit of the education.

Below is listed the required **minimum** of obligations in order to comply to study activity.

- One accepted mandatory assignment,
- Acceptance of the frontend part of the cross-disciplinary project **or** a second mandatory assignment if the student participates in this course as an elective course or as part-time (diploma) student.

3. The lectures

A common lecture day consists of working with theory and cases. The individual lecture day is described in the lecture plan. Video tutorials are used as preparation besides comprehensive literature studies.

4. Exam

The description of the examination of the course is in the curriculum. It is done by drawing a question, followed by 30 minutes of preparation and ended with 30 minutes of examination.