The aim of the course is to introduce the student to the technologies behind web applications and make him able to develop small-scale web apps. The course touches all required concepts in a simplified way to enable students to understand the technology. It teaches HTML, CSS, JavaScript, NodeJS and SQLite at a basic level so that a complete project can be built.
## Study load

<table>
<thead>
<tr>
<th>Total learning time: 75h</th>
<th>Hours large group:</th>
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<td></td>
<td>Hours medium group:</td>
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<td>Hours small group:</td>
<td>30h</td>
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<tr>
<td></td>
<td>Guided activities:</td>
<td>0h</td>
<td>0.00%</td>
</tr>
<tr>
<td></td>
<td>Self study:</td>
<td>45h</td>
<td>60.00%</td>
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</tbody>
</table>
## Content

### Module 1: Introduction to Web Apps

**Description:** Components of a Web App. The HTML Protocol.

**Learning time:** 4h
- Laboratory classes: 2h
- Self study: 2h

### Module 2: The Frontend

**Description:** Creating pages with HTML, the Hyper-Text Markup Language. Styling pages with CSS (Cascading Style-Sheets). in the browser.

**Learning time:** 20h
- Laboratory classes: 10h
- Self study: 10h

**Related activities:** Quiz

### Module 3: The Backend 1: NodeJS

**Description:** Entering commands on the command line and accessing remote computers. Install NodeJS. in the server. Express: programming handlers for web URLs. Generation of pages through templates.

**Learning time:** 16h
- Laboratory classes: 8h
- Self study: 8h

**Related activities:** Quiz
Module 4: The Backend 2: SQLite

Learning time: 8h
Laboratory classes: 4h
Self study: 4h

Description:
The Relational data model.
Creating a database with SQLite.
Inserting, Updating and Deleting records.
Using an SQLite database from .

Related activities:
Project Design

Module 5: Complete Web Apps

Learning time: 27h
Laboratory classes: 6h
Self study: 21h

Description:
Mini-Wordpress, a simple blog web application.

Related activities:
Web App Project

Qualification system

25% - Tasks (exercises during the course)
10% - Quizzes
15% - Project Design (a document describing the planning for a web app project)
50% - Web App Project (a working web app project)

Bibliography

Complementary: