



# Course planning: Frontend development - server

Education: Front-end developer specializing in web security · 400 YH-points · Classroom/Remote · Full-time ·  
Gothenburg Number of YH-points in the course: 20 YH-  
points Course responsible teacher: Patrik Nygren, E-mail: [keyturnlogic@gmail.com](mailto:keyturnlogic@gmail.com)  
Course start: 13 November 2023 End  
of the course: 8 December 2023

## Course description: purpose and connection to the professional role

The purpose of the course is to provide the necessary skills to be able to work with server programming with JavaScript and to provide an overview of API development with REST and databases. The course "Frontend development-Server" is crucial for students studying Frontend development with a focus on web security because it provides knowledge about API use and development. By understanding the server environment, students gain a background for later courses in how they can optimize front-end performance and develop secure web applications. Server programming is a necessary component to create robust and secure front-end solutions that are integrated with secure server environments.

## Content and purpose

The purpose of the course is to teach the student backend development in JavaScript with node.js, or equivalent. The course develops the student's ability to develop server applications.

### Course objectives

After completing the course with an approved result, the student must be able to:

#### Skills 1.

Backend development with node.js, or equivalent 2. Create server applications

#### Skills 3.

Develop towards server and desktop with node.js, or equivalent 4. Structure code in a server application using the REST API

#### Competencies

5. Independently assess and evaluate different methods for backend development

## Forms of knowledge control The

student's knowledge, skills and competences are assessed based on the results of the following knowledge controls: • Course

objectives 1-5: assignment (IG/G/VG)

The course grade is based on a combination of all assessment documents.

## Principles for grading The student's

performance is graded after the completed course with the grades Not Passed (IG), Passed (G) or Well Passed (VG).

#### Not Passed (IG)

To receive the grade Not Passed (IG), the student must have completed the course without reaching all of them



course objectives.

### Passed (G)

To receive the grade Passed (G), the student must have completed the course and achieved all course objectives.

### Well Passed (VG)

In order to receive the grade Well Passed (VG), the student must have completed the course and achieved all course objectives.

The student must also be able to conduct well-founded and nuanced reasoning and be able to make well-founded and nuanced assessments regarding the application of the methods and tools included in this course.

### Course literature •

w3schools.com

The pedagogical structure of the course The

course consists of both physical and digital meetings with theory interspersed with practice. Homework and reading is expected to be done by the student in his own time.

The course "Frontend development-Server" is structured to give students an in-depth understanding of server management and backend development. During the sessions from the 13th to the 8th of December, the course covers everything from handling modules and packages, asynchronous programming with callbacks, and web server concepts. The course also includes practice sessions and demonstrations for practical application. It ends with a submission task where the students can apply their knowledge and skills

### Overview of course content

Date Time	Content	Literature reference
13/11	09:00-16:00 Introduction: expectations and goals with the course incl. review of course planning • Presentation of submission task • The terminal (rehearsal) • Install Node • What is Node • Frontend - Backend • REPL • Our first Node program	Node.js HOME Node.js Intro Node.js Get Started
15/11	09:00-16:00 • Node modules • Require / exports • ES6 modules • Packages and package managers • NPM • Registry	Node.js Modules Node.js Filesystem Node.js NPM



		<ul style="list-style-type: none"> <li>• package.json</li> <li>• global/local installation</li> <li>• Install packages</li> </ul>	
17/11	09:00-11:00	• Exercises/Demo	
20/11	09:00-16:00	<ul style="list-style-type: none"> <li>• Callbacks</li> <li>• Event loop               <ul style="list-style-type: none"> <li>• Non-blocking</li> <li>• Events and event emitter</li> </ul> </li> </ul>	Node.js Events JS Callbacks JS Asynchronous
22/11	09:00-16:00	<ul style="list-style-type: none"> <li>• Promises</li> <li>• Async/Await</li> </ul>	JS Promises JS Async/Await
24/11	09:00-11:00	• Exercises/Demo	
27/11	09:00-16:00	<ul style="list-style-type: none"> <li>• HTTP &amp; Web servers               <ul style="list-style-type: none"> <li>• Networking</li> </ul> </li> <li>• Client in JS</li> <li>• Server in JS</li> </ul>	Node.js HTTP Module
29/11	09:00-16:00	<ul style="list-style-type: none"> <li>• REST Api</li> <li>• Express</li> </ul>	
1/12	09:00-11:00	• Exercises/Demo	
4/12	09:00-16:00	<ul style="list-style-type: none"> <li>• Express cont</li> <li>• Mongo DB</li> </ul>	MongoDB HOME MongoDB Get Started MongoDB Query API MongoDB Create Database MongoDB Create Collection MongoDB Insert MongoDB Find MongoDB Update MongoDB Delete
6/12	09:00-16:00	• Mongo DB cont	
8/12	09:00-11:00	• Exercises/Demo	
10/12	23:59	Submission information is submitted at the Learnpoint platform	