

Internet technologies

Course outline - extramural online track, spring 2023

Course structure

Lesson no	Assignment desc. and guidelines published till ¹	Topic	Assignment	Solution upload due
1	assignment folder opening date	Static WWW documents. Markup languages	HTML and XHTML webpage creation. Project-related work: Valid HTML5 document describing the proposed problem domain of your website project.	assignment folder closing date
2	assignment folder opening date	Cascading Style Sheets (CSS)	Webpage with formatting and layout using (X)HTML and CSS Project-related work: Your website's main page meeting the detailed requirements of the assignment.	assignment folder closing date
3	assignment folder opening date	Internet protocols and architecture	Website request and response analysis using a dedicated web debugger.	assignment folder closing date
4	assignment folder opening date	JavaScript – an introduction	JavaScript – introductory exercises	assignment folder closing date
5	assignment folder opening date	JavaScript – client-side programming	Navigating and updating the document tree within the browser environment <u>Project-related work:</u> Selected functionality of your website including data and its subsequent presentation	assignment folder closing date
6	assignment folder opening date	Server-side programming using NodeJS	Building simple server-side functionality using NodeJS <u>Project-related work:</u> Outlining the functionality and non-functional requirements of the website being the subject of your project.	assignment folder closing date
	assignment folder opening date	-	Project implementation start (detailed guidelines and requirements provided)	assignment folder closing date
7	assignment folder opening date	Server-side WWW programming framework	ExpressJS and View templates	assignment folder closing date
8	assignment folder opening date	Client-side WWW programming frameworks	Data persistence using ExpressJS <u>Project-related work:</u> Extending the server-side functionality of the website	assignment folder closing date
9	assignment folder opening date	Web application security	Client interaction state management <u>Project-related work:</u> Client interaction state management implementation.	assignment folder closing date
10	assignment folder opening date	Client-side frameworks - React	Client-side application logic with React	assignment folder closing date

¹ Until this date the lesson content and assignment may be altered

11	assignment folder opening date	Client-side frameworks – React, React Router	Client-side functionality using frameworks and design patterns. <u>Project-related work:</u> Extending application towards richer client-side interaction.	assignment folder closing date
12	assignment folder opening date	XML – syntax and document schemata	Schema specification and XML document validation <u>Project-related work:</u> Defining an XML schema for a selected data structure your website might need to exchange with external parties.	assignment folder closing date
13	assignment folder opening date	XPath, XSLT - processing XML documents declaratively XML interfaces for programming languages	Creating transformation templates for XML documents <u>Project-related work:</u> Creating a transformation template for the XML document built in assignment 13.	assignment folder closing date
14		SOA (Service Oriented Architecture) and Web Services	Service client development <u>Project-related work:</u> Extending the project website with the external service consuming functionality	
15	2020-06-22	Current trends and problems in Web application development	-	-

Grading policy

Lab / project

Graded credit. Grade is calculated based on your total score from lesson assignments (up to 14 x 5 pts.) and the assessment of the final version of your website project (up to 20 pts.).

You need to collect at least 45pts to complete that course, including not less than 8pts. for the project (and ~80pts to get 5.0 grade).

Theory

Exam. Two theoretical questions will be asked during the project review during the exam session.