

## RTU Course "Development of Web-Applications for the Internet"

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**General data**

Code	DIP221
Course title	Development of Web-Applications for the Internet
Course status in the programme	Courses of Free Choice
Responsible instructor	Natālija Prokofjeva
Academic staff	Valdis Saulespurēns
Volume of the course: parts and credits points	1 part, 3.0 credits
Language of instruction	LV, EN
Annotation	Development and implementation of Web-application with HTML (Hypertext Markup Language), CSS (Cascading Style Sheet) and JavaScript. HTML document structure, fundamental elements, lists, tables etc. CSS syntax, examples of use. JavaScript possibilities for interactive Web-application developing.
Goals and objectives of the course in terms of competences and skills	The aim of the course is to provide knowledge about web technology usage possibilities, describes HTML, JavaScript and CSS syntax, their functionality, defines possible ways to develop and implement interactive network applications. Course tasks: - learn HTML and CSS syntax, abilities and use cases to develop web-applications; - learn JavaScript abilities to create interactive web-tools; - teach students to practically apply their knowledge for successful development of rich web-applications.
Structure and tasks of independent studies	Learning of methodological materials and literature
Recommended literature	Obligātā/Obligatory: 1. Jennifer Nieder Robbins. Learning Web Design 5e: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics. O'Reilly; 5th ed. edition, 2018. - 700 p. 2. Matt Frisbie. Professional JavaScript for Web Developers. Wrox; 4th edition, 2019. - 1200 p. 3. Jon Duckett. HTML & CSS: Design and Build Websites + JavaScript & JQuery: Interactive Front-End Web Development (Set of 2 Volumes). John Wiley & Sons; Pck edition, 2014. - 1152 p. 4. THE WORLD'S LARGEST WEB DEVELOPER SITE / Internet. - <a href="https://www.w3schools.com/">https://www.w3schools.com/</a> 5. Andris Kamars. Tīmekļa lapu veidošana. HTML un CSS. – Rīga: Zvaigzne ABC, 2008. – 320 lpp. Papildu/Additional: 1. Jon Duckett. HTML & CSS, Design and Build Websites / Internet. - <a href="http://www.academia.edu/31552563/Jon_Duckett_HTML_and_CSS_Design_and_Build_Websites.pdf">http://www.academia.edu/31552563/Jon_Duckett_HTML_and_CSS_Design_and_Build_Websites.pdf</a> 2. HyperText Markup Language home page / Internet. - <a href="http://www.w3.org/MarkUp/">http://www.w3.org/MarkUp/</a> 3. Cascading Style Sheets home page / Internet. - <a href="http://www.w3.org/Style/CSS/">http://www.w3.org/Style/CSS/</a> 4. The Modern Javascript Tutorial / Internet. - <a href="https://javascript.info/">https://javascript.info/</a> 5. JavaScript tutorial / Internet. - <a href="https://www.learn-js.org/">https://www.learn-js.org/</a>
Course prerequisites	Programming Languages (DIP208)

**Course contents**

Content	Full- and part-time intramural studies		Part time extramural studies	
	Contact Hours	Indep. work	Contact Hours	Indep. work
Course introduction. HTML document structure. Tags. Text formatting.	5	5	0	0
Lists. Hyperlinks. Images. Tables.	5	5	0	0
Forms. Creation and parsing of forms.	5	5	0	0
Frames. Frame creation and working principles.	5	5	0	0
CSS: definitions, abilities, examples.	5	5	0	0
JavaScript usage in HTML. Variables. Operators.	5	5	0	0
Functions. Events. Form parsing.	5	5	0	0
OOP model in JavaScript. Browser objects. Inner objects.	5	5	0	0
<b>Total:</b>	<b>40</b>	<b>40</b>	<b>0</b>	<b>0</b>

**Learning outcomes and assessment**

Learning outcomes	Assessment methods
Able to create a Web page with several HTML and CSS elements.	Homework successfully completed and defended.
Able to create Web applications using HTML, CSS and JavaScript.	Laboratory work was successfully completed and defended.

Knows the possibilities of HTML, CSS and JavaScript for creating Web applications.	Passed tests (on topics "HTML language", "CSS features", "JavaScript language"), for which a positive assessment was received.
Able to work collaboratively in a group.	Successfully completed and protected group projects.

***Evaluation criteria of study results***

Criterion	%
Homeworks	20
Lab works	30
Tests	10
Working in a group	40
Total:	100

***Study subject structure***

Part	CP	Hours			Tests			Tests (free choice)		
		Lectures	Practical	Lab.	Test	Exam	Work	Test	Exam	Work
1.	3.0	0.0	2.0	0.0	*					