

Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Computing and Informatics		
Type and level of studies		Undergraduate Academic Studies		
The name of the course		Web Programming		
Lecturer (for lectures)		Petković M. Ivan		
Lecturer/associate (for exercises)		Petković M. Ivan, Đorđević Z. Dušan		
Lecturer/associate (for OFE)		Đorđević Z. Dušan, Petković M. Ivan		
Number of ECTS	5	Course status (obligatory/elective)	Obligatory	
Prerequisites	Object Oriented Programming, Data Structures			
Course objectives	Goal of the course is to introduce students with current Web technologies and to gain knowledge to develop a full stack Web application.			
Course outcomes	As an outcome, students should be able to develop a client-server Web application which will interact with the database.			
Course outline				
Theoretical teaching	Web as Internet's multimedia service. Protocols. Basics of HTML 5 and CSS. EcmaScript 6+. Object oriented concepts of ES. Asynchronous programming and Ajax communication. Server technologies: ASP.NET Core, PHP. XML and JSON. REST and SOAP Web services. Web Sockets and push mechanism.			
Practical teaching (exercises, OFE, study and research)	HTML elements, CSS. EcmaScript (JavaScript) syntax and basic concepts. Prototypes and classes. Lambda functions. Functional programming in ES. Using DOM to manipulate page structure. Server-side development in PHP and ASP.NET Core. Using and validating data submitted from client. CRUD operations against the database. Sessions. Templates.			
Textbooks/references				
1	Jon Duckett, Beginning Web Programming with HTML, XHTML, and CSS, John Wiley & Sons, Aug 6, 2004			
2	Rasmus Lerdorf, Kevin Tatroe, Bob Kaehms, Ric McGredy, Programming PHP, O Reilly, 2002			
3	Nicholas C. Zakas: Understanding ECMAScript 6: The Definitive Guide for JavaScript Developers, No Starch Press 2016			
4	Mark J. Price, C# 7.1 and .NET Core 2.0 – Modern Cross-Platform Development - Third Edition, Packt Publishing 2017			
5				
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
2	2	1	0	0
Teaching methods	Lectures, demonstration practice and independent practice in computer lab			
Grade (maximum number of points 100)				
Pre-exam duties	Points	Final exam		Points
Activity during lectures		Written exam		
Exercises	20	Oral exam		40
Colloquia	40			
Projects				