

Specification for the book of courses

Study program		Electrical Engineering and Computer Science		
Module		Electronics - Multimedia technologies		
Type and level of studies		Undergraduate Academic Studies		
The name of the course		Web technologies 1		
Lecturer (for lectures)		Nikolić V. Saša		
Lecturer/associate (for exercises)		Cvetković S. Stevica		
Lecturer/associate (for OFE)		Cvetković S. Stevica		
Number of ECTS	5	Course status (obligatory/elective)	Obligatory	
Prerequisites				
Course objectives	The course objective is to provide students with a fundamental understanding of Internet protocols and techniques for data presentation and manipulation on Web. Introduction to development of client-side (front-end) of Web applications.			
Course outcomes	After successful completion of the course, students are expected to be able to: a) understand the major protocols for internetworking in today's Internet; b) understand client-server architecture of Web applications c) develop simple Web pages using HTML5, CSS3 and JavaScript.			
Course outline				
Theoretical teaching	Overview of computer communications, computer network architectures, and network standards and protocols. Principles of client-server communication and Web application development. Email services and protocols SMTP, POP3, IMAP. Basics of XML and XLS. Concepts of HTML5, CSS3 and JavaScript. Multimedia communications: streaming media, VoIP, quality of service control. Network security: basics of authentication and encryption, Firewalls, VPNs.			
Practical teaching (exercises, OFE, study and research)	Focus of practical lectures is on practical development of web sites using HTML5, CSS3 and JavaScript. Introduction to HTML5 and improvements to previous versions. CSS3 and development responsive web design. Introduction to JavaScript client-side programming. Selectors, event handling and DOM manipulation. Introduction to JQuery. Optimizatiuon of JS and client-server data transfer. Practical lectures include a final project to develop a complete web site.			
Textbooks/references				
1	1. T. Felke-Morris: Web Development and Design Foundations with HTML5 (6th Edition), AddisonWesley, 2012.			
2	Interactive material on web site http://w3schools.com/			
3	Additional course materials, such as lecture notes and tutorial documents, will be available on the faculty website.			
4				
5				
Number of classes of active education per week during semester/trimester/year				
Lectures	Exercises	OFE	Study and research work	Other classes
2	1	1	0	0
Teaching methods	Lectures, exercises, laboratory exercises, homework, course project, consultations.			
Grade (maximum number of points 100)				
Pre-exam duties	Points	Final exam		Points
Activity during lectures	10	Written exam		
Exercises	20	Oral exam		30
Colloquia				
Projects	40			