

Study programmes: Bachelor studies - Informatics				
Course name: P291 - Web Development				
Lecturers: Saša Malkov and other lecturers at Department of computer Science				
Status: Optional				
ECTS: 6				
Attendance prerequisites: P100, P101, P102, P103, R270, R290				
Course aims: Mastering general and specific knowledge about the development of web applications				
Course outcome: After completion of the course, the student have adopted the elementary concepts and techniques of web applications development. By working in a team project, he trained in some of the contemporary web development techniques and gained practical experience in the field.				
Course content: <ul style="list-style-type: none"> - Theory behind the WWW, the original goals and assumptions. Basic concepts. - Web architecture: servers and clients, communication protocols, HTTP. - Applicative aspects of the architecture: communication of programs and web servers, CGI protocol and consequences, program, template, hybrid and session approach to web application development. - Web application architecture, patterns and styles. - The components of the web application architecture: model-view-controller, presentation-abstraction-controller. - The Service-Oriented Architecture (SOA) and Web. RESTfull architecture. - Working with multimedia content on the web, HTML5. - Dynamic HTML, scripting languages, JavaScript, asynchronous communication (AJAX), some important JavaScript libraries. - User interface design for the Web. - APIs, tools. - Databases in web applications. - Application and system scalability. - Web application security. 				
Literature: <ol style="list-style-type: none"> 1. L.Shklar, R.Rosen: Web Application Architecture, JohnWilley & Sons, Ltd, 2003. 2. G.Kappel, B.Proll, S.Reich, W.Retschitzegger: Web Engineering, John Willey & Sons, Ltd, 2006. 3. Vossen, Unleashing Web 2.0 - From Concepts to Creativity, Morgan Kaufmann, 2007 4. Luke Welling, Laura Thomson: PHP и MySQL: развој апликација за веб, Микро књига, 2009. (The lecturer can choose another relevant current literature)				
Number of hours: 5	Lectures: 2	Tutorials: 3	Laboratory: -	Research: -
Teaching and learning methods: Frontal lectures, group and individual tutorials and exercises.				
Assessment (maximal 100 points)				
Course assignments	points	Final exam	points	
Lectures	-	Written exam	-	
Exercises / Tutorials	-	Oral exam	-	
Colloquia	25	Written-oral exam	55	
Essay / Project	20 (тимски пројекат)			