

Course name: <b>Programming of web pages</b>		
Field of study: <b>Computer science</b>	Type of study: <b>Full time</b>	Course code: <b>E5_04, F5_04</b>
Course characteristics: <b>Mandatory within the speciality of software engineering and programming web applications</b>	Level: <b>First (Eng.)</b>	Year: <b>III</b> Semester: <b>V</b>
Type of classes: <b>lectures, laboratories</b>	Hours per week: <b>2 lect, 2 lab</b>	ECTS points: <b>5 ECTS</b>

## COURSE GUIDE

### AIMS

- A1. Acquainting the student with basic methods of programming of web pages.
- A2. Obtaining by the students the practical skills in construction of web pages.

### PREREQUISITES

- 1 The basic knowledge in high-level programming languages and techniques used in the Internet.
- 2 The skills of the practical use of the Internet.
- 3 The skills of using different sources of information including instructions and technical documentation.
- 4 The skills of working alone and in the group..

### LEARNING OUTCOMES

- EE 1 – The student knows and is able to use basic tools to create and test websites.
- EE 2 – The student knows the basics of HTML and cascading style sheets, and is able to use them create a user interface running in a web browser.
- EE 3 – The student knows the basics of JavaScript.
- EE 4 – The student is familiar with the basics of Dynamic Object Model and is able to use it to create a dynamic user interface running in a web browser.
- EE 5 – The student is able to use JavaScript libraries e.g. JQuery.
- EE 6 – The student knows the mode of action of the asynchronous data transfer and is able to program it in the web browser.
- EE 7 – The student is able to identify "bottlenecks" of websites and knows how to remove them.
- EE 8 – The student is able to define key risks associated with web pages, and knows how to counteract them.

### CONTENT

Lectures		Hours
Lect. 1	Introduction to web programming.	<b>2</b>
Lect. 2	Client-server architecture and basic programming technologies in web	<b>2</b>

	design.	
Lect. 3	Introduction to HTML.	2
Lect. 4	Cascading style sheets CSS part. 1.	2
Lect. 5	Cascading style sheets CSS part. 2.	2
Lect. 6	Introduction to programming in JavaScript man. 1.	2
Lect. 7	Introduction to programming in JavaScript man. 2.	2
Lect. 8	Object-Oriented Programming in JavaScript.	2
Lect. 9	Object model of websites (DOM).	2
Lect. 10	Event-driven programming in JavaScript.	2
Lect. 11	JQuery library part. 1.	2
Lect. 12	JQuery library part. 2.	2
Lect. 13	Asynchronous data transmission - AJAX.	2
Lect. 14	Optimization of websites.	2
Lect. 15	Security of websites.	2
<b>Laborator ies</b>		<b>Hours</b>
Lab. 1	Getting familiar with Microsoft Expression Web.	2
Lab. 2	Getting to know development tools available in web browsers.	2
Lab. 3	Creating a static web page in HTML.	2
Lab. 4	Modifying the appearance of the page with CSS.	2
Lab. 5	Creating graphical layout with CSS.	2
Lab. 6	Introduction to JavaScript.	2
Lab. 7	Debugging JavaScript with the use of the tool FireBug Mozilla.	2
Lab. 8	Object-Oriented Programming in JavaScript.	2
Lab. 9	Dynamic Object Model.	2
Lab. 10	Creating dynamic web pages.	2
Lab. 11	Using JQuery library Part 1.	2
Lab. 12	Using JQuery library Part 2 .	2
Lab. 13	Basics of AJAX.	2
Lab. 14	Optimization of Web Pages Part 1	2
Lab. 15	Optimization of Web Pages Part 2.	2

## TEACHING TOOLS

1. – lectures using multimedia presentations
2. – laboratory on computer stations
3. – exemplary applications in selected programming techniques
4. – laboratory guides
5. – software for programming and testing websites

## LITERATURE

Steven M. Schafer, HTML, XHTML, and CSS Bible, 5th Edition, Wiley 2010
Eric Meyer, Smashing CSS: Professional Techniques for Modern Layout, Wiley 2010
Richard York, CSS Instant Results, Wiley 2006
Karl Swedberg and Jonathan Chaffer, Learning jQuery 1.3, Packt Publishing, 2009
C. Luthra and D. Mittal, Firebug 1.5: Editing, Debugging, and Monitoring Web Pages, Packt Publishing 2010
Dave Crane and Eric Pascarello and Darren James, Ajax in Action, Manning Publications, 2005

## TEACHERS

1. dr hab. inż. Janusz Starczewski, prof. PCz, [janusz.starczewski@iisi.pcz.pl](mailto:janusz.starczewski@iisi.pcz.pl)
2. dr inż. Marcin Zalański, [marcin.zalasinski@iisi.pcz.pl](mailto:marcin.zalasinski@iisi.pcz.pl)
3. dr inż. Łukasz Bartczuk [lukasz.bartczuk@iisi.pcz.pl](mailto:lukasz.bartczuk@iisi.pcz.pl)

## ADDITIONAL NOTES

Links to course unit teaching materials can be found on the <http://iisi.pcz.pl/> website.