

## SYLLABUS

### 1. Information on the study programme

1.1. Higher education institution	West University of Timișoara
1.2. Faculty	Matematics and Computer Science
1.3. Department	Computer Science
1.4. Study program field	Computer Science
1.5. Study cycle	Bachelor
1.6. Study programme / Qualification	Computer Science : <i>Database administration / Administrator baze de date - 252101; Computer network administration / Administrator de rețea de calculatoare - 252301; Analyst / Analist - 251201; Research assistant in computer science / Asistent de cercetare în informatică - 214918; Teacher in secondary schools / Profesor în învățământul gimnazial - 233002; Programmer / Programator - 251202; Software systems designers / Proiectant sisteme informatice - 251101</i>

### 2. Information on the course

2.1. Course title		Web Design					
2.2. Lecture instructor		Mîndruță Cristina					
2.3. Seminar / laboratory instructor		Mîndruță Cristina					
2.4. Study year	1	2.5. Semester	2	2.6. Examination type E(xam)/C(olloquim)	C	2.7. Course type M(andatory)/ E(lective)/ F(acultative)	E

### 3. Estimated study time (number of hours per semester)

3.1. Attendance hours per week	3	out of which: 3.2 lecture	2	3.3. seminar/laboratory	1
3.4. Attendance hours per semester	42	out of which: 3.5 lecture	28	3.6. seminar/laboratory	14
<b>Distribution of the allocated amount of time</b>					<b>hours/ ore</b>
Study of literature, course handbook and personal notes					15
Supplementary documentation at library or using electronic repositories					10
Preparing for laboratories, homework, reports etc.					25
Exams					5
Tutoring					5
3.7. Total number of hours of individual study	60				
3.8. Total number of hours per semester	102				
3.9. Number of credits (ECTS)	4				

#### 4. Prerequisites (if it is the case)

4.1. curriculum	Algorithms and Data Structures (I1E1101) Programming (I1E1102)
4.2. competences	Basic programming skills

#### 5. Requirements (if it is the case) / Condiții (acolo unde e cazul)

5.1. for the lecture	Room with projector
5.2. for the seminar / laboratory	Room with personal computers ; XAMPP installed

#### 6. Specific acquired competences

Professional competences	<ul style="list-style-type: none"> <li>Ability to develop simple web sites using HTML, CSS, ECMAScript, PHP and MariaDB.</li> </ul>
Transversal competences	<ul style="list-style-type: none"> <li>Ability of oral and written communication on professional topics with specialists and non-specialists in informatics and of writing technical reports and documentation in at least one international language</li> <li>Ability to learn new concepts and to quickly adapt to the new technologies which appear in informatics</li> </ul>

#### 7. Course objectives

7.1. General objective	Provide students with concepts and main issues in web design and abilities to design simple professional web sites
7.2. Specific objectives	Developing skills for approaching web sites development. <i>Ob. de cunoaștere (OC):</i> (1) to explain the basic structure of web sites (2) to describe languages and technologies for client side (3) to describe an example of technology for server site. <i>Ob. de abilitare (OAb):</i> (1) to create the structure of a web site (2) to create the style of a web site (3) to create the client side behavior of a web site (4) to create a simple server side part of a web site including database access and AJAX. <i>Ob. atitudinale (OAt):</i> (1) to argue the importance of professional design of web sites.

#### 8. Content

8.1. Lecture	Teaching methods	Remarks, details
(2h) Introduction. Concepts and definitions. (OC1, OAt1)	Systematic explaining, examples, dialog	
(2h) Semantic markup of web pages using HTML (OC2, OAb1)	Systematic explaining, examples, dialog	
(4h) Presentation style definition of web pages using CSS. Responsive Web Design (OC2, OAb2)	Systematic explaining, examples, dialog	
(2h) JavaScript (EcmaScript) scripting language (OC2, OAb3)	Systematic explaining, examples, dialog	

(4h) JavaScript în web context used to define client-side behavior. (OC2, OAb3)	Systematic explaining, examples, dialog	
(2h) Client-side JavaScript libraries: JQuery. (OC2, OAb3)	Systematic explaining, examples, dialog	
(4h) Client-server web architectures. Server-site behavior defined with PHP. (OC3, OAb4)	Systematic explaining, examples, dialog	
(2h) Basic database creation and usage facilities exemplified with MariaDB DBMS. Accessing database from PHP. (OC3, OAb4)	Systematic explaining, examples, dialog	
(2h) Principles and foundations of AJAX (OC3, OAb4)	Systematic explaining, examples, dialog	
(2h) Examples of Web Design Frameworks (OC2, OAb1, OAb2, OAb3)	Systematic explaining, examples, dialog	
(2h) Verification	Quiz.	

#### Recommended literature

1. Jennifer Niederst Robbins, *Learning Web Design*, 4<sup>th</sup> Edition, O'Reilly Media, 2012
2. Robin Nixon, *Learning PHP, MySQL, JavaScript, and CSS, 2nd Edition A Step-by-Step Guide to Creating*
3. David Flanagan, *JavaScript. The Definitive Guide. 6-th ed., O'Reilly 2011 Dynamic Websites*, 4<sup>th</sup> Edition, Publisher: O'Reilly Media, 2015
4. Adam Freeman, *A Definitive Guide to HTML 5*, Apress
5. Janice Redish, *Letting Go of the Words*, Second Edition, Morgan Kaufmann Publishers (an imprint of Elsevier), 2012.
6. [www.w3.org/standards/webdesign](http://www.w3.org/standards/webdesign)
7. <http://www.ecma-international.org/publications/files/ECMA-ST/Ecma-262.pdf>

8.2. Seminar / laboratory	Teaching methods	Remarks, details
(4h) Simple web site: basic design; create structure and presentation with HTML and CSS. (OAb1, OAb2)	Explanation and dialog. Individual work.	
(4h) Simple web site: define client-side behavior using JavaScript. Study and use of JQuery library (OAb3)	Explanation and dialog. Individual work.	
(2h) Simple web site: define server-side behavior using PHP. (OAb4)	Explanation and dialog. Individual work.	
(2h) Simple web site: create and access data în files and databases. Explore AJAX. (OAb4)	Explanation and dialog. Individual work.	
(2h) Discussion (OAb1, OAb2, OAb3)	Project presentation and evaluation.	

#### Recommended literature

1. [www.w3schools](http://www.w3schools)
2. <http://php.net/manual/en/index.php>
3. <https://secure.php.net/>
4. <https://mariadb.org>

### 9. Correlations between the content of the course and the requirements of the IT field and relevant employers

Developing abilities of creating web sites is typical in computer science students instruction. Web sites are essential in almost any company. The way they are designed and implemented is an

important success factor.

**10. Evaluation**

Activity	10.1. Assesment criteria	10.2. Assesment methods	10.3. Weight in the final mark
10.4. Lecture	Knowledge of fundamental theoretical elements presented and discussed in lectures	Quiz	50%
10.5. Seminar/ laboratory	Ability to create a simple web site using basic client-side and server-side technologies.	Project	50%
10.6. Minimum needed performance for passing			
Knowledge of fundamental theoretical elements. Good skills of designing and creating a simple web site.			

Date of completion  
15.09.2020

Signature (lecture instructor)  
Conf. Dr. Cristina Mindruta

Signature (seminar instructor)  
Conf. Dr. Cristina Mindruta

Date of approval

Signature (director of the department)