

UNIVERSITY OF ECONOMICS – VARNA
FACULTY OF INFORMATICS
DEPARTMENT OF INFORMATICS

Adopted by the FC (record № 9/24.04.2024)
Adopted by the DC (record № 10/16.04.2024)

ACCEPTED BY:
Dean:
(Prof. Vladimir Sulov, PhD)

SYLLABUS

SUBJECT: WEB TECHNOLOGIES

DEGREE PROGRAMME: Computer Science; MASTER`S DEGREE

YEAR OF STUDY: 5 for other field graduates; SEMESTER: 10 for other field graduates

TOTAL STUDENT WORKLOAD: 360 hours; incl. curricular 60 hours

CREDITS: 12

DISTRIBUTION OF STUDENT WORKLOAD ACCORDING TO THE CURRICULUM

<i>TYPE OF STUDY HOURS</i>	WORKLOAD, hours	TEACHING HOURS PER WEEK, hours
CURRICULAR: incl. <ul style="list-style-type: none">• LECTURES• SEMINARS / LAB. EXERCISES	30 30	2 2
EXTRACURRICULAR	300	-

Prepared by:

1.
(Prof. Snezhana Sulova, PhD)
2.
(Chief assist. prof. Boris Bankov, PhD)
3.
(Chief assist. prof. Radka Nacheva, PhD)

Head of department
of Informatics:
(Prof. Julian Vasilev , PhD)

I. ANNOTATION

The course *Web Technologies* is designed to give students who major in 4.6 professional degrees the required knowledge and skills to design, develop, deploy and optimize websites. Through lectures and lab work, students will learn to:

- prepare the design, organize the structure and layout of websites;
- select and apply modern web technologies in website development;
- maintain and optimize websites.

The acquired knowledge and skills can be applied in all spheres of public life - economy, public administration, education, etc. Thanks to the curriculum, students will be able to create websites for organizations as an effective marketing and business tool.

The course will build students' self-study and dissemination skills in the world of constantly evolving Internet technologies. It will help them improve their teamwork skills, continuous training, self-improvement, as well as decision-making on the implementation of new technologies in the field of web development.

In the course, the following key competencies are applied and developed, according to the recommendation of the Council of the European Union dated May 22, 2018, namely:

• *Digital competence - group 4. The ability to use and create digital content intended for the web environment. The acquired in-depth knowledge of modern web site development technologies enables students to skilfully, critically and freely create quality web content.*

• *Personal competence, social competences and the competence to acquire learning skills - group 5. The ability to handle complex situations and an uncertain environment. Web technologies are an extremely dynamic field that implies the acquisition of skills for continuous learning. Moreover, in order to create an appropriate design and functionality of web applications, it is necessary to collect multiple and different opinions, conduct constructive dialogues, and the ability to effectively manage time and information.*

• *Entrepreneurial competence - group 7. The ability to plan and manage projects related to web development. The field of web technologies provides many options for project implementation, which requires analysis and evaluation of the strengths and weaknesses of each possible approach. The knowledge gained in the course helps students easily transform their ideas into real applications.*

II. THEMATIC CONTENT

№	TITLE OF UNIT AND SUBTOPICS	NUMBER OF HOURS		
		L	S	L.E.
Theme 1. WEB TECHNOLOGIES – BASIC CONCEPTS		6	2	
1.1.	Introduction to Web technologies - evolution of the Web, basic concepts	1	-	
1.2.	Planning and designing a website.	1	-	
1.3.	Classification and characteristics of websites.	1	-	
1.4.	Web site development technologies.	1	-	
1.5.	Publish a web site on hosting	1	1	
1.6.	Tools for web site marketing.	1	1	
Theme 2. HTML (HyperText Markup Language) fundamentals		10	12	
2.1.	Introduction to HTML. HTML document structure and markup elements. Block and inline elements	1	2	
2.2.	HTML semantic tags.	2	2	
2.3.	HTML tags for text items	2	2	
2.4.	HTML tags for multimedia elements and hyperlinks	1	2	
2.5.	HTML tags for creating tables	2	2	
2.6.	HTML tags for creating forms	2	2	

Theme 3. CSS (Cascading Style Sheets) fundamentals		10	12	
3.1.	Introduction to CSS	1	2	
3.2.	Using CSS selectors	2	2	
3.3.	Stylizing text, paragraphs and lists.	2	2	
3.4.	Changing backgrounds, borders, margins and paddings.	1	2	
3.5.	Box model components. Layout element positioning.	2	2	
3.6.	Responsive web design. Bootstrap framework fundamentals.	2	2	
Theme 4. Web content management systems		4	4	
4.1.	Classification and characteristics of web content management systems	2	2	
4.2.	Principles of using web content management systems.	2	2	
Total:		30	30	

III. FORMS OF CONTROL:

№	TYPE AND FORM OF CONTROL	Number	extracurricular, hours
1.	Midterm control		
1.1.	Test	1	60
1.2.	Practical test	2	120
Total midterm control:		3	180
2.	Final term control		
2.1.	Examination (test)	1	60
2.2.	Examination (course project)	1	60
Total final term control:		2	120
Total for all types of control:		5	300

IV. LITERATURE

REQUIRED (BASIC) LITERATURE:

1. Wolf, J. (2023) HTML and CSS: The Comprehensive Guide. Rheinwerk Computing; First Edition

RECOMMENDED (ADDITIONAL) LITERATURE:

1. Frain, B. (2022) Responsive Web Design with HTML5 and CSS3. Birmingham: Packt Publishing.
2. Krol, K. (2019) WordPress 5 Complete. Birmingham: Packt Publ.
3. McGrath, M. HTML, CSS & JavaScript in easy steps. In Easy Steps Limited, 2020.
4. Robbins, J. (2018) Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics 5th Edition Boston: O'Reilly Media.
5. Robbins, J. (2018) Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics, 5 edition, O'Reilly Media.
6. W3Schools Online Web Tutorials. // <http://w3schools.com>, (1.04.2024).