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: .NET WEB DEVELOPMENT

DEGREE PROGRAMME: Computer Science; MASTER`S DEGREE

YEAR OF STUDY: 6 for other field graduates; SEMESTER: 11 for other field graduates

TOTAL STUDENT WORKLOAD: 240 hours; incl. curricular 75 hours

CREDITS: 8

DISTRIBUTION OF STUDENT WORKLOAD ACCORDING TO THE CURRICULUM

TYPE OF STUDY HOURS	WORKLOAD, hours	TEACHING HOURS PER WEEK, hours
CURRICULAR: incl.		
• LECTURES	30	2
• SEMINARS / LAB. EXERCISES	45	3
EXTRACURRICULAR	165	-

Prepared by:

1. …………………………………..
   (Prof. Vladimir Sulov, PhD)

2. ……………………………………
   (Chief assist. prof. Bonimir Penchev, PhD)

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

I. ANNOTATION

The course ".NET Web Development" covers Microsoft's .NET framework, designed for development and implementation of applications and more specially its basic concepts, architecture, components, libraries, languages and development environment. The course provides theoretical knowledge and practical skills for creating web applications with the help of the .NET framework and the C# language, including the usage of a variety of Web controls, models and access to databases.

The application of the acquired knowledge and skills is in the field of software development with the help of .NET framework for creating web applications, including the usage of various controls, architectural models for design and access to databases.

The course allows students to expand their basic knowledge of programming and to form new skills for integration of the software tools and database technologies when creating web applications.

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

• Mathematical competence and competence in the field of exact sciences, technologies, and engineering - group 3. The ability to apply mathematical thinking and vision in order to solve various algorithmic problems is developed.

• Digital competence - group 4. Knowledge of the possibilities and limitations of computer technologies (CT); understanding the principles and logic underlying CT; ability to create and use programs and digital content.

• Personal competence - group 5. Ability to apply a variety of communication approaches and tools that are adapted to the context of interaction. Acquiring skills to solve real-life problems, to plan tasks, to organize one's own work and to deal with conflicts.

II. THEMATIC CONTENT

№	TITLE OF UNIT AND SUBTOPICS	NUMBER OF HOURS		
		L	S	L.E.
Theme 1. Introducing .NET technologies and advanced features of the C# language		**6**	**3**	
1.1	Microsoft's .Net Framework	4	-	
1.2	Programming languages and development tools	1	-	
1.3	Visual Studio development environment	1	3	
Theme 2. Web applications development		**16**	**27**	
2.1	Main project types, architecture and structure of applications	4	6	
2.2	Web pages, components, events and interactions	8	15	
2.3	Advanced features and session management	4	6	
Theme 3. Working with databases		**8**	**15**	
3.1	Basic concepts and supported technologies	2	3	
3.2	Controls and functions for database access	6	12	
	Total:	**30**	**45**	

III. FORMS OF CONTROL:

№	TYPE AND FORM OF CONTROL	Number	extracur-ricular, hours
1.	**Midterm control**		
1.1.	Tests	2	40
1.2.	Practical tasks	2	50
	Total midterm control:	**4**	**90**
2.	**Final term control**		
2.1.	Examination (test)	1	30
2.2.	Examination (practical task)	1	45
	Total final term control:	**2**	**75**
	Total for all types of control:	**6**	**165**

IV. LITERATURE

REQUIRED (BASIC) LITERATURE:
1. Online lectures in the university's online e-learning system.

RECOMMENDED (ADDITIONAL) LITERATURE:
1. Roth, D. et al. Blazor for ASP.NET Web Forms Developers, Microsoft, 2023.
2. Price, M. C# 12 and .NET 8 – Modern Cross-Platform Development Fundamentals, Packt Publishing, 2023.