

## General Information:

Name of Course: **WEB BASED SOFTWARE DEVELOPMENT**

**Course Code:** IVB474AN  
**Semester:** 5<sup>th</sup>  
**Number of Credits:** 4  
**Allotment of Hours per Week:** 1 Lecture+2 practices /Week  
**Evaluation:** Semester Grade  
**Prerequisites:** Databases I, Programming3

**Instructor:** Dr Etelka SZENDRŐI, associate professor  
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## Introduction, Learning Outcomes:

During the Course, students will learn the basics and techniques of web based software development methods. They will be able to create database based applications in Microsoft ASP.NET and ASP.NET Core environment.

## General Course Description and Main Content:

Students will learn the following topics

ASP.NET Application Lifecycle. Structure of ASP.NET applications. Master pages, themes and skins. ASP.NET compilation model. Creating and configuring server side controls. Standard Controls, Advanced Controls (Calendar, Panel, Image, File Upload, etc.) Use data-bound controls (ListView, GridView, DetailsView, FormView, Tree, Menu, DataPager, etc.). Manage data using ADO.NET and LINQ. Entity Framework. Input control, Site Navigation, state management. ASP.NET Core technology. Data access with Entity Framework Core.

## Methodology:

- **Lectures:** Lecture presentations will cover the major concepts, methods and techniques of web based development.
- **Practices:** During practices we create different ASP.NET sample exercises.

## Schedule:

Study period in 15 weeks: **September 5-December 17 (2022)**

**Tests:** Accumulated knowledge is tested by two tests containing theory questions and coding tasks.

**Week 7: Test 1**

**Week 15: Test 2**

Week	Topic
1.	Introduction. What is ASP.NET? Classic HTML model. HTTP protocol.
2.	Architecture of web forms. Lifecycle of web forms. ASP.NET Controls. Server controls.
3.	State Management
4.	Validating user input. Validation controls. Client-side and Server side validation.
5.	Master pages. Styles. Navigation between pages. Menu structure.
6.	Data Manipulation. ADO.NET Entity Framework. LINQ.
7.	<b>Test 1</b>
8.	ASP.NET Core technology
9.	<b>Autumn holiday</b>
10.	ASP.NET Core MVC applications.
11.	Entity Framework Core technology.
12.	Lambda expressions..
13.	Razor pages..
14.	Authentication, authorization. ASP.NET Core Identity
15.	<b>Test 2</b>

**Attendance:**

Attending is required at all classes and will impact the grade (max. 5%) of course. Unexcused absences will adversely affect the grade, and **in case the absence of more than 30% of the total number of lessons will be grounds for failing the class.** To be in class at the beginning time and stay until the scheduled end of the lesson is required, tardiness of more than 10 minutes will be counted as an absence. In the case of an illness or family emergency, the student must present a valid excuse, such as a doctor's note.

**Grading:**

The semester grade is determined as a combination of Test 1 (45%), the Test2 (50%) and attendance of lectures (5%). Factors such as class participation may be used to adjust your final grade, especially if it falls on a borderline.

All tests are closed-book and closed-notes. A student with a proper excuse of being absent from the test must inform and get a permission from the teacher prior to the time of examination. Any students who do not take the test at the scheduled time will receive a zero score.

Grading Scale:

Numeric Grade:	5	4	3	2	1
Evaluation in percent:	85%-100%	70%-85%	55%-70%	40%-55%	0-40%

**Correction Period:**

Course grade correction between December 19-31 (2022)

**Students with Special Needs:**

Students with a disability and needs to request special accommodations, please, notify the Deans Office. Proper documentation of disability will be required. All attempts to provide an equal learning environment for all will be made.

**Readings and Reference Materials:**

1. Andrew Lock, *ASP.NET Core in Action*, Second edition, Manning Publication Co., 2021, ISBN: 978-1-61729-830-1
2. Adam Freeman, *Pro Entity Framework Core 2 for ASP.NET Core MVC*, Apress, 2018, ISBN: 978 1 4842 3435 8
3. William Penberthy, *BEGINNING ASP.NET for Visual Studio 2015*, John Wiley & Sons, Inc., 2016, page: 793, ISBN: 978-1-119-07742-8
4. Lee Naylor, *ASP.NET MVC with Entity Framework and CSS*, Apress, 2016, ISBN: 978-1-4842-2136-5
5. Robert E. Beasley, *Essential ASP.NET Web Forms Development*, Apress, 2020, page:561, ISBN: 978-1-4842-5783-8
6. Michele Aponte, *Building Single Page Applications in .NET Core 3*, Apress, 2020, page:110, ISBN: 978-1-4842-5746-3