Obuda University John von Neumann Faculty of Informatics	Software Engineering Institute

Name and code: Software Technology and Graphical User Interface Design (NSXSG1EBNE) **Credits:** 5
Computer Science BSc
Daytime 2023/24 year II. semester

Subject lecturers: Sipos Miklós László, Krutilla Zsolt

Prerequisites (with code):	Software Design and Development I., Software Design and Development II., Advanced Development Techniques			
Weekly hours:	Lecture: 2	Seminar.: 0	Lab. hours: 3	Consultation: 0
Way of assessment:	Exam-season grade			

Course Description

Goal:
During the practices, the students familiarize with the MVVM/MVC patterns using the C# language. During the lectures, the students familiarize with the GoF Basic Design Patterns.

Course description:
MVVM design pattern in the WPF framework (controls, events, data binding). Using the MVC design pattern in the ASP.NET framework (razor, controllers, API endpoints, API access). Simple game development in WPF framework. GoF Basic Design Patterns. JavaScript fundamentals, DOM manipulation, events, Web API usage.

Final Grade Calculation Methods

Students can take the final exam in the exam season, if they have signature from one of the previous semesters. The final exam will be from the lecture materials in written form. The final grade will be the exam's grade. Students must reach at least 50% of the achievable points.

References

Mandatory:
The lecture and lab materials (codes, slides etc.) provided by the teacher to the students during the semester. https://nik.siposm.hu/sgui

Recommended:
Horváth Rudolf: Common Design Patterns
Aniruddha Chakrabarti: Design Patterns (GoF) in .NET
Michael Feathers: Working Effectively with Legacy Code
Joshua Kerievsky: Refactoring to Patterns
Martin Fowler: Refactoring (a.k.a. The Refactoring Bible)
Design Patterns: Elements of Reusable Object-Oriented Software, 1994, ISBN-13: 978-0201633610
Microsoft official C# documentation: https://docs.microsoft.com/en-us/dotnet/csharp/
Design Patterns: http://dofactory.net/net/design-patterns