Course title: Object-Oriented Programming
Course code: 63047
ECTS credits: 8
Requirements: None
Basic information
Level of studies: Master applied studies
Year of study: 1
Trimester: 1
Goal: Acquiring knowledge of the basic principles of object-oriented programming and creative application of these principles in the C# programming language. The student will learn basic principles of .NET technology, the creation of Windows applications using C# language, basic techniques of database management, basic classes in .NET library, and Microsoft Visual Studio development enviroment.
Outcome: The student is familiar with the Microsoft Visual Studio development environment. The student will be able to create Windows applications in the C# programming language using the basic principles of object-oriented programming, and basic techniques of database management.
Contents of the course
Theoretical instruction
1. Microsoft Visual Studio development enviroment and .NET techology
2. C# programming language: Data types, operators and statements
3. C# programming language: Control statements, preprocessing, concept of objects and components
4. C# programming language: Classes, objects
5. C# programming language: Inheritance, encapsulation and polymorphism
6. C# programming language: Features, indexers, operators overloading
7. C# programming language: Structures, enumerating, conversions, strings, arrays,   exceptions
8. C# programming language: Namespaces, atributes, assemblies, delegates and events
9. C# programming language: Generic types, grafical user interfaces, collections, streams and serializations
10. C# programming language: Database management, UML diagrams

Practical instruction (Problem solving sessions/Lab work/Practical training)	
1. Project development in Microsoft Visual Studio.	
2. C# application development	
3. C# grafical user interface design	
4. C# application code refactoryzation, debugging	
5. Creating UML diagrams	
Textbooks and References	
1. Jesse Liberty, Програмирање на језику C#, превод четвртог издања, Микро књига, 2007.	
2. Ласло Краус, Решени задаци из програмског језика C#, Академска мисао, Електротехнички факултет, Београд, 2007	
3. Ben Watson, C# 4.0: како до решења, Микро књига, 2011.	
Number of active classes (weekly)	
Lectures: 3	
Practical classes: 2	
Other types of classes: 1	
Grading (maximum number of points: 100)	
Pre-exam obligations: Points	
Activities during lectures:	
Activities on practical exercises: 15	
Seminary work:	
Colloquium: 25	
Final exam: Points	
Written exam: 60	
Oral exam:	
Lecturer	
Goran Zajić, PhD	
Associate	