

Study program: Modern computer technologies			
Course title: NET Technologies			
Professor/assistant: Zoran Veličković / Miloš Stošić			
Type of course: compulsory			
ECTS credits: 6			
Pre-requisites: none			
Aims of the course: Preparing students to: - learn basic concepts of NET technologies such as CLR (Common Language Runtime), FCL (Framework Class Library), IL (Intermediate Language), CLS (Common Language Specification); - explore the basics of C # programming language, architecture development environment Visual Studio. NET base classes, methods, constants and constructors in C #; Exception handling and multithreading programming; - learn how to solve basic practical problems in Visual Studio using the programming language C #.			
Learning outcomes: It is expected that after passing the exam students can: - describe the basic components of NET technologies and argue their use; - use the integrated development environment Visual Studio for programming of basic programming tasks; - implement basic applications in the programming language C #; - compare practical solutions implemented in other prog. languages with a standard solution of NET; - distinguish program details and analyze the quality of programming solutions.			
Syllabus <i>Theoretical part:</i> Basics of development NET platforms. Common language in CLR and FCL environment. IL and Verification. Specification of a common language. Interoperability. Architecture development environment Visual Studio .NET. Supported programming languages. Automatic memory management. Monitoring garbage collection. Basics of programming language C #. Primitives, operators, loops, preprocessing directives. Strings, arrays, enumeration types. References and value types. Classes, methods, constants and constructors in C #. Delegates and events, interfaces and structures in C #. Creating objects. Web services. <i>Practical part:</i> Introduction to the Integrated Development Environment for developing OO applications. Visual Studio, Eclipse. Working with the command line. Conditional branching, data entry and print messages on the screen. Drop down menus and other controls in C # with support Visual studio. Formation and class inheritance. Working with strings and arrays. Classes and structures to support graphics in C # with support Visual studio. Basic programming Internet applications.			
Literature 1. J. Liberty, D. Xie, Programming C# 3.0, O'Reilly Media, 2007. 2. P. Deitel, H. Deitel, Visual C# 2012- How to program, Deitel, Pearson, 2014. 3. Z. Veličković, .NET technologies: Practicum laboratory exercises, Niš, 2014.			
Number of active classes			Other forms of teaching:
Lectures: 30	Practical classes: 30	Research work:	
Teaching methods Combination of interactive approach with practical problem solving.			
Grading system (maximum 100 points), grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.			
Pre-exam obligations	points	Final exam	points
activity during theoretical lectures	10	written exam	15
practical training	20	oral exam	15
colloquium(s)/seminar papers	40		
Sum	70	Sum	30