

## SYLLABUS

Basic data of the course:	
University/Faculty:	University of Applied Sciences in Ferizaj/ Faculty of Engineering and Informatics
Academic unit:	Faculty of Engineering and Informatics
Course title:	Programming
Level:	Bachelor
Course status:	Obligatory
Year of studies:	III
Number of hours per week:	4
Value in credit – ECTS:	5
Time / location:	Monday, 13: 00-16: 00, Room 203
Course teacher:	Prof. Ass. Dr. Dhuratë Hyseni
Contact details:	<a href="mailto:dhurate.hyseni@ushaf.net">dhurate.hyseni@ushaf.net</a>
Course description:	
Course description:	This course will introduce students to the basics of programming and algorithms. It enables students to apply programming techniques to new software projects. Also, this course enables students to successfully train and apply programming and using pseudo-codes to solve various problems and switch them to programming.
Aim of the course:	
Aim of the course:	The aim of the course is to equip students with modern knowledge in "thinking and programming", a prerequisite for the basics of programming. In addition, students in this course will learn to program with strings and matrices in the c # programming language. Familiarizing students with algorithms and their presentation forms. Students will gain knowledge of the concept of computer programming, utilizing the C # programming language as the main development tool, using C # algorithms and programming language. Requirements for completing the goal of this course are: <ul style="list-style-type: none"> <li>• Programming skills</li> <li>• Active student during lectures and exercises.</li> </ul>
Expected outcomes from learning:	
Expected outcomes from learning:	After completing this course (subject) the student will be able to: <ul style="list-style-type: none"> <li>• Analyze and solve the problem</li> <li>• Use C # programming language to solve the problem</li> <li>• How to read and "debug" the program in C #</li> <li>• C # programming language syntax</li> <li>• Develop algorithms and programs in C # programming language for other course requirements during study and beyond.</li> </ul>

<b>Student contribution (which should correspond to the student's learning)</b>			
<b>Activity</b>	<b>Hour</b>	<b>Day / week</b>	<b>Total</b>
Lectures	2	15	30
Theoretical / laboratory exercises	2	15	30
Practical work			
Contacts with the teacher / consultations	1	1	1
Field exercises			
Tests, seminars			
Homework			
Student self time study	4	15	60
Final exam preparation	7	3	21
Time spent in evaluation (tests, quizzes, final exam)	4	1	4
Projects, presentations,etc	4	1	4
<b>Total</b>			<b>150</b>
<b>Teaching methodology:</b>			
	<i>Lectures and exercises combined with case studies and classroom discussions</i>		
<b>Evaluation methods:</b>			
	<i>Tests and final exam rated by 100% of the grade.  The exam consists of questions and answers, open-ended questions, and assignments.  First evaluation 35%  Second evaluation 35%  Exercises 20%  Attendance 10%</i> <p>-----</p> <i>Total: 100%  Final exam: 70%</i>		
<b>Literature</b>			
<b>Basic literature:</b>			
	-Fundamentals of Computer Programming with C#: The Bulgarian C# Book, Nakov Svetlin, and Veselin Kolev 2013.		
<b>Additional literature:</b>			
	-Troelsen, A., & Japikse, P. (2017). Pro C# 7: With. NET and. NET Core. Apress. -Online Book: <a href="https://introprogramming.info/english-intro-csharp-book/">https://introprogramming.info/english-intro-csharp-book/</a>		
<b>Designed lesson plan :</b>			
<b>Week</b>	<b>The lecture to be held</b>		
<b>Week one:</b>	<b><i>Introduction to C # Programming Language</i></b> How to write, compile, and execute code in C #		
<b>Week two:</b>	<b><i>Program structure</i></b> Variables and Constants, Data types		
<b>Week three:</b>	<b><i>Basic programming</i></b> Writing a simple program. Reading the entries by Console. Identifiers, Variables and Constants.		

<b>Week four:</b>	<b>Basic programming</b> Data types and their conversion.
<b>Week five:</b>	<b>Basic programming</b> Basic mathematical operators, associative expressions and comparison operators. Operators.
<b>Week six:</b>	<b>Conditional Statements</b> The role of conditional statements in programming. Algorithms of conditional statements. Boolean Type, Conditions: if, if-else, multi-way if-else and switch. Generating random numbers. Logical operators, switch condition.
<b>Week seven:</b>	<b>Loop</b> Loop: while, do-while, for. Algorithms and loop programming. Reduce numerical errors.
<b>Week eight:</b>	<b>First evaluation</b>
<b>Week nine:</b>	<b>Methods (functions)</b> Method Definition. The main method (main). Ordinary methods. Calling method.
<b>Week ten:</b>	<b>Types of methods (functions)</b> Local and global variables. Parameters of methods. Types of methods based on return values. Overloaded methods. Implementation of math class methods. Factoring and solving.
<b>Week eleven:</b>	<b>Vectors</b> Determination of vectors. Arithmetic operations. Return string from method. Individual student practical work on the computer writing the program in the c # programming language for different calculations of vector arithmetic operations. Solving some examples.
<b>Week twelve:</b>	<b>Vectors</b> Searching for arrays. Enumeration of designated members. Finding Designated Members. Sorting of strings. Individual student work. Individual student practical work on the computer by writing the program in the c # programming language for different vector computations. Solving some examples.
<b>Week thirteen:</b>	<b>Matrices</b> Elementary matrices. Determining matrices. Arithmetic operations. Individual student practical work on the computer by writing the program in the c # programming language for different calculations of arithmetic operations with matrices. Solving some examples.
<b>Week fourteen:</b>	<b>Study visits to a company</b>
<b>Week fifteen:</b>	<b>Second evaluation</b>
<b>Academic policies and rules of conduct</b>	

*Regular attendance, keeping calm and active engagement in dialogue during lectures and exercises is compulsory.*

- *Students are required to attend lectures and exercises regularly.*
- *Students should come to class on time and are not allowed to go out of class for no reason*
- *Students may not enter lectures and exercises after the beginning of the exercises and lectures.*
- *Students are free to ask questions and participate in any activity.*
- *Students should keep calm and actively engage in dialogue in lectures.*
- *Students should unlock cell phones during class and exams.*
- *COPYING and any other form of cheating during exams is not allowed.*

**Grading**

- **Over 49% Sufficient**
- **Up to 49% Fail**

- 50-59 : 6 (six)
- 60-69 : 7 (seven)
- 70-79 : 8 (eight)
- 80-89 : 9 (nine)
- 90-100 : 10 (ten)