

Study program: INFORMATION TECHNOLOGY			
Type and level of studies: Master Academic Studies (second level of studies)			
Course unit: Programming Languages			
Teacher in charge: Vlade Urošević			
Language of instruction: English			
ECTS: 6			
Prerequisites: -			
Semester: Summer			
Course unit objective			
Introduction to structural programming and complete mastery of C language as the language of general purpose and its advantages over other languages. Pointers, dynamic memory allocation, bits, etc. Introducing the structures as an introduction to classes and objects, as the basis of object-oriented programming.			
Learning outcomes of Course unit			
Students know how to use all the advantages of C language as the language of general purpose and one of the best structured languages; fully master pointers and functions; completely use bits and dynamic memory allocation; fully master control program flow and stated that in solving tasks of daily life; apply programming logic.			
Course unit contents			
<i>Theoretical classes</i>			
Language C. A detailed description of the basis of the language, the structure of the program. Data types: scalar types, defining the type string types. Input / output data conversions. Operators and expressions, conversions and order calculations. Control structures: sequence, selection, cycles and leaps. Pointers and arrays: addresses and pointers; the address arithmetic; dynamic memory allocation. Modularization programs (functions), mechanism of arguments. Recursive functions, pointers to functions, the arguments of the main program, library functions. The visibility and lifetime of variables. Define and use of structures and unions. Definition files and functions for working with files (opening, closing, input / output). Command preprocessor.			
<i>Practical classes</i>			
Students prepare for solving tasks within their professional orientation using programming logic.			
Literature			
[1] Kernighan, Brian W.; Dennis M. Ritchie (1978). <i>The C Programming Language</i> . Englewood Cliffs, NJ: Prentice Hall.			
[2] B. Stroustrup: <i>Programming -- Principles and Practice Using C++</i> . 2008. Addison-Wesley.			
Number of active teaching hours			
Lectures: 2	Practice: 2	Other forms of classes	Independent work: 1
Other classes			
Lectures and exercises based on the model of interactive teaching (dwell methods: public lecture, discussion, methods of practice, workshops, enactment); activated forms of learning: meaningful verbal receptive learning, discovery learning, cooperative learning, learning by doing.			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures	5	oral examination	50
Practical classes/tests	15	written examination	
Seminars/homework	-	
Project	30		
Other			
Grading system			
Grade	No. of points	Description	
10	91-100	Excellent	
9	81-90	Exceptionally good	
8	71-80	Very good	
7	61-70	Good	
6	51-60	Passing	
5	less than 50	Failing	