

DESCRIPTION OF A STUDY COURSE – SYLLABUS

Title of a course	Programming I				
Head of course	Vlatka Davidović, Senior Lecturer				
Study programme	Professional undergraduate study Telematics				
Status of a course	Obligatory				
Year of study	1.	Semester	I	ECTS credits	5
Teaching plan (L + E + S+ Pr)	2 + 2 + 0 + 0				
Goals of a course					
The aim of the course is to enable students to analyze the problem and apply the basic concepts in creating a computer program in a procedural programming language.					
Conditions for enrolling course					
No conditions					
Learning outcomes on a level of a study programme which includes course					
Outcome 4: Use computer principles and methods related to the architecture and organization of computers and computer networks.					
Outcome 5: Use computer principles and methods related to programming languages, databases, and operating systems.					
Outcome 6: Design and implement desktop, web and mobile computer applications and computer programs for microcomputers and microcontrollers, with or without a database.					
Outcome 10: Analyse and implement an information system in the field of telematics.					
Expected learning outcomes on a level of a course					
1. Analyse the set problem and set an algorithm solution with a pseudocode or block diagram. 2. Apply a linear and branched algorithm structure in a computer program 3. Apply a repeating algorithm structure in a computer program 4. Create a structured program code 5. Apply complex data types and work with files in creating a computer program					
Content of a course					
Features of programming languages. Compiler, interpreter and virtual machine. Programming fundamentals – syntax and notation (diagrams and syntaxes). Development of programming languages (direct, procedural, structural, objective). Structural and modular programming and functional decomposition of programs. Variables, data types, constants. Complex data types (fields, structures), operating with files. Control structures (sequencing, selection, multiple selection, repetition, structural programming). Top-down method and pseudo code for algorithm building and expressing of algorithm solutions in the form of computer programs.					
Teaching modes	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> auditory exercises <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> distance learning <input type="checkbox"/> field classes		<input checked="" type="checkbox"/> individual assignments <input type="checkbox"/> multimedia and network <input type="checkbox"/> laboratory <input type="checkbox"/> supervisor's work <input type="checkbox"/> other _____		
Comments					
Students' obligations					
Grading, evaluation and monitoring of students' work continuously during lectures and exams					
Grading is based upon evaluation of course's learning outcomes' adoption. Grading is performed continuously during lectures and/or during exam, in compliance with the provisions of Regulation on the assessment of students.					

Continuous check-up:

Outcomes	Written test I	Written test 2	Practical assignment	Threshold	Max
Outcome 1	10%			5%	10%
Outcome 2	15%			7,5%	15%
Outcome 3	20%		5%	12,5%	25%
Outcome 4		20%	5%	12,5%	25%
Outcome 5		25%		12,5%	25%
Percentage of ECTS	2,25	2,25	0,5	-	-
Total	45%	45%	10%	50 %	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

Exam term:

Outcomes	Written exam	Oral exam	Max
Outcome 1	10%		10%
Outcome 2	10%	10%	20%
Outcome 3	10%	15%	25%
Outcome 4	10%	15%	25%
Outcome 5	10%	10%	20%
Percentage of ECTS	2,5	2,5	-
Total	50%	50%	100 %

A student has passed the exam if he has acquired a percentage of credits for each learning outcome higher or equal to defined threshold.

Grading:

A student has passed the exam if he has acquired at least 50% of anticipated credits of a specific learning outcome.

If a student has passed learning outcomes of all courses, the accomplished credits (percentages) of all passed learning outcomes are being added, while the final grade is defined upon following table:

Range of credits (percentages)	Numerical grade	ECTS grade
90,00 – 100,00	Excellent (5)	A
75,00 – 89,99	Very good (4)	B
60,00 – 74,99	Good (3)	C
50,00 – 59,99	Sufficient (2)	D
0,00 – 49,99	Insufficient (1)	F

Obligatory literature

1. Jakupović, A., Šuman, S.: Osnove programiranja, Veleučilište u Rijeci, Rijeka, 2014

Additional literature

1. Eckel, B.: Thinking in C++, Volume 1, 2nd Edition,
<http://www.planetpdf.com/developer/article.asp?ContentID=6634>
2. McConnell, S.: Kod iznutra, Znak, Zagreb, 1995.
3. Čukman, T.; Bolt, V.: C/C++, Procon, Zagreb, 1994.

