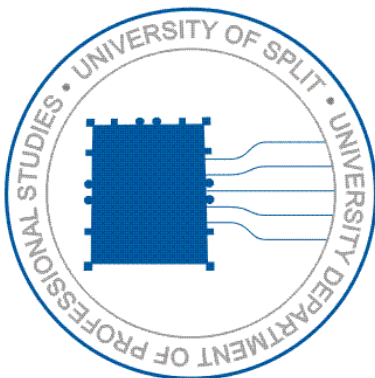


Course syllabus

Programming Methods and Abstractions



COURSE DETAILS

<i>Type of study programme</i>	Undergraduate professional study programme- 180 ECTS	
<i>Study programme</i>	INFORMATION TECHNOLOGIES	
<i>Course title</i>	Programming Methods and Abstractions	
<i>Course code</i>	SIT109	
<i>ECTS (Number of credits allocated)</i>	6	
<i>Course status</i>	Core	
<i>Year of study</i>	First	
<i>Course Web site</i>	http://moodle.oss.unist.hr/	
<i>Total lesson hours per semester</i>	Lectures	45
	Practicals	0
	Laboratory exercises & practical demonstration	30
<i>Prerequisite(s)</i>	None	
<i>Lecturer(s)</i>	Department of Information Technologies: Ljiljana Despalatović, lecturer	

COURSE DESCRIPTION

<i>Course Objectives:</i>	<ul style="list-style-type: none">• understand fundamentals of programming (variables, iteration and recursion, conditional, functions),• learn the C programming language: its syntax, standard library, idioms and patterns,• learn the procedural and modular technique,• learn to create algorithms.
<i>Learning outcomes</i> <i>On successful completion of this course, student should be able to:</i>	<ol style="list-style-type: none">1. define basic programming concepts: variables, types, functions, operators, pointers and structure,2. describe memory layout during program execution,3. design algorithms for basic programming problems; use compiler and linker, or IDE (Integrated Programming Environment),4. recognize idioms and patterns; find syntactic and semantic errors,5. implement algorithms in C,6. make test cases; estimate program complexity.
<i>Course content</i>	Introduction to procedural programming, introduction to C programming language. Algorithms, variables, types, functions, statements. Operators in C. Recursion. Pointers. Pointers and functions. Function pointers. Arrays. Dynamic allocation, working with memory. Strings. Preprocessor. Structures. Working with files. Variable lifetime and scope.

CONSTRUCTIVE ALIGNMENT – Learning outcomes, teaching and assessment methods

Alignment of students activities with learning outcomes		
Activity	Student workload ECTS credits	Learning outcomes
<i>Lectures</i>	45 hours / 1,5 ECTS	1,2,4,5,6
<i>Laboratory work</i>	30 hours / 1 ECTS	2,3,5,6
<i>Two mid-term exams(preparation and delivery)</i>	45 hours / 1.5 ECTS	2,3,5,6
<i>Self-study</i>	45 hours / 1.5 ECTS	1,2,3,4,5,6
<i>Office hours and final exam</i>	15 hours / 0.5 ECTS	1,2,3,4,5,6
TOTAL:	180 hours / 6 ECTS	1,2,3,4,5,6

CONTINUOUS ASSESSMENT		
Continuous testing indicators	Performance A_i (%)	Grade ratio k_i (%)
<i>Class attendance and participation</i>	50 – 100	10
<i>Laboratory work</i>	100	10
<i>First mid-term exam</i>	40-100	40
<i>Second mid-term exam</i>	40-100	40

FINAL ASSESSMENT		
Testing indicators – final exam (first and second exam term)	Performance A_i (%)	Grade ratio k_i (%)
<i>Practical exam (written)</i>	40 – 100	80
<i>Previous activities (include all continuous testing indicators)</i>	40 – 100	20
Testing indicators – makeup exam (third and fourth exam term)	Performance A_i (%)	Grade ratio k_i (%)
<i>Practical exam (written)</i>	40 - 100	80
<i>Theoretical exam (written and/or oral)</i>	40 - 100	20

PERFORMANCE AND GRADE		
Percentage	Criteria	Grade

40% - 54%	<i>basic criteria met</i>	sufficient (2)
55% - 69%	<i>average performance with some errors</i>	good (3)
70% - 84%	<i>above average performance with minor errors</i>	very good (4)
85% - 100%	<i>outstanding performance</i>	outstanding (5)

ADDITIONAL INFORMATION

Teaching materials for students (scripts, exercise collections, examples of solved exercises), teaching record, detailed course syllabus, application of e-learning, current information and all other data are available by MOODLE system to all students.