

COURSE SYLLABUS AND COURSE REQUIREMENTS

2022/2023 SEMESTER 1

Course title	Programming 1
Course Code	IVB053ANMI
Hours/Week: le/pr/lab	2/0/2
Credits	5
Degree Programme	BSc
Study Mode	full-time
Requirements	midyear grade
Teaching Period	fall
Prerequisites	-
Department(s)	Department of Systems and Software Technologies
Course Director	
Teaching Staff	Dr. Levente Szabó

COURSE DESCRIPTION

A short description of the course (max. 10 sentences).

Neptun: Instruction/Subjects/Subject Details/Basic data/Subject description

The basics of C language, functions and variables, fundamental data types, standard I/O, control structures, recursion, arrays and character arrays (strings), pointers, pointer arrays, user defined data types, structures, structure arrays, dynamic memory handling, precedence and associativity of the arithmetic operation, high level file handling debugging and error correction, high level data structures, command line arguments, standard ANSI C functions, GIT

SYLLABUS

Neptun: Instruction/Subjects/Subject Details/Syllabus

1. GOALS AND OBJECTIVES

Goals, student learning outcome.

Neptun: Instruction/Subjects/Subject Details/Syllabus/Goal of Instruction

The main goal of the course is to make the students familiar with the fundamental programming structures and to make them able to code these kind of structures using the tools of C language.

2. COURSE CONTENT

Neptun: Instruction/Subjects/Subject Details/Syllabus/Subject content

TOPICS

LECTURE	TOPICS
	1. Functions and variables
	2. Basic data types
	3. Recursion
	4. Programs in several files (projects)
	5. Compound data types
	6. Handling of text files
	7. Parameters of function main
	8. Self referential data structures
	9. Distributed version control systems

	10. <i>Centralized version control systems</i>
PRACTICE	
LABORATORY	
PRACTICE	<ol style="list-style-type: none"> 1. <i>Functions and variables</i> 2. <i>Basic data types</i> 3. <i>Recursion</i> 4. <i>Programs in several files (projects)</i> 5. <i>Compound data types</i> 6. <i>Handling of text files</i> 7. <i>Parameters of function main</i> 8. <i>Self referential data structures</i> 9. <i>Distributed version control systems</i> 10. <i>Centralized version control systems</i>

DETAILED SYLLABUS AND COURSE SCHEDULE

ACADEMIC HOLIDAYS INCLUDED

				LECTURE
week	Topic	Compulsory reading; chapter number	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	Introductory lesson, "Hello world" program, functions and variables	1, 2
2.	Basic data types	3		
3.	Solving tasks	4		
4.	Recursion	5		
5.	More problems to solve...	6		
6.	Programs in several files	7		
7.	Consultation before the first written examination			
8.	Compound types	8		
9.	Fall break			
10.	Data types made from compound data types	9		
11.	Handling of text files	10		
12.	Parameters of function main	11		
13.	Self referential data structures	12		
14.	Consultation before the second written examination			
15.	Version control	13		

				PRACTICE, LABORATORY PRACTICE
week	Topic	Compulsory reading; chapter number	Required tasks (assignments, tests, etc.)	Completion date, due date
1.	Introductory practice, "Hello world" program, functions and variables	1, 2		
2.	Basic data types	3		
3.	Solving tasks	4		
4.	Recursion	5		
5.	More problems to solve...	6		
6.	Programs in several files	7		
7.	Consultation before the first written examination		First written examination	
8.	Compound types	8		
9.	Fall break			
10.	Data types made from compound data types	9		

11.	Handling of text files	10		
12.	Parameters of function main	11		
13.	Self referential data structures	12		
14.	Consultation before the second written examination		Second written examination	
15.	Version control	13		

3. ASSESSMENT AND EVALUATION

(Neptun: Instruction/Subjects/Subject Details/Syllabus/Examination and Evaluation System)

ATTENDANCE

In accordance with the Code of Studies and Examinations of the University of Pécs, Article 45 (2) and Annex 9. (Article 3) a student may be refused a grade or qualification in the given full-time course if the number of class absences exceeds 30% of the contact hours stipulated in the course description.

Method for monitoring attendance (e.g.: attendance sheet / online test/ register, etc.)

attendance sheet

ASSESSMENT

Cells of the appropriate type of requirement is to be filled out (course-units resulting in mid-term grade or examination). Cells of the other type can be deleted.

Course resulting in mid-term grade (PTE TVSz 40§(3))

Mid-term assessments, performance evaluation and their ratio in the final grade (The samples in the table to be deleted.)

	Type	Assessment	Ratio in the final grade
Test 1		max 100 points	50 %
Test 2		max 100 points	50 %

Opportunity and procedure for re-takes (PTE TVSz 47§(4))

The specific regulations for improving grades and resitting tests must be read and applied according to the general Code of Studies and Examinations. E.g.: all tests and assessment tasks can be repeated/improved at least once every semester, and the tests and home assignments can be repeated/improved at least once in the first two weeks of the examination period.

Students whose midyear grade is at least 2 have the opportunity to improve it. A grade can be made better by demonstrating of a solution of a task based on the student's own idea. In a case like this the original grade can be incremented by maximum one.

In the case of having a performance evaluated on the closed range of 30 – 40%, the student can write a test to improve / correct his / her evaluation. In a case like this the test is about the material of the whole semester. The final grade is calculated according to the following expression:

$$\text{final grade} = ((\text{test1} + \text{test2}) / 2 + \text{corrective}) / 2$$

Each test which has not been written during the semester counts with 0 value in the expression above.

Grade calculation as a percentage

based on the aggregate performance according to the following table

Course grade	Performance in %
excellent (5)	85 % ...
good (4)	70 % ... 85 %
satisfactory (3)	55 % ... 70 %
pass (2)	40 % ... 55 %
fail (1)	below 40 %

The lower limit given at each grade belongs to that grade.

4. SPECIFIED LITERATURE

In order of relevance. (In Neptun ES: Instruction/Subject/Subject details/Syllabus/Literature)

COMPULSORY READING AND AVAILABILITY

Dr. Levente Szabó: Introduction to programming (Teams)

RECOMMENDED LITERATURE AND AVAILABILITY