Study programmes: Bachelor studies - Mathematics

Course name: RM01 - Programming 1

Lecturers: Gordana Pavlović-Lažetić, Filip Marić, Milena Vujošević-Janičić, Mladen Nikolić, Jovana Kovačević and other lecturers of the Department of Computer science and informatics

Status: Compulsory

ECTS: 6

Attendance prerequisites: No prerequisites

Course aims: Acquiring general and specific knowledge about programming and procedural programming languages.

Course outcome: After the course, a student has adopted basic concepts of procedural programming such as data types, control structures, functions, arrays as well as mechanisms of running, testing and debugging a programme. He also acquired basic knowledge about historical and social context of informatics and computer science

Course content:

Computer science and programming;
Computer systems;
Alphabet, word, language, language processors;
Basic programming constructions of a procedural programming language; Data types and expressions;
Simple input/output;
Conditional and iterative control structures;
Function and parameter transfer; structural decomposition; modularity;
Organization of source and executable programme;
Development of algorithms; recursion; implementation of recursion;
Basic data structures: arrays, records, strings;
Simple algorithms on numbers, strings, arrays, records;
Programme testing and debugging;

Literature:

1. B.Kernighan, D.Ritchie: The C Programming Language, Prentice Hall, 1988. (Programski Jezik C, Savremena administracija, ISBN 86-387-0128-4)
2. G.Pavlović-Lažetić: Programming 1, script, Faculty of Mathematics, 2013.
3. F.Marić, P.Janičić: Basic programming through programming language C, e-script, Faculty of Mathematics, 2014.
(lecturer may opt for other suitable current literature)

Number of hours: 5	**Lectures: 2**	**Tutorials: 2**	**Laboratory: 1**	**Research: -**

Teaching and learning methods: Frontal, group, individual and practical.

Assessment (maximal 100 points)

Course assignments	**points**	**Final exam**	**points**
Lectures	20	Written exam	-
Exercises / Tutorials	20	Oral exam	-
Colloquia	--	Written-oral exam	60
Essay / Project	-		