DESCRIPTION OF STUDY MODULE[*]

Study programme	**Applied Informatics and Programming**		

Study module	**PROGRAMMING C/C++**	Credits in total	6

Learning outcomes
− Student knows data types and data structures and is able to choose the right data types for different tasks.   − Student knows syntax of C/C++ programing language and is able to write proper algorithms.   − Student knows and can apply conditional sentences, cycles, functions, arrays, pointers for application development.   − Understand how programs is executed, how data are stored in operational memory and hard drive.   − Is able to design, implement and analyze software programs designed for various typical and non-typical tasks.
Aims of study module
The module is intended to provide students with a systematic fundamental knowledge about programming principles, the C/C++ programming languages, control structures and data types and to equip them with practical experience with applied programming in a typical modern programming environment.
Annotation of a study module
The module presents classical programming principles, explains control and data structures for programming languages and trains the students to use them in practical programming and problem solving exercises. During the laboratory work students apply theoretical knowledge and develop practical skills working with the C/C++ programming languages.
Topics of the subject
1. Programming languages history   2. C/C++ programming language syntax, operators, variables   3. Usage of libraries   4. Conditional sentences   5. Cycle „for"   6. Conditional cycles   7. Functions   8. Recursive functions   9. Working with files   10. Arrays   11. Multidimensional arrays   12. Data structures   13. Pointers
Procedure for assessment of knowledge and competences
Ten grade and gathered evaluation system is applied. The semester's individual work tasks are evaluated by grades; the final grade is given during the examination session while multiplying particular grades by the lever coefficient and summing the products.
Main literature
1. Blonskis J. , Bukšnaitis V., Jusas V., Marcinkevičius R., Misevičius A., Turskienė S. (2008). Programavimo kalba C++ Smaltija.   2. Belevičius R., Valentinavičius S. (2016). Programavimas C++. Vadovėlis. Technika.   3. Grigas, G. V.: Žuvėdra, (2007). Duomenų tipai. 264 p.

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[*] Short form