



Course title: C++ Programming
Department: Department of Computer Science
Erasmus subject code: F32-C++
Number of contact hours: 45 hours
Course duration: 1 semester
ETCS credits: 6

Course description: The course covers the basics and also more advanced topics of C++ programming language. No prior knowledge about C++ is required. The students learn about the structure of the projects created in C++, the organization of the source files, the compilation and linking processes by using different tools. The course follows the standard C++ without focusing on tools of any specific vendor, however Microsoft Visual Studio is used by students during the laboratories. The students learn the basics of C++ such as loops, flow control, conditional statements, arrays, pointers, etc.. More advanced topics cover memory management, object oriented programming, operator overloading, I/O operations and an introduction to generic programming and Standard Template Library (STL). After the theoretical introduction during the lecture, the students analyse the example programs during the laboratories. They are also required to prepare several projects with an increasing level of difficulty.

Literature:

1. Bjarne Stroustrup, The C++ Programming Language,
2. Bruce Eckel, Thinking in C++: Introduction to Standard C++, Prentice Hall;
3. Matthew H. Austern, Generic Programming and the STL: Using and Extending the C++ Standard Template Library, Addison-Wesley Professional Computing Series
4. Ray Lischner, Exploring C++ 11, Apress

Course type: Lectures and computer laboratory

Assessment method: Projects and final test

Prerequisites: Basic programming knowledge in any language, basic computer skills

Primary target group: 3rd year Information Sciences / Physics students

Lecturer: Michał Bereta, PhD Eng.

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Deadline for application: 15th of January