ECCC SYLLABUS

MODULE: **CS M1** PROGRAMMING
LEVEL: BASICS (**A**)

COMPETENCE GROPUP	COMPETENCE WITHIN ECCC STANDRADS
1. Basics programming terminology	1.1. The concepts of information connected with programming process: compilation and interpretation of source code, source files and executables. 1.2. Programming languages.
2. Positional numbers system	2.1. Representation of natural numbers in the binary numeral system. 2.2. Conversion of numbers written in binary to decimal and vice versa. 2.3. Activities on numbers stored in binary addition, subtraction and multiplication of binary numbers. 2.4. Representation of natural numbers in hexadecimal counting system: conversion of numbers between the decimal, hex and binary.
3. Algorithms writing ways	3.1. Symbols used in flow charts. 3.2. Operators: arithmetic, and logical relationships, arithmetic and logical expressions. 3.3. Writing algorithms in the form of a flowchart. 3.4. Writing algorithms in the form of pseudo-code and the list of steps.
4. Units of information and data types	4.1. The use of binary prefixes, memory units, conversion between multiples of the memory units. 4.2. Types of data used in computing: simple types and structural.
5. Basics counting and operating on texts algorithms	5.1. Exploring the properties of algorithms and natural integers in Pascal. 5.2. Iterative algorithms in Pascal. 5.3. Algorithms that operate on text in Pascal.

Preferred development environment for the realization of the basic-level tasks:

- Laboratorium Informatyki ELI 2.0 (Edukacja Polska S.A. http://www.elboxedu.pl)
- Free Pascal 2.x.x (http://www.freepascal.org)
- TMT Pascal Lite 3.9 (http://www.frameworkpascal.com)