

## **401112 Programming Fundamentals**

[3 cr., 3, 0] Problem Solving, Problem Solving Methodology: Analysis, Design (Algorithm), Coding (program), Testing, Maintenance, Top Down Algorithm design (Sub algorithm : function), Data Definition Structures: Types, constants, variables, Expressions: Arithmetic, Logical, Control Structures: I/O, Assignment, Sequence, Selection (simple, alternated, and multiple), Repetition (While, do while, for), Parameters definition and passing (function depth look), Record (non uniform set), Array of 1 and 2 dimensions (uniform set), Strings (use of main operations: Concatenate, Left\_N\_char, Right\_N\_Char, Include, Compare, ...), File (use of main operations of a sequential file: open, reset, rewrite, read, write, eof), VC++ environment: Editor, compiler, linker, Run, and debugger, Programming with C++: Translating Algorithm structures into C++ structures