



Successful candidates of the MSc “Statistics in Smart Data” degree will have a solid background in the following statistical, mathematical and IT subjects:

Programing, Algorithms and Data Structures

- Data structure. Abstract types: setting arrays, trees, dictionaries.
- Classic algorithmic patterns: greedy approach, divide and conquer, dynamic programming.
- Writing and compiling a program, debugging programs, input/output using files, use of variables, control structures and loops, exception handling, writing functions, methods, procedures.
- **Languages and statistical software:** Python or R, C++ or Java.
- **Relational database management system:** SQL language, variable type, create a table, update a table, SELECT/DELETE/INSERT INTO queries, SQL scripts.