

Division: *Institute of Natural Sciences and Mathematics, Department of Applied Mathematics and Programming*

Academic programme: *01.03.02 Applied Mathematics and Computer Science, Computer Technology and Software Development*

Programme length: *4 years*

Mode of study: *full-time*

Programme level: *Bachelor's degree*

Language of instruction: *Russian*

Programme description: *The educational programme is focused on training specialists whose professional activities involve the application of fundamental knowledge gained in mathematical sciences and computer technology. It is aimed at using mathematical methods and programming technologies to develop and implement algorithms for solving applied problems. Particular attention in the training of specialists is paid to obtaining the skills of algorithmic design and development of computer programs for solving problems in various fields of human activity based on the application of innovative advances in theoretical and applied mathematics and information technology. Graduates of the educational programme are ready to solve various engineering and manufacturing problems using mathematical methods and programming, are capable of developing effective methods and algorithms for solving problems in natural science, technology, economics and management.*

A key part of the programme is project-based learning. This is a mandatory one-year course in which a team of students solves a realistic problem from the customer, and a tangible and valuable result is obtained at the end, which is defended to the examination committee.

Main programme-specific classes:

- *Fundamentals of IT Technologies*
- *Algorithms and Data Structures*
- *Databases*
- *Fundamentals of Computer Security*
- *Computer Graphics*
- *Machine Learning*
- *Artificial Intelligence and Neural Networks*
- *Programming in C++ Language*
- *Programming in C# Language*

- *Programming in Python Language*
- *Programming in Java Language*
- *C Programming*
- *Web Programming*
- *Programming for Mobile Devices*
- *Parallel Programming*
- *Project Activities*

Programme manager: *Alena A. Zamyshlyeva, Doctor of Sciences (Physics and Mathematics), Professor, Head of the Department of Applied Mathematics and Programming*