

## Summary of discipline Informatics and Programming

### Introduction

The program of the course "Informatics and programming" drawn up in accordance with the educational and vocational training programs for bachelor directly pryladobuduvanya

Academic discipline belongs to the cycle of natural-scientific training

Subject Discipline hardware and computer software, the theory of algorithms and algorithmic programming language

Interdisciplinary connections: higher mathematics, physics, engineering mechanics, modern programming techniques, design elements appliances, devices transformative devices, construction equipment, theory and design of instrumentation.

### 1. The purpose and objectives of the course

#### 1.1. The purpose of discipline.

The aim of the course is to develop students' abilities:

- Selection of optimal computer performance;
- Installation of operating systems;
- Development of algorithms for solving engineering problems;
- Use of modern programming languages ??to implement the solution of engineering problems;
- The use of software packages for solving engineering problems.

#### 1.2. The main objectives of the course.

Requires educational and professional program students after the assimilation of the course must demonstrate the following learning outcomes

knowledge: the computer, the structure and characteristics of operating systems, the basics of algorithmic problems; development of methods algorithms; modern programming languages; modern applied mathematics and office suites.

the ability to: select computers with optimal performance, install operating systems and application software; develop linear, branched and cyclic algorithms and software to implement them using modern algorithmic programming languages; use application package for solving engineering problems and design appropriate documentation.

Experience: choosing computers with optimal performance, install the operating system and application software; development and program implementation of algorithms using modern algorithmic programming languages; use of software packages for solving engineering problems and design appropriate documentation.