

## Summary of discipline Databases

### Introduction

The program of the course Databases

Prepared according to the educational and professional training programs for bachelor

Directly 6.051003 Instrument

Academic discipline belongs to the cycle vocational training component

Subject Discipline relational and object-oriented DBMS

Interdisciplinary connections: higher mathematics, computer science and programming, advanced programming techniques, design elements appliances, devices transformative devices, construction equipment, mining equipment monitoring and diagnosis, 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:

- Creation of database elements appliances;
- Creation of a database of characteristics of elements appliances;
- Selection of elements of devices based on analysis of characteristics created using the database.

#### 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: basic principles of construction of normalized databases; methods of creating interfaces for reference and analytical information from the database; conditions and methods of protection from unauthorized access created database; instruction accompanying documentation to set up the database.

the ability to: obtain the necessary scientific and technical information in preparation for creating a database the appropriate subject area, learning and critical understanding of existing databases to solve such problems, formulate new ideas for creating databases; justify the choice of database management systems and algorithmic programming language tailored to the specific operating conditions; use modern database management systems.

Experience: analysis methods and ways to collect information domain that are required for setting tasks for creating databases, data normalization methods to obtain the integrity of the database; experimental studies main characteristics established framework design supporting documentation to set up the database.