**STATISTICAL METHODS OF DATA PROCESSING**

(course title)

**ANNOTATION**

**TO THE CURRICULUM OF THE DISCIPLINE**

**Specialty 6-05-0612-03 "Information Management Systems"**

**profile** "Information systems and technologies in design and production"

| | The form of higher education | | |
|---|---|---|---|
| | Full-time (full-time) | Correspondence* | Correspondence shortened* |
| Course | 4 | 5 | 4 |
| Semester | 8 | 9 | 7 |
| Lectures, hours | 12 | 2 | 2 |
| Lab exercises, hours | 24 | 6 | 6 |
| Credit, semester | 8 | 9 | 7 |
| Classroom hours in the academic discipline | 36 | 8 | 8 |
| Individual work, hours | 54 | 82 | 82 |
| Total hours in the discipline / credits | 90/3,0 | | |

**1.Course outline**

Acquisition of sufficient knowledge and skills in the field of approaches and methods of processing and analyzing multidimensional deterministic and stochastic data.

**2.Course learning outcomes**

Upon completion of the course, students will be expected to

**know**: existing approaches to the analysis of multidimensional data; properties of vectors and matrices used in multidimensional analysis (eigenvalues, eigenvectors, singular value decomposition); the concept of a multidimensional random variable, a vector of mathematical expectations and a covariance matrix; properties of a multidimensional normal distribution as a theoretical basis for parametric methods;

**be able to:** apply the acquired scientific and theoretical knowledge to solve scientific and practical problems; reasonably choose an analysis method depending on the type of data and the research task;

**to possess a skill:**

use existing mathematical and software for modeling and solving problems related to multidimensional data analysis; possess modern tools for visualizing multidimensional data.

**3. Competencies to be formed**

Apply a multidimensional matrix approach to multidimensional data analysis.

**4. Requirements and forms of current and intermediate attestation**

Defence of laboratory works – current, oral -written, credit – intermediate, oral -written