**"MODELS AND METHODS FOR PROCESSING AND ANALYZING LARGE VOLUMES OF INFORMATION".**

(name of the discipline)

**OUTLINE**

**TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION**

**Specialty** 1-40 80 02 "System analysis, management and information processing" (by branches)
**Professionalization:** Information Control Systems
**II level of higher education (master's degree)**

|  | FORM OF HIGHER EDUCATION |
| --- | --- |
|  | **FULL-TIME (FULL-TIME)** |
| **Course** | **1** |
| **Semester** | **2** |
| **Lectures, hours** | **18** |
| **Laboratory, hours** | **18** |
| **Exam, semester** | **2** |
| **Classroom hours in the educational discipline** | **36** |
| **Self-work, hours** | **72** |
| **Total hours of the discipline / credit units** | **108/3** |

**1 Summary of the contents of the discipline**
Learning the theoretical foundations of big data analysis, including basic elements of statistical programming and intelligent analysis of large data sets.

**2 Learning objectives**
As a result of studying the academic discipline, the student should
**know:**
- basic concepts and principles of big data analysis;
- Basic algorithms of big data analysis and approaches to their creation;
- the problems of analyzing big data sets;
**be able to:**
- use special algorithms for big data analysis;
- apply methods of big data analysis to solve practical problems of managing and processing large amounts of information;
- creatively and effectively use the acquired knowledge in professional activities;
**possess:**
- skills of working on multi-core computing systems;
- tools of software development using Internet resources of statistical programming projects
- Technologies of big data analysis using special environments of statistical programming.

**3. Formable competencies**
UK-1 Apply methods of scientific cognition in research activities, generate and implement innovative ideas, SK-13 Formulate solutions based on the analysis of complex cause-effect relationships.

**4 Requirements and forms of current and intermediate attestation.**
ZIZ, PKU, TA, credit.