

"System analysis and operations research"

(name of the discipline)

OUTLINE

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-53 01 02 Automated Systems of Information Processing

	Form of higher education		
	Full-time (full-time)	Correspondence	Correspondence shortened
Course	2,3	3	2
Semester	4,5	5,6	3,4
Lectures, hours	102	20	20
Laboratory hours	68	16	16
Semester	4,5	5,6	3,4
Classroom hours in the academic discipline	170	38	38
In-class examination (semester hours)		5 (2 hours)	3 (2 hours)
Term paper, semester/ credit units	5	6	4
Independent work, hours	154	286	286
Total hours in the discipline / credit units	324/9		

1. Brief content of the discipline

Mastering the modern methodology of modeling and optimization of solutions arising in various fields of science, technology and economics.

2. Learning objectives

As a result of studying the discipline, the student should

know:

- the problematics of decision making in complex system tasks with different degrees of structuring on the basis of modern methodology of operations research, expert analysis and system analysis;

Scientific toolkit for modeling and optimization of management decisions (methods, techniques, models, problems, algorithms, procedures and software);

Technology of the analysis and optimization of management decisions using prospective means of computer technology;

to be able to:

carry out structuring, formalization and algorithmic procedures in the tasks of modeling and optimization of managerial decisions;

Solve complex system management tasks in conditions of multiple options, multicriteria, uncertainty and risk

use advanced computer technologies to solve complex system tasks of forecasting, planning, diagnosis, design and management;

to master:

methods of formalizing and solving complex management problems under conditions of multivariability, multicriteria, uncertainty and risk;

Skills in applying the methodology of operations research, expert analysis and system analysis modern tools for implementation of decision support systems.

3. Competencies to be formed

UK-1 Master the basics of research activities, search, analysis and synthesis of information, UK-5 Have the skills of self-development and improvement in professional activities, UK-6 Show initiative and adapt to changes in professional activities, BPC-19 Receive, process and analyze information, provide its storage.

4. Requirements and forms of current and intermediate attestation.

ZLR, PCU, TA, coursework, exam.