

"Random processes in information processing systems "

(name of the discipline)

ANNOTATION

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

specialty 7-06-0612-03 system information management

	Form of higher education	
	Full-time	Correspondence
Course	1	1
Semester	1	1
Lectures, hours	16	4
Laboratory hours	16	4
Test, Semester	1	1
Classroom hours in the educational discipline	32	8
Independent work, hours	64	88
Total hours of the discipline / credit units	96/3	

1.Summary of the contents of the study discipline

Formation of specialists, able to efficiently and effectively apply existing information technologies and master new information technologies, forming of students' conception of the role of information technologies in digital economy.

2 Learning objectives

As a result of studying the academic discipline, the student should

know:

- basics of the theory of random processes;
- Markov chains, Markovian, Poisson processes;
- numerical characteristics of random processes.
- traditional methods of analysis of time series, designed mainly to work with real data.

be able to:

- identify the type of random process, determine its characteristics;
- Mathematically correctly apply methods of investigation of random processes;
- apply the analysis of Markov processes to solve problems of mass service theory;
- apply knowledge and skills of time series analysis in the study of economic processes;

have the skill:

- basic analytical techniques of analyzing random processes;
- basic analytical methods of analyzing random processes; -methods of forecasting of time series
- applied program packages used for forecasting and analysis (STATISTICA, EXCEL, R).

3. Competencies to be formed

Compose mathematical models of information flows under conditions of lack of information.

4.Requirements and forms of current and interim certification.

Defence of laboratory works - current attestation, credit - intermediate attestation, oral and writ-ten.