«Discrete Mathematics»

(name of the discipline)

ANNOTATION

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-40 05 01 "Information systems and technologies (by directions)

	Form of higher education		
	Full-time (full-time)	**Correspondence**	**Correspondence shortened**
Course	1	2	2
Semester	2	3	3
Lectures, hours	34	8	8
Laboratory hours	16	4	4
In-class examination		3 (2 ч)	2 (2 ч)
Test, semester	2	3	3
Classroom hours in the educational discipline (including controlled self-study)	50	12	12
Independent work, hours	58	96	96
Total hours of the discipline / credit units	108/3,0		

1.Summary of the contents of the study discipline

The purpose of the study discipline "Discrete Mathematics" is to provide students with basic knowledge of modern discrete and applied mathematics and the formation of the fundamental basis for the successful study of disciplines of the specialty.

2. Course objectives

As a result of the study of the academic discipline the student should

know:

basic concepts of the theory of sets and relations; operations of algebra of logic; criteria of completeness of Boolean function systems; problems of analysis and synthesis of logical circuits; basic methods of combinatorics: methods of recalculation, various graph representations and operations over graphs; ways of finite automata, methods of synthesis and minimization of abstract automata

be able to:

build discrete models of various information processes, apply combinatorics methods when solving problems on counting the number of elements in finite sets, apply various graph representations to solve practical problems.

To master:

basic methods of work with the discrete information and to be able to apply them in professional activity; skills of mathematical modeling by means of discrete devices of information and computational processes and control processes.

3. Formable competences

BPC-3 To use practical skills of formalization and solution of applied problems in the field of info-communication technologies by means of discrete mathematics methods.

4. Requirements and forms of current and intermediate attestation.

ZLR, TA, PCU, credit.