DISCRETE MATHEMATICS

(name of discipline)

OUTLINE

TO THE STUDY PROGRAM OF THE DISCIPLINE

specialty 6-05-0611-01 Information systems and technologies

Information systems and technologies in design and production

	Form of higher education		
	Full-time	Correspondence	Part-time shortened*
Course	1		
Semester	2		
Lectures, hours	16		
Laboratory, hours	16		
Test, Semester	2		
Classroom hours on the study course (including controlled self-study)	32		
Independent work, hours	76		
Total hours of the discipline / credit units	108/		

1. The purpose of the training 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. Expected results of study of the discipline:

The student, who has studied the discipline, 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 logic circuits; basic methods of combinatorics: methods of recalculation; various graph representations and operations over graphs; ways of setting a finite automaton, methods of synthesis and minimization of an abstract automaton.

The student who has studied the discipline should 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.

The student who has studied the discipline should know:

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

3. Competencies to be formed.

Learning of the given discipline should provide formation of the following competences: BPC-3. Formalize and solve applied problems in info-communication technologies using methods of discrete mathematics

4. Requirements and forms of current and intermediate attestation.

Defence of laboratory works, defence of controlled independent work, intermediate progress control, credit.