

**Academic discipline:
" Information theory "**

Code and name of specialty	1-40 01 01 Information Technology Software
Training course	2
Semester of training	4
Number of class hours:	64
Lectures	32
Seminar classes	-
Practical classes	-
Laboratory classes	32
Form of current assessment (credit/differential credit/exam)	exam
Number of credits	3
Competencies to be formed	To apply the basic information theory underpinning modern cryptographic information transformations, steganography and obfuscation to analyse and protect data
Summary of the content of the academic discipline:	
<p>General information about signals. Quantification of information. Sources of discrete and continuous messages. Information characteristics of continuous and discrete communication channels. Information coding during transmission over a discrete channel without interference. Redundant coding of data in information systems. Hamming codes and cyclic codes. Message compression. Data compression and decompression based on statistical methods. Coding as a means of cryptographic closure of information. User identification and authentication. Digital steganography, study of computer steganography method for information protection. Information encoding during transmission over a discrete channel with interference.</p>	