

**Structure and thematic plan of contact and independent work on the discipline (module)**

N	Sections of the discipline / module	Semester	Types and hours of contact work, their labor intensity (in hours)		Individual work
			Lectures, total	Laboratory works, total	
1.	Theme 1: General concepts of scientific methods of investigation. The use of laboratory animals in experimental research.	5	0	4	1
2.	Theme 2: Morphological investigations for clinical diagnosis. Autopsy.	5	2	0	1
3.	Theme 3: Preparation of material for morphological examination: fixation, processing and embedding in paraffin, decalcification.	5	0	4	1
4.	Theme 4: Molecular genetic methods in clinical practice.	5	2	0	1
5.	Theme 5: Preparation of histological slices.	5	0	4	1
6.	Theme 6: Procedures for handling biopsy material. Good clinical practice guidelines for biopsy specimens. Good clinical practice rules.	5	2	0	1
7.	Theme 7: Histological and Histochemical stains.	5	0	4	1
8.	Theme 8: Research methods in Biochemistry. ELISA. Immunoblotting.	5	2	0	1
9.	Theme 9: Fundamentals of immunohistochemistry immunohistochemical and Immunofluorescence reactions and methods of detection of their products.	5	0	4	1

10.	Theme 10: Research methods in Biochemistry. The concept of stem cells.	5	2	0	1
11.	Theme 11: Morphometry. Basics of statistical analysis of morphometric results.	5	0	4	1
12.	Theme 12: Methods of isolation and purification of DNA from cells and tissues.	5	2	0	1
13.	Theme 13: DNA isolation and purification from Prokaryotic and eukaryotic cells.	5	0	4	1
14.	Theme 14: Qualitative and quantitative methods for determining the parameters of isolated DNA.	5	2	0	1
15.	Theme 15: Research work on morphometry and statistical processing of study results.	5	0	0	21
16.	Theme 16: Atomic force microscopy in biomedical research.	5	2	0	1
17.	Theme 17: The formation and development of physiological research methods. The study of bioelectrical phenomena in the body.	5	2	0	1
18.	Theme 18: Determination of DNA parameters by electrophoresis and spectrophotometry.	5	0	4	1
19.	Theme 19: Research methods of the functional state of the nervous system. Assessment of the psychophysiological state of the nervous system.	5	2	0	1
20.	Theme 20: Scanning laser Confocal	5	2	0	1

	microscopy in biomedical Biomedical research.				
21.	Theme 21: EEG recording technique. Spectral analysis.	5	0	4	1
22.	Theme 22: Methods for studying autonomic functions: ECG recording.	5	0	4	1
23.	Theme 23: Method of recording of muscle electrical activity (EMG).	5	0	4	1
24.	Theme 24: Research methods in biochemistry. ELISA. Immunoblotting.	5	0	4	1
25.	Theme 25: Research methods in Biochemistry. The concept of stem cells.	5	0	4	1
26.	Theme 26: Spectrophotometric Biomolecule analysis.	5	0	4	1
27.	Theme 27: Research methods for microorganisms.	5	0	4	1
28.	Theme 28: Sequencing. Atomic force microscopy	5	0	4	1
	TOTAL		22	64	58