Medical and Biological Physics as an Educational Discipline:

- This subgect integrates with such disciplines as medical chemistry, medical biology, etc;

- It s provides the basis for students to study physiology, biostatistics, histology, pathophysiology, radiation medicine, hygiene and ecology, ophthalmology, otorhinolaryngology, etc.

The discipline "Medical and Biological Physics" is divided into 3 modules, which in turn are divided into 9 content modules.

Module 1. Mathematical processing of medical and biological data.

Content modules: Fundamentals of mathematical analysis.

Fundamentals of Probability Theory and Mathematical Statistics.

Module 2. Fundamentals of biophysics.

Content modules:

- Fundamentals of biomechanics, bioacoustics, bioreology and hemodynamics.
- Thermodynamics of biological systems.
- Biophysics of membrane processes.

Module 3. Fundamentals of Medical Physics.

Content modules:

Electrodynamics, its medical application. Fundamentals of medical equipment. Optical methods and their use in biology and medicine. Quantum-mechanical methods of research. Radiation Physics. Basis of dosimetry.

Types of training in accordance with the curriculum are:

a) lectures,

b) practical classes,

c) independent work of students,

d) performance of individual tasks,

e) final control,

e) consultations.

The course of the course "Medical and Biological Physics" is accompanied by practical classes, which, by the methodology of their organization, are seminars and laboratory works.

Laboratory workshop provides students with additional practical skills in the field of medical and biological physics, in particular using modern diagnostic and physiotherapeutic electronics equipment, dosimetric radiation control devices, viscosimetric and optic methods in medicine, etc. In laboratory classes, students are encouraged to record protocols of their studies, where they formulate the purpose of the study, summarize the course of the work, the results of the research and conclusions.

The control of mastering the topic (current control) in practical classes is carried out in accordance with specific goals with the use of input (output) test control, oral questioning and testing of practical skills.

The final control of mastering the modules is carried out on the final control occupations. Assessment of the student's progress in the discipline is rated and displayed on a multi-scale scale, taking into account the assessment of individual modules, and has a definition based on the ECTS system and the scale adopted in Ukraine.