

**Annotation**  
**of the course to the catalog of elective courses**  
**for students of medical faculties**  
**for 2022-2023 academic year.**

<b>4th year</b>	
<b>Course title</b>	<b>Clinical Physiology</b>
<b>Specialty</b>	<b>222 Medicine</b>
<b>Level of education</b>	<b>Second level of education (master's)</b>
<b>Term of study (course)</b>	<b>4th year</b>
<b>Form of education</b>	<b>Full-time education</b>
<b>Department</b>	<b>Y.D. Kirshenblat Department of Physiology</b>
<b>Program implementation team (scientific-pedagogical staff)</b>	<b>Prof. Tkachuk S. Ass.prof. Yasinska O. Ass.prof. Timofsyshuk I. Ass.prof. Povar M. As. Kysylytsia S.</b>
<b>A brief description of the content of the course</b>	<p><b>Purpose and tasks of the course</b>  <b>The purpose</b> of teaching the discipline "Clinical Physiology" is to provide masters of medicine with a significant in-depth theoretical knowledge of cellular mechanisms of a regulatory functions; mechanisms of exploitation of functional reserves and compensatory capabilities of organs and systems in the normal processes of adaptation and in pathology; formation of theoretical basis for differential diagnosis, for choice of adequate tactics and strategies for disease prevention and treatment of patients, as well as preparation for the study of the following medical disciplines and the use of theoretical knowledge in future professional activities.</p> <p><b>The task</b> is a systematic approach to the study of the essence of physiological processes at the cellular level, awareness of the importance of the functioning of universal cellular mechanisms at the level of individual organs, systems and the whole organism; disclosure of physiological mechanisms of interaction of organs and systems in normal and pathology; study of physiological bases of pharmacological correction of body functions; expanding the idea of the importance of studying human physiology for other medical disciplines.</p> <p><b>Learning outcomes:</b>          -. to know the methods of further modern learning; the methods of information analysis and synthesis, algorithms for making informed decisions, the acquisition of modern knowledge.          To have specialized conceptual knowledge acquired in the learning process and use them to solve complex professional tasks and problems; for clear and unambiguous communication of own</p>

conclusions, knowledge and explanations that substantiate them to specialists and non-specialists;

To know the tactics and strategies of communication, laws and ways of communicative behavior for being able to draw a substantiated decision, choose ways and strategies to communicate to ensure effective teamwork.

To be able to assess information about the state of human organs and systems, using knowledge about human body, its organs and systems, based on the results of laboratory and instrumental research, according to certain algorithms.

To be able to identify and register deviation from the norm of physiological functions by drawing a substantiated decision, using preliminary data on the physiological state of human body, physical examination data, knowledge about human body, its organs and systems.

To be able to appoint laboratory and / or instrumental examination of the patient by drawing a substantiated decision, based on known data, according to standard algorithms, using knowledge about human body, its organs and systems, adhering to the relevant ethical and legal norms.

To be able to determine the probable cause of deviation from the norm of physiological functions by drawing a substantiated decision, according to a certain algorithm, using laboratory and instrumental examination of the patient, knowledge about human body, its organs and systems, following relevant ethical and legal norms.

To be able to assess the state of human physiological functions by drawing a substantiated decision and logical analysis, using laboratory and instrumental examination of the patient, knowledge about human body, its organs and systems, adhering to the relevant ethical and legal norms.

To be able to determine the necessary mode of work and rest in the treatment of the disease, in a health care facility, at the patient's home and at the stages of medical evacuation, including in the field, on the basis of a preliminary clinical diagnosis, using knowledge about the human body, its organs and systems, adhering to the relevant ethical and legal norms, by drawing a substantiated decision according to existing algorithms and standard schemes.

To be able to analyze the state of health of a certain contingent on the basis of official data by comparing them with average indicators;

To be able to determine the availability of relationship between the state of the environment and the state of health of a particular contingent on the basis of data about them;

To be able to develop and to implement preventive measures on the basis of data on the relationship between the state of the environment and the state of health of a certain contingent;

To be able to assess the impact of socio-economic and biological determinants on the health of the individual, family, population, in the service area according to standard methods and on the basis of epidemiological and medical-statistical studies.

To demonstrate:  
mastery of moral and ethical principles of attitude to a living human and human body as an object of anatomical and clinical research

	<p>the ability to explain the physiological basis of methods for studying the functions of the body</p> <p>the ability to explain the mechanisms of integrative activity of the organism</p> <p>the ability to analyze the functional parameters of the organism and explain the possibilities of their pharmacological correction in the chosen direction</p> <p>the ability to formulate a conclusion about the state of physiological functions of the organism, its systems and organs</p> <p>the ability to interpret the mechanisms and patterns of functioning of excitable structures of the organism.</p> <p><b>Learning outcomes for course.</b></p> <p>to apply knowledge of general and professional disciplines in professional activities.</p> <p>to use the results of independent search, analysis and synthesis of information from various sources to solve typical problems of professional activity; to use clinical, laboratory and instrumental research data for effective treatment; to determine the influence of factors influencing the vital processes of the human body; to provide home and professional medical care to patients in emergencies and victims in extreme situations; to determine the advantages and disadvantages of drugs of different pharmacological groups, taking into account their pharmacokinetic and pharmacodynamic features.</p>
<p><b>Approximate list of topics for training sessions (practical classes)</b></p>	<ol style="list-style-type: none"> <li>1. The role of cell membranes in regulatory and adaptation processes. Cellular mechanisms of nervous and humoral regulation of functions.</li> <li>2. Clinical-functional interpretation of cardiac and vascular examination methods. Compensatory mechanisms in the circulatory system.</li> <li>3. Physiological mechanisms of hypoxia compensation in norm and pathology. Hemostasis system in norm and pathology. System of immune protection of an organism.</li> <li>4. Clinical and functional interpretation of methods for studying the processes of digestion and metabolism, excretion. The role of the excretory system in the regulation of homeostasis and adaptation in normal and in pathology.</li> <li>5. The human body as a holistic self-regulating system.</li> </ol>
<p><b>Competencies, which formation is contributed by the course</b></p>	<p><i>Integral competence:</i> the ability to solve typical and complex specialized problems and practical problems in a professional activity in the field of health care, or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements.</p> <p><i>common competences:</i></p> <p>GC1 - Ability to abstract thinking, analysis and synthesis, the ability to learn and to be modernly educated..</p> <p>GC2 - Ability to apply knowledge in practical situations.</p> <p>GC3 - Knowing and understanding of the subject sphere and understanding of professional activity.</p> <p>GC5 - Ability to draw a substantiated decision; to work in training detachment; skills of interpersonal cooperation</p>

	<p><i>Special competences:</i></p> <p>SC2 Ability to determine the necessary list of the laboratory and instrumental investigations and estimation of their results</p> <p>SC3 Ability of making provisional and clinical diagnose of a disease</p> <p>SC6 Ability to define principles and character of the diseases treatment</p> <p>SC7 Ability to diagnose urgent conditions</p> <p>SC8 Ability to determine the approach of providing emergency cover</p>
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**The head of Y.D. Kirshenblat Department of Physiology**

**Professor**

**Svitlana Tkachuk**