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| Teacher | Summary | The name of the special course |
| Senior Lecturer  Yaremchuk OM | The special course is designed for medical students . Topics and materials for practical classes are selected in accordance with the program of the discipline " *Modern problems of biophysics* ".  Biophysics is the physics of living systems at all levels of their organization - molecular, membrane, cellular, organ, population, biosphere. The physical properties of biological objects, physical and physicochemical processes that occur in these objects and underlie their functioning are studied .  The purpose of studying the discipline "Modern problems of biophysics" is the formation of students' biophysical thinking, acquainting students with modern problems and the latest advances in medical and biological physics, the prospects of implementing these achievements in practical medicine.  The main objectives of the elective course "Modern problems of biophysics" are  : formation of students' ability to interpret the general physical and biophysical laws that underlie human life;  acquaintance of students with modern achievements, problems and main trends in the field of modern biophysics;  mastering the physical foundations of therapeutic and diagnostic techniques based on modern advances in biophysics.  Achieving these goals will allow medical students to master the physical and biophysical, physical, technical and mathematical knowledge and skills necessary to direct the formation of doctor-professionals, but also to explore other educational theoretical and clinical courses in medical schools During the study of this disciplines students gain theoretical and practical knowledge about biophysical mechanisms and patterns of functioning of living organisms at the cellular and subcellular level, study the biophysical mechanisms of action of external factors on organ systems. Students will deepen their knowledge on a wide range of issues related to cellular metabolism and mechanisms of its regulation, master the methods of studying the structure and functions of individual cells, organs and the body as a whole, get acquainted with the basics of bioenergy.  Students will be able to use the acquired knowledge and skills in their future professional activities and further study in senior courses. They will have basic knowledge of the processes that occur at the molecular-genetic and cellular levels of organization of life of organisms, basic knowledge of biophysical patterns that underlie life and biophysical mechanisms of action of external factors on organ systems. Will be able to apply knowledge and skills in mathematics, physics, chemistry, and other related sciences to solve problems of modern medicine. They will be able to apply modern methods of work in laboratories with appropriate equipment, measuring instruments, laboratory utensils and tools. | " *Modern problems of biophysics* ". |