

Discipline: Human and Animal Physiology

Anotation

Physiology of humans and animals is the science of the functions and mechanisms of vital activity of an integral organism. The purpose of teaching the course "Human and Animal Physiology" is as follows: to acquaint students with the basic concepts of the functions of the body, with the principles of systemic organization, differentiation, integration of body functions; to form students' understanding of the mechanisms of regulation of physiological functions, about the interaction of regulatory systems and mechanisms that maintain the constancy of the internal environment of the body and ensure an adequate response of the body to events in the world around it.

The study of the discipline "Human and Animal Physiology" should help the student in understanding modern problems of biology, in replenishing knowledge about the history and methodology of biology, in mastering the methodological foundations of modern science. The areas of physiology that study individual functions are often distinguished, and therefore they speak of the physiology of blood circulation, physiology of digestion, as special sections of physiological science. The differences in the processes studied by these sections of physiology are due to the morphological features of the studied objects, the differences in their functions, and many other important reasons.

Discipline: Physiology with the basics of anatomy

Annotation

Currently, the role of the pharmacist in the development of the preventive and curative direction of medicine is gaining relevance. The need to introduce the discipline is due to the fact that physiology is the basis for the study of other biological sciences, in particular microbiology, biochemistry, pathology, pharmacology, it is closely related and relies on such previously studied disciplines as chemistry, physics, biology, mathematics. When studying special pharmacological disciplines (pharmacognosy, pharmaceutical chemistry, drug technology) knowledge about the functions of the body is also necessary, since these subjects study the properties, methods of obtaining and using medicinal substances in diseases. Moreover, in modern medicine, a large number of new drugs are used, which are produced in different dosage forms, which largely determine the pharmacological efficacy of a substance. Therefore, a pharmacist must be able to give qualified advice on all issues related to the choice and prescription of a drug to patients, not only to the patient, but also to the doctor.

The main semantic load of the discipline is the development of the basic principles of the activity of organs and systems of the body, on the basis of which students should be able to understand the mechanisms of the pathogenesis of diseases and the action of medicinal substances.

Physiology with the basics of anatomy as a basic biomedical discipline of pharmaceutical universities is aimed at teaching the student to analyze and use the principles and regularities of the vital activity of cells, tissues, organs and the whole human body that provide adaptation, homeostasis of the body and maintaining its health. This goal orients the student to a correct understanding of the material of subsequent biological and medical disciplines - biochemistry, pathology, pharmacology, etc. The objectives of the discipline are to study the types of physiological reactions and processes occurring in the body, research methods and identification of the processes occurring.

***Discipline: Physiology of the Central Nervous System
annotation***

The brain is the most complexly organized matter, each element of which constantly interacts with information coming both from the environment and from the internal environment of the organism. Analysis of this polymodal information is necessary in the adaptation of the organism to constantly changing living conditions, its survival and maintenance of homeostasis. Physiology studies the laws governing these processes. The nervous system, along with the immune and endocrine systems, integrates various tissues and organs into a single whole, therefore knowledge the mechanisms of this influence are of paramount importance for understanding the functioning of the brain. In the course of physiology of the central nervous system, the listed range of problems is considered, and attention is also paid to particular issues related to the functioning of the respiratory system, digestion, and reproduction.

The course "Physiology of the Central Nervous System" is a basic discipline in the study of the physiological foundations of the regulation of body functions. The study of the course aims to provide students with knowledge of the nervous mechanisms that ensure the adaptation of functions to changing environmental conditions, the behavioral interaction of the body with the environment and underlying mental activity.

The objective of the course is to form students' understanding of the relationship of mental phenomena with the peculiarities of the functioning of the central nervous system, about the integration of autonomic, neuroendocrine and central regulations in the implementation of behavior based on the main biological motivations, to consider the nervous structures, neuro-hormonal mechanisms in the regulation of drinking, food, sexual behavior.