

**ANNOTATION**  
**work program of the discipline**  
**"PATHOPHYSIOLOGY, CLINICAL PATHOPHYSIOLOGY"**

The main professional educational program of higher education is a specialty program in the specialty 31.05.01 General medicine, approved on 24.05.2023.

**Full-time form of education**

**Term of mastering the OBOP VO:** 6 years

**Department:** Pathological Physiology

**1. The purpose of the discipline:** the formation of professional competencies and from the standpoint of fundamental systemic natural science knowledge to study general pathological processes, their causes, functional, biochemical and structural mechanisms of development, main manifestations and outcomes, as well as their importance in the formation of nosological forms of diseases; formation of systemic and analytical thinking skills in relation to the etiology and pathogenesis of diseases.

**2. Place of discipline in the structure of MPEP:**

The discipline "Typical pathological processes" refers to the disciplines of Block 1 of the mandatory part of the Federal State Educational Standard of Higher Education in the specialty "General Medicine".

**3. Requirement for the results of mastering the discipline:**

The teaching of this discipline is based on the following types of professional activity:

- ✓ medical;
- ✓ research;
- ✓ organizational and managerial.

The learning process is aimed at the formation and development of competencies:

GPC-5 (etiology and pathogenesis) - is able to assess morphofunctional, physiological conditions and pathophysiological processes in the human body to solve professional problems.

As a result of studying the discipline, the student must:

**Know**

- ✓ basic physical phenomena and patterns underlying the processes taking place in the human body; the impact of physical factors on the body;
- ✓ the chemical and biological essence of the processes occurring in the human body at the molecular and cellular levels;
- ✓ structure and biochemical properties of the main classes of biologically important compounds, the main metabolic pathways of their transformation;
- ✓ the role of cell membranes and their transport systems in the metabolism in the human body;

- ✓ concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of a disease, principles of classification of diseases; basic concepts of general nosology;
- ✓ functional systems of the human body, their regulation and self-regulation when exposed to the external environment in normal conditions and in pathological processes;
- ✓ etiology, pathogenesis, manifestations and outcomes of the most frequent forms of pathology of organs and physiological systems, the principles of their etiological and pathogenetic therapy.

**Be able to**

- ✓ use educational, scientific, popular science literature, the Internet for professional activities;
- ✓ interpret the results of the most common methods of laboratory and functional diagnostics to identify pathological processes;
- ✓ substantiate the nature of the pathological process and its clinical manifestations, the principles of pathogenetic therapy of the most common diseases;
- ✓ independently formulate conclusions based on the stated purpose of the study, the results obtained and the assessment of errors;
- ✓ analyze the issues of general pathology and evaluate modern theoretical concepts and trends in medicine.

**4. The total workload of the course is 9 credit units (324 hours).**

**5. Time and place of mastering the discipline:** 4 and 5 semesters (second and third academic years) at the Department of Pathological Physiology of the Federal State Budgetary Educational Institution of Higher Education NOSMA of the Ministry of Health of Russia.

**6. The main sections of the discipline:**

- ✓ Introduction. Subject, sections and methods of pathophysiology. Basic concepts of general nosology;
- ✓ Pathogenic action of factors of external and internal environment;
- ✓ Hereditary and congenital diseases. Teratogenic action of factors of the working environment;
- ✓ Typical disorders of the body's immunogenic reactivity;
- ✓ Typical disorders of organ-tissue blood circulation and microcirculation;
- ✓ Pathophysiology of inflammation;
- ✓ Pathophysiology of the acute phase response. Fever. Hyper- and hypothermia;
- ✓ Pathophysiology of hypoxia and hyperoxia;
- ✓ Typical forms of metabolic disorders;
- ✓ Typical forms of pathology of the blood system;
- ✓ Typical forms of pathology of the circulatory system;
- ✓ Typical forms of pathology of the gas exchange function of the lungs;

- ✓ Typical forms of digestive disorders in the stomach and intestines. Peptic ulcer disease.
- ✓ Liver failure. Jaundice;
- ✓ Typical forms of kidney pathology;
- ✓ Typical forms of endocrine system pathology;
- ✓ Stress and its significance in pathology.

Head of the department of pathological physiology

Professor

  


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Assistant professor

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