

**THE PLANNED SCHEDULE OF PRACTICAL UNIT BY PATHOPHYSIOLOGY  
on 5 semester 2026 – 2027 of academic year Specialty 31.05.01 General Medicine**

| №                        | Name of the practical lesson                                                                                                                                                                                                                             | Hours | List of study questions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.<br>01.09. –<br>04.09. | Introduction. Pathological physiology as a medical discipline. General nosology. The role of damaging environmental factors in the origin of disease. The effect of altered atmospheric pressure. The damaging effect of mechanical factors on the body. | 2     | 1. Pathological physiology as a science and as a medical discipline. Subject of study, objectives and research methods. The role of pathological physiology in the general system of training a general practitioner.<br>2. The concept of “general nosology”, “general etiology”, “general pathogenesis”.<br>3. Definition of the concept of “disease” Stages and outcomes of the disease.                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                          |                                                                                                                                                                                                                                                          | 1     | 4. The role of damaging environmental factors in the origin of the disease. The influence of changed atmospheric pressure on the body.<br>5. The role of mechanical environmental factors in the occurrence of disease and pathological processes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.<br>07.09. –<br>11.09. | General nosology. General pathogenesis. Damaging effect of radiant energy. Effect of changed ambient temperature. Damaging effect of electric current on the body.                                                                                       | 2     | 1. The concept of "General pathogenesis". "The initial link in pathogenesis", "cause-and-effect relationship in pathogenesis", "leading link" of pathogenesis, "vicious circle" in the pathogenesis of the disease. Definition of the concept of "sanogenesis", its role in the pathogenesis and outcome of diseases.<br>2. Radiant energy, types. Radiation sickness: causes, development mechanisms, forms. Bone marrow form of acute radiation sickness, periods of its development, characterize the blood picture for each of them.<br>3. Sunstroke. Etiology, pathogenesis.<br>4. Definition of the concept "overheating (hyperthermia)". Causes, conditions and mechanisms of overheating development (by stages). Burn disease, causes, mechanisms. Periods of burn disease, their characteristics, consequences. |
|                          |                                                                                                                                                                                                                                                          | 1     | 5. Definition of the concept "hypothermia". Causes, conditions and mechanisms of hypothermia development (by stages). Use of hypothermia in medicine, examples.<br>6. Damaging effect of electric current on the body. Electrical injury, causes, conditions and mechanisms of its development. Imaginary death. Characteristics of the concept, principles of resuscitation.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 3.<br>14.09. –<br>18.09. | Cell damage as a general law of disease development.                                                                                                                                                                                                     | 2     | 1. Levels of damage in diseases.<br>2. Causes of cell damage. Exogenous and endogenous factors.<br>3. Specific mechanisms of cell damage.<br>4. Non-specific mechanisms of cell damage.<br>5. Manifestations of cell damage, consequences. Types of cell death.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                          |                                                                                                                                                                                                                                                          | 1     | 6. Adaptation of cells to damage. Mechanisms of cell adaptation to damage: intracellular and extracellular mechanisms.<br>7. Cell damage during hypoxia. "Vicious circle" in cellular pathology.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 4.<br>21.09. –<br>25.09. | Reactivity of the body. Its role in disease                                                                                                                                                                                                              | 2     | 1. Definition of the concept "reactivity of the organism". Types of reactivity of the organism.<br>2. Mechanisms of individual physiological and pathological reactivity of the organism.<br>3. Factors of individual reactivity of the organism.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                          |                                                                                                                                                                                                                                                          | 1     | 4. Heredity and pathology. Etiology and pathogenesis of hereditary diseases.<br>5. The role of constitution in pathology.<br>6. The importance of age in the occurrence and development of diseases.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5.<br>28.09. –           | General typical pathological processes. Typical disorders                                                                                                                                                                                                | 2     | 1. Definition of the concept of “disease”, “typical pathological process”, “pathological condition”.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| 02.10.                    | of carbohydrate metabolism.                                                                                                                                     |   | 2. Stages of metabolic disorders.<br>3. Types of carbohydrate metabolism disorders. Hypoglycemia and hyperglycemia. Causes, mechanisms of development, consequences for the body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                           |                                                                                                                                                                 | 1 | 4. The concept of "Diabetes mellitus type I and II". Disorders of fat and protein metabolism in diabetes mellitus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 6.<br>05.10. –<br>09.10.  | General typical pathological processes. Typical disorders of protein and fat metabolism. Disorders of nucleic acid metabolism. Disorders of vitamin metabolism. | 2 | 1. Disruption of protein intake into the body, types, etiology, pathogenesis, manifestations.<br>2. Disruption of transport and digestion of amino acids, etiology, pathogenesis, manifestations.<br>3. Typical forms of protein content disorders in blood plasma, etiology, pathogenesis, manifestations, principles of therapy.<br>4. Disorders of nucleic acid metabolism, types, etiology, pathogenesis, manifestations, principles of therapy.<br>5. The main causes, mechanisms of development, manifestations, consequences of various types of lipid metabolism disorders.<br>6. Types, causes, mechanisms of development of obesity and the significance of its development for the body.<br>7. Exhaustion and cachexia – types, causes, mechanisms of development, manifestations, consequences for the body. |
|                           |                                                                                                                                                                 | 1 | 8. Dyslipoproteinemia. Etiology, types, development mechanisms. Causes, development mechanism, possible consequences and outcomes of atherosclerosis.<br>9. Vitamin metabolism disorders. Causes, development mechanisms, consequences for the body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 7.<br>12.10. –<br>16.10.  | Typical water-salt metabolism disorders. Acid-base metabolism disorders.                                                                                        | 2 | 1. Types of water-salt metabolism disorders (dyshidria).<br>2. Hypohydration. Types, causes, mechanisms of development, consequences.<br>3. Hyperhydration. Types, causes, mechanisms of development, consequences.<br>4. "Edema". Definitions of the concept, types, causes, development mechanisms. The role of Starling's teaching in understanding the mechanisms of edema development.<br>5. Classification of edema by pathogenesis.                                                                                                                                                                                                                                                                                                                                                                               |
|                           |                                                                                                                                                                 | 1 | 6. Types of acid-base metabolism disorders.<br>7. Respiratory and metabolic acidosis. Causes, mechanisms of development, consequences.<br>8. Respiratory and metabolic alkalosis. Causes, mechanisms of development, consequences.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 8.<br>19.10. –<br>23.10.  | Colloquium №1.                                                                                                                                                  | 2 | 1. Colloquium №1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                           |                                                                                                                                                                 | 1 | 1. Colloquium №1 on issues of the 1st section "General nosology" and the second section "General typical pathological processes"                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 9.<br>26.10. –<br>30.10.  | General typical pathological processes. Changes in regional blood circulation and microcirculation. Thrombosis. Embolism.                                       | 2 | 1. Arterial and venous hyperemia. Etiology, pathogenesis, signs, consequences.<br>2. Ischemia, Etiology, pathogenesis, signs, consequences for the body.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                           |                                                                                                                                                                 | 1 | 1. Thrombosis definition of the concept. Etiology, pathogenesis, stages of thrombus formation. Types of thrombi, outcomes, consequences.<br>2. Embolism, definitions of the concept. Etiology, pathogenesis, types, consequences                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 10.<br>02.11. –<br>06.11. | Inflammation. Local and general inflammation. Biological significance. Chronic inflammation. Acute phase response. Fever.                                       | 2 | 1. Inflammation. Definition of the concept. Biological significance of acute inflammation.<br>2. Causes and mechanisms of development of acute inflammation.<br>3. Stages, outcomes, principles of therapy of acute inflammation.<br>4. Local clinical signs, the mechanism of their development and                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|                           |                                                         |   | general changes in the body during acute inflammation.<br>5. Chronic inflammation, types, etiology, pathogenesis.<br>Difference between acute and chronic inflammation.<br>Consequence of chronic inflammation.                                                                                                                                        |
|                           |                                                         | 1 | 6. Acute phase response, definition, signs, mediators, significance.<br>7. Fever as part of the acute phase response. Etiology, pathogenesis, stages, biological significance. Similarities and differences between fever and overheating.                                                                                                             |
| 11.<br>09.11. –<br>13.11. | Tumor process.                                          | 2 | 1. Tumor process, definition of the concept.<br>2. Etiology of the tumor process, types of carcinogens.<br>3. Pathogenesis of the tumor process. The concepts of "proto-oncogenes", "oncogenes". Mechanisms of carcinogenesis. Stages.                                                                                                                 |
|                           |                                                         | 1 | 1. Types of tumors. Atypisms of the tumor process.<br>2. Antineoplastic resistance of the organism, types, mechanisms.                                                                                                                                                                                                                                 |
| 12.<br>16.11. –<br>20.11. | Extreme conditions. General adaptation syndrome.        | 2 | 1. The concept of "Extreme conditions".<br>2. Types of extreme conditions. Shock, collapse, coma. Causes, development mechanisms, consequences.                                                                                                                                                                                                        |
|                           |                                                         | 1 | 3. General reactions of the body to damage. Stress, causes, mechanisms of development. Consequences.                                                                                                                                                                                                                                                   |
| 13.<br>23.11. –<br>27.11. | Typical disorders of immunological reactivity. Allergy. | 2 | 1. Types of IBS violations.<br>2. Immunopathological conditions. Types.<br>3. Primary immunodeficiencies. Hereditary and congenital.<br>4. Secondary (acquired) immunodeficiencies and immunodepressive conditions. Acquired immunodeficiency syndrome (AIDS).<br>5. Allergy definitions of the concept. Classifications by etiology and pathogenesis. |
|                           |                                                         | 1 | 6. 4 types of allergic reactions according to the classification of Gell, Coombs. Causes, mechanisms of development by stages. Manifestations, consequences.                                                                                                                                                                                           |
| 14.<br>30.11. –<br>04.12. | Colloquium №2.                                          | 2 | 1. Colloquium №2.                                                                                                                                                                                                                                                                                                                                      |
|                           |                                                         | 1 | 1. Colloquium №2 on issues of the 2nd section “General typical pathological processes”.                                                                                                                                                                                                                                                                |

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