UNIVERSITY OF BANJA LUKA

FACULTY OF MEDICINE

Department of Pathological Physiology

School years	Subject		Study program	Study cycle	Year of study	Semester	No of student	No of practice gro
2026/27.	PATHOPHYSIOLOGY		MEDICINE	INTEGRAL	Third	V	?	?

LECTURE PLAN AND SCHEDULE

Week	No lecture	Thematic unit	Day	Date	Time	Venue		Lecturer
I	П1	Introduction to pathophysiology	Monday	12.10.2026.	09:30 - 11:00	Blue hall	2	Prof.dr M.Vujnić
II	П2	Physical and chemical etiological factors	Monday	19.10.2026.	09:30 - 11:00	Blue hall	2	Prof. dr M. Vujnić
III	П3	Hereditary etiological factors; Enzymopathies	Monday	26.10.2026.	09:30 - 11:00	Blue hall	2	Assist. prof. T. Milivojac
IV	П4	Inflammatory reaction and infection	Monday	02.11.2026.	09:30 - 11:00	Blue hall	2	Prof. dr D. Golić
V	П5	Immune system disorders	Monday	09.11.2026.	09:30 - 11:00	Blue hall	2	Assist. prof. T. Milivojac
VI	П6	Water and sodium metabolism disorders	Monday	16.11.2026.	09:30 - 11:00	Blue hall	2	Prof. dr D. Golić
VII	П7	Electrolyte and acide-base balance disorders	Monday	23.11. 2026.	09:30 - 11:00	Blue hall	2	Prof. dr D. Golić
VIII	П8	Carbohydrate metabolism disorders; Diabetes mellitus	Monday	30.11.2026.	09:30 - 11:00	Blue hall	2	Prof. dr D. Golić
IX	П9	Lipid metabolism disorders; Atherosclerosis, Metabolic sy.	Monday	07.12.2026.	09:30 - 11:00	Blue hall	2	Prof. dr M. Vujnić

X	П10	Protein metabolism disorders	Monday	14.12.2026.	09:30 - 11:00	Blue hall	2	Prof. dr M. Vujnić
XI	П11	Pathophysiology aspects of malignant tumors	Monday	21.12.2026.	09:30 - 11:00	Blue hall	2	Prof. dr M. Vujnić
XII	П12	Pathophsiology of aging	Monday	28.12.2026.	09:30 - 11:00	Blue hall	2	Assist. prof. A. Prtina
XIII	П13	Local circulation disorders; Shock	Monday	04.01.2027.	09:30 - 11:00	Blue hall	2	Prof. dr D. Golić
XIV	П14	Pathophysiology of endocrine system I	Monday	11.01.2027.	09:30 - 11:00	Blue hall	2	Prof. dr M.Vujnić
XV	П15	Pathophysiology of endocrine system II; Test exam.	Monday	In agreement with students	09:30 - 11:00	Blue hall	2	Prof. dr M.Vujnić

EXERCISE PLAN

Weeks	No	Thematic unit
I	E1	Introductory exercise Functional tests and additional diagnostic methods
II	E2	Action of physical etiological factors, mechanisms of thermoregulation, hypo and hyperthermic states. Presentation of experimental model and clinical forms. Artificial hypothermia. Case reports
III	E3	Local circulation disorders, arterial and venous hyperemia, thrombosis and embolism. Case reports
IV	E4	Pathophysiology of inflammation, local signs, mediators of inflammation. Acute phase response. Fever, stages and types of fever. Analysis of temperature curves. Non-specific markers of inflammation, methods of determination and interpretation of findings. Determination of RBC sedimentation. Case reports
V	E5	Allergic reaction, types of allergic reaction, anaphylactic shock and serum disease Case reports

VI	E6	Protein metabolism disorders. Hypo and hyperproteinemias, dysproteinemias, paraproteinemias. Functional testing of protein metabolism disorders. Biuretic determination of total serum proteins, electrophoresis of serum proteins and immunochemical determination proteins of diagnostic significane. Case reports
VII	E7	Carbohydrate metabolism disorders. Hypo and hyperglicemic states. Diabetes mellitus. Methods of functionale testing of CH metabolism. Interpretation of the findings. Analysis of diabetic complications. Case reports
VIII	E8	Lipid metabolism disorders. Hypo and hyperlipoproteinemia. Dyslipoproteinemia. Fredrickson classification of hyperlipidemias. Analysis of primary and secondary hyperlipoproteinemias. Pathophysiology of atherosclerosis.
IX	E9	Pathophysiology of obesity and metabolic syndrome. Analysis of adipocytokines. Methods of assessing body composition and body fat distribution: BMI, waist circumference, waist to hip ratio.
X	E10	Vitamin metabolism disorders. Clinical implication and significance of liposolubile and hydrosolubile vitamins deficiency. Functional testing. Case reports
XI	E11	Disorders of the metabolism of essential oligoelements and the clinical consequences of their deficiency in the body. Getting to know the methods of testing trace elements and interpretation of pathological findings
XII	E12	Enzymopathies. Familiarization with the methods of functional testing and presentation of cases of the most common enzymopathies
XIII	E13	Disorders of water and electrolyte metabolism. Methods of functional testing water balance, electrolytes, osmolarity. Interpretation of findings. Case reports

XIV	E14	Acide-base balance disorders and test methods. Metabolic acidosis and alkalosis. Respiratory acidosis and alkalosis. Methods of determination and interpretation of AB status findings and gas analyses. Case reports
XV	E15	Endocrine system disorders. Functional testing of hypo and hyperfunction of different endocrinal glands. Analysis of nonglandular endocrinopathies. Interpretation of findings. Case reports

Prof. dr sc. med. Milorad Vujnić