

UNIVERSITY OF SPLIT  
SCHOOL OF MEDICINE  
DEPARTMENT OF PATHOPHYSIOLOGY  
MEDICAL STUDIES IN ENGLISH, 3rd YEAR

**PATHOPHYSIOLOGY – MEDICINE (2025./26.)**

**COURSE DESCRIPTION AND OBJECTIVES:**

This course provides an in-depth study of human pathological processes and their effects on homeostasis. Emphasis is on interrelationships among organ systems in deviation from homeostasis. Students examine the phenomena that produce alterations in human physiologic function and the resulting response.

Upon completion of the course, students will understand pathophysiological changes, including how pathological processes are manifested, progress in the body with primary and secondary effects.

**CLASS ATTENDANCE AND ACTIVITY:**

Students are required to attend all forms of teaching and **actively participate** in seminars and exercises, which will be graded (plus or minus). Three awarded activities at seminars and exercises are worth one point at exam.

Absenteeism is monitored through individual records of class attendance. Student may **reasonably** be absent **up to 20%** of the total fund of lectures, seminars and exercises.

**Absences from lectures (>2), seminars (all) and exercises (all) have to be compensated through a colloquium at least 3 days before the exam.**

**OBLIGATORY LITERATURE:**

1. Hammer GD, McPhee SJ. Pathophysiology of Disease: An Introduction to Clinical Medicine 8/E, 2018.
2. Handouts of lectures, seminars and exercises.

**ADDITIONAL LITERATURE:**

1. McCance KL, Huether SE. Pathophysiology - the Biologic Basis for Disease in Adults and Children 8/E, 2018.

**EXAM:**

The exam is composed of the written test and oral exam that equally contribute to the final mark. Written test is consisted of two parts: 75 multiple-choice questions (one answer is correct; 75 points) and one problem-solving case (5 points). To pass the written test it is required to achieve at least 55% of correct answers. Oral exam consists of 5 questions that are pulled by the student from different sets of questions.

**EXAM TERMS:**

1.	17./18.02.2026.
2.	20./21.07.2026.
3.	28.08.2026.
4.	11.09.2026.

**TEACHING STAFF:**

1. Prof. Tina Tičinović Kurir, MD, PhD
2. Prof. Joško Božić, MD, PhD
3. Assoc. Prof. Mladen Krnić, MD, PhD
4. Assist. Prof. Anteo Bradarić, MD, PhD
5. Assist. Prof. Marino Vilović, MD, PhD
6. Marko Kumrić, MD, PhD
7. Josip Vrdoljak, MD, PhD
8. Piero Marin Živković, MD, PhD
9. Josip Anđelo Borovac, MD, PhD
10. Roko Šantić, MD

**I. LECTURES**

LEC.	LECTURE TOPICS	PLACE	TEACHER
L1	Pathophysiology of energy metabolism	B100	Vilović
L2	Pathophysiology of arterial hypertension	A116	Božić
L3	Pathophysiology of immune system and rheumatic diseases	A116	Vilović
L4	Pathophysiology of atherosclerosis and lipid metabolism disorders	MS Teams	Vilović
L5	Review of respiratory pathophysiology	B104	Božić
L6	Pathophysiology of hemodynamic shock	B100	Krnić
L7	Pathophysiology of heart failure	B104	Bradarić
L8	Pathophysiology of diabetes mellitus and disorders of carbohydrate metabolism	B103	Tičinović Kurir
L9	Pathophysiology of endocrine system 1	B104	Tičinović Kurir
L10	Pathophysiology of endocrine system 2	B100	Tičinović Kurir
L11	Endogenous bioactive substances in pathological processes	B104	Božić
L12	Fluid and electrolyte disorders	B100	Božić
L13	Pathophysiology of acid-base disorders	B104	Božić
L14	Pathophysiology of acute and chronic kidney failure	B103	Božić
L15	Integration	A116	Božić

## II. SEMINARS

SEM.	SEMINAR TOPICS	PLACE	TEACHER
S1	Pathophysiology of infection and inflammation	S1 (A530) S2 (B103)	Vilović
S2	Pathophysiology of secondary arterial hypertension	B103	Božić
S3	Pathophysiology of respiratory system	B101	Božić
S4	ECG basics	B103	Kumrić
S5	<i>Problem seminar:</i> Respiratory system disorders	S1 (B104) S2 (B102)	Božić
S6	Pathophysiology of cardiovascular system 1	B102	Kumrić
S7	Pathophysiology of cardiovascular system 2	B102	Kumrić
S8	<i>Problem seminar:</i> Cardiovascular disorders	S1 (B101) S2 (B102)	Kumrić
S9	Pathophysiology of blood 1	B101	Božić
S10	Pathophysiology of blood 2	A104	Šantić
S11	<i>Problem seminar:</i> Blood disorders	A429	Božić
S12	Metabolic disorders	S1 (A429) S2 (B101)	Božić
S13	Pathophysiology of parathyroid gland and calcium	S1 (B103) S2 (A429)	Božić
S14	<i>Problem seminar:</i> Endocrine disorders	A530	Krnić
S15	Pathophysiology of gastrointestinal disorders	A429	Vrdoljak
S16	Pathophysiology of exocrine pancreas	A529	Vrdoljak
S17	Pathophysiology of hepatobiliary disorders	A530	Vilović
S18	<i>Problem seminar:</i> Gastrointestinal and hepatobiliary disorders	A530	Vilović
S19	Pathophysiology of thermoregulation, CRUSH syndrome and magnesium balance	A530	Vilović
S20	Pathophysiology of renal and specific tubular disorders	S1(A530) S2(A104)	Šantić
S21	<i>Problem seminar:</i> Renal disorders	S1 (A430) S2 (A529)	Šantić
S22	Selected topics	S1 (A429) S2 (A116)	Božić

## III. PRACTICALS

PR.	PRACTICALS TOPIC	PLACE	TEACHER
P1	Orthostatic load and ECG in exercise	LCR	Božić/Vilović/Šantić
P2	Basics of ECG analysis	P1,2 (A530) 3,4 (B102) P5,6,7,8 (A530)	Vilović/Vrdoljak
P3	CE - Patients with heart disorders	Clinic	Bradarić/Borovac
P4	ECG – from pathophysiology to practice 1	P1,2,3,4 (B101) P5,6,7,8 (B102)	Kumrić/Božić
P5	ECG – from pathophysiology to practice 2	B101	Kumrić/Božić
P6	CE - Patients with endocrine disorders	Clinic	Krnić

P7	Evidence based medicine and pathophysiology	B102	Kumrić/Božić
P8	CE - Patients with gastrointestinal disorders	Clinic	Živković
P9	Clinical cases and laboratory tests 1	P1,2 (A530) P3,4 (B103) P5,6,7,8 (B102)	Kumrić/Božić/Šantić
P10	Clinical cases and laboratory tests 2	P1,2,7,8 (A529) P3,4,5,6 (A530)	Vilović/Šantić
P11	Acid base and electrolyte disorders - case studies	P1,2,5,6 (B103) P3,4 (A430) P7,8 (A429)	Kumrić/Božić/Vilović
P12	CE – Emergency medicine cases	Clinic	Tičinović Kurir
P13	CE - Patients with renal disorders	Clinic	Tičinović Kurir
P14	Integration	B101	Kumrić/Božić

**LCR-** Laboratory for Cardiometabolic Research, 5th floor; **Clinic**, Department of Internal medicine (Hospital Firule or Križine, details will be provided)

**Important: For all Clinical exercises students must have a white coat!**

**Contacts:**

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For all schedule changes and additional announcements students are obligate to follow official web pages of Department of Pathophysiology at:

<http://www.mefst.unist.hr/education/courses/pathophysiology>