

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

**PATHOPHYSIOLOGY – MEDICINE (2024./25.)**

**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 7/E, 2014. (selected chapters), or 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.	18./19.02.2025.
2.	21.07.2025.
3.	03.09.2025.
4.	17.09.2025.

**TEACHING STAFF:**

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

**I. LECTURES**

LEC.	LECTURE TOPICS	PLACE	TEACHER
L1	Pathophysiology of energy metabolism	MS Teams	Vilović
L2	Pathophysiology of immune system and rheumatic diseases	MS Teams	Vilović
L3	Pathophysiology of atherosclerosis and lipid metabolism disorders	MS Teams	Vilović
L4	Pathophysiology of arterial hypertension	B100	Božić
L5	Review of respiratory pathophysiology	B102	Božić
L6	Pathophysiology of hemodynamic shock	A116	Bradarić
L7	Pathophysiology of heart failure	A116	Bradarić
L8	Pathophysiology of diabetes mellitus and disorders of carbohydrate metabolism	B104	Tičinović Kurir
L9	Pathophysiology of endocrine system 1	B104	Tičinović Kurir
L10	Pathophysiology of endocrine system 2	B104	Tičinović Kurir
L11	Endogenous bioactive substances in pathological processes	B103	Božić
L12	Fluid and electrolyte disorders	A116	Božić
L13	Pathophysiology of acid-base disorders	A116	Božić
L14	Pathophysiology of acute and chronic kidney failure	A116	Božić
L15	Integration	B104	Božić

## II. SEMINARS

SEM.	SEMINAR TOPICS	PLACE	TEACHER
S1	Pathophysiology of infection and inflammation	MS Teams	Vilović
S2	Pathophysiology of secondary arterial hypertension	S1 (A116) S2 (A117)	Božić
S3	ECG basics	S1 (A116) S2 (B104)	Kumrić
S4	Pathophysiology of respiratory system	S1 (A529) S2 (B101)	Božić
S5	<i>Problem seminar:</i> Respiratory system disorders	S1 (B100) S2 (A116)	Božić
S6	Pathophysiology of cardiovascular system 1	B104	Kumrić
S7	Pathophysiology of cardiovascular system 2	B102	Kumrić
S8	<i>Problem seminar:</i> Cardiovascular disorders	S1 (B104) S2 (A116)	Kumrić
S9	Pathophysiology of blood 1	S1 (A101) S2 (B102)	Božić
S10	Pathophysiology of blood 2	B104	Kumrić
S11	<i>Problem seminar:</i> Blood disorders	B104	Božić
S12	Metabolic disorders	B103	Božić
S13	Pathophysiology of parathyroid gland and calcium	B104	Božić
S14	<i>Problem seminar:</i> Endocrine disorders	A529	Vilović
S15	Pathophysiology of gastrointestinal disorders	S1 (A530) S2 (A429)	Vrdoljak
S16	Pathophysiology of exocrine pancreas	A116	Vrdoljak
S17	Pathophysiology of hepatobiliary disorders	A429	Vilović
S18	<i>Problem seminar:</i> Gastrointestinal and hepatobiliary disorders	A529	Vilović
S19	Pathophysiology of thermoregulation, CRUSH syndrome and magnesium balance	A530	Vilović
S20	Pathophysiology of renal and specific tubular disorders	A117	Vilović
S21	<i>Problem seminar:</i> Renal disorders	B104	Božić
S22	Selected topics	S1 (B104) S2 (Križine 6 <sup>th</sup> floor)	Božić

**Križine 6<sup>th</sup> floor** – University Hospital Split, Križine – Seminar Hall on 6<sup>th</sup> floor

## III. PRACTICALS

PR.	PRACTICALS TOPIC	PLACE	TEACHER
P1	Orthostatic load and ECG in exercise	LCR	Kumrić/Božić/Vilović
P2	Basics of ECG analysis	P1,2 (A102) P3,4 (A530) P5,6 (B101) P7,8 (A116)	Vilović/Vrdoljak
P3	CE - Patients with heart disorders	Clinic	Borovac
P4	ECG – from pathophysiology to practice 1	P1,2,3,4 (B104) P5,6 (B102) P7,8 (A116)	Kumrić/Božić/Vilović

P5	ECG – from pathophysiology to practice 2	B102	Kumrić/Božić/Vilović
P6	CE - Patients with endocrine disorders	Clinic	Tičinović Kurir
P7	Evidence based medicine and pathophysiology	P1,2,3,4,7,8 (B104) P5,6 (B102)	Kumrić/Božić/Vilović
P8	CE - Patients with gastrointestinal disorders	Clinic	Živković
P9	Clinical cases and laboratory tests 1	B104	Kumrić/Božić/Vilović
P10	Clinical cases and laboratory tests 2	P1,2 (A429) P3,4 (A101) P5,6,7,8 (A529)	Vilović/Vrdoljak
P11	Acid base and electrolyte disorders - case studies	P1,2,5,6,7,8 (B104) P3,4 (B103)	Kumrić/Božić/Vilović
P12	CE – Emergency medicine cases	Clinic	Tičinović Kurir
P13	CE - Patients with renal disorders	Clinic	Tičinović Kurir
P14	Integration	P1,2,5,6 (A116) P3,4,7,8 (B104)	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>