**PATOFIZJOLOGIA**

**PATHOPHYSIOLOGY**

**Course/module: PATHOPHYSIOLOGY**

- **Fields of education:** medical sciences, health sciences and physical culture studies
- **Course status:** Compulsory
- **Course group:** A-basic course
- **ECTS code:** 12048-31-A

**Major:** Medicine

- Kierunek lekarski - studia bezspecjalizacjowe

**Educational profile:** Practical

- **Form of study:** Full-time

- **Level of study/Form of education:** Uniform master's degree studies

- **Year/semester:** III/5

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**Course/module syllabus - part A**

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**Course content**

**Lectures**

Pathophysiology of the pain; Intracranial volume/pressure balance disorder; Pathophysiology of nervous system disorders; Pathophysiology of neoplasia; Pathophysiology of kidney diseases; Gastrointestinal tract, liver, biliary tract, and pancreas diseases pathophysiology; Pathophysiology of the pulmonary diseases; Pathophysiology of the cardiovascular diseases; Pathophysiology of the shock; Pathophysiology of the endocrine system diseases. Obesity.

**Classes**

Pathomechanisms discussion by case analysis of virtual patients: Cellular responses to stress and toxic insults, adaptation and death, inflammation, renewal, repair, regeneration; Pathophysiology of the immune system diseases, AIDS; Pathophysiology of the blood cells diseases, spleen and thymus; Pathophysiology of the nervous system diseases; Pathophysiology of esophagus, gastrointestinal tract, Inflammatory Bowel Diseases; Pathophysiology of live, biliary tract, and pancreas diseases; Pathophysiology of the pulmonary disorders, sleep apnoe syndrome; Pathophysiology of the kidney; Pathophysiology of Cardiovascular system; Pathophysiology of the endocrine system diseases.

**Seminar**

Definitions of follows terms: health, disorder, disease, healing; Pathophysiology of the cell degeneration, cell response disorders and skin diseases; Pathophysiology of the environmental and genetic Disorders; Pathophysiology of infancy and childhood diseases; Pathophysiology of the bones, joints and scletal muscle diseases, Pathophysiology of nutritional disorders; Pathophysiology of the fluid – electrolyte and acid-base imbalances; Pathophysiology of the male genital tract, the femal genital tract and the breast diseases; Complexity of the haemodynamics system pathomechanisms in arterial hypertension; Knowledge testing in the form of a multiple choice tests.

**Educational objective**

Study of: a) definition of health, dysfunction, disease and healing, biogenic and abiotic pathogens; b) cell dysfunctions: the mechanisms leading to the degeneration and death, its causes and disorders types, cellular disorders in the defense response to the pathogen in contrast to the aging process; c) the pathophysiology of pain, inflammation, carcinogenesis, deficiency and excess of vitamins and minerals, disorders of water-electrolyte and acid-base balances, eating disorders and cachexia; d) cause - effect relationship between the pathogen causing homeostasis disorders and the impact of the disorders on systemic or local damage, and the disease development; e) genetic, prenatal and environmental pathomechanisms causing disorders and diseases in humans; f) the most common consequences of trauma and shock; g) the pathophysiology of the defense and endocrine systems disorders; h) on the base of the cases studies students acquire the skills between the pathogenesis exploration and functional changes in organism with the clinical signs of disease or the diagnostic results of the virtual patient; i) etiopathogenesis of the most important diseases in the following systems: nervous, gastrointestinal tract, hematopoietic, excretory, respiratory, circulatory, reproductive, skeletal and muscular; j) static and hemodynamic complexity of pathomechanisms with examples: oncogenesis (from neoplasia to cancer) and hypertension (from unknown reason to stroke); k) understanding of the pathophysiology role: in the integration the medical theory and the basic sciences with the practical medical, as pharmacology basis, as the connecting factor between different medical disciplines, requiring continuous clinical and theoretical training.

**Description of learning outcomes for the course in relation to field and major learning outcomes**

- **Codes of learning outcomes in a major area of study:** not applicable

- **Codes of learning outcomes in a major field of study:**
  - **B.W19.**, **B.W20.**, **B.W26.**, **B.W28.**, **B.W30.**, **C.W14.**, **C.W22.**, **C.W27.**, **C.W28.**, **C.W29.**, **C.W32.**, **C.W33.**, **B.U7.**

**Learning outcomes**

**Knowledge**


**Skills**

- **U1** - Student is able to recognize disturbances in the physiological function of the organism in homeostasis disorders and provides for their effects (B.U7.)

**Social competence**

- **K1** - The student understands that knowledge improving in the pathophysiology is necessary to apply the relationship between pathomechanism, symptom and diagnosis of the disease and understands the role of consultation

**Basic literature**


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**Name of the organizational unit offering the course:**

**UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN**

The Faculty of Medical Sciences

**Course/module syllabus - part A**

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**Type of course:** seminar, recitation classes, lecture

**Number of hours per semester/week:**

- Lectures: 2/2
- Classes: 3/2
- Seminar: 2/2

**Teaching forms and methods**

- **Seminar**
  - Overview and discussion of selected issues prepared by the students (W1, U1, K1)

- **Lectures**
  - Lecture - Lectures with presentations (W1, U1, K1)
  - Recitation classes - Presentation of pathophysiology prepared cases of diseases by virtual patients and discussion (W1, U1, K1)

- **Written examination (multiple-choice test)** - The final exam consists of 250 questions grouped in 50 problems with 5 multiple choice "true/false" answers. The final exam is passed with a score of min. 175 points (70%) to receive credit (W1, U1, K1)

- **Written test 1** - Regular checking of knowledge in the form of short tests, 3 multiple-choice test: 125 questions grouped in 25 problems with 5 answers. For credit necessary to obtain min. 87 points (70%) (W1, U1, K1)

- **Oral test 1** - Student presents a problem in the form of prepared computer presentation, discusses prepared case of diseases and respond to questions concerning the pathomechanisms and etiology of the diseases (W1, U1, K1)

**Form and conditions of obtaining credit:**

- **Examination**

- **Number of ECTS points:** 5

**Language of instruction:** Polish/English

**Introductory courses:** anatomy, physiology, histology, immunology, biochemistry

**Preliminary requirements:** Knowledge of basic information is verified during pathology case studies

Kod ECTS: AAABB-CD-E_F

AAA – Subject area code in the ECTS system. BB – major number, C – 1 first-cycle (engineer's degree or bachelor's degree) studies, 2 – second-cycle studies, 3 – uniform master's degree studies, 4 – third-cycle studies, 5 – postgraduate studies D – specialty number, E – course group, F – serial number of the course in the subset.
SUPPLEMENTARY LITERATURE

PATOFIZJOLOGIA

ECTS: 5

PATHOPHYSIOLOGY

The awarded number of ECTS points is composed of:

1. Contact hours with the academic teacher:
   - Participation in seminar: 20,0 h
   - Participation in lectures: 20,0 h
   - Participation in classes: 35,0 h
   \[ \text{TOTAL:} \quad 75,0 \text{ h} \]

2. Student’s independent work:
   - preparation for exam: 30,0 h
   - preparation for test: 10,0 h
   - preparation of cases: 10,0 h
   \[ \text{TOTAL:} \quad 50,0 \text{ h} \]

Practical classes:

- Practical classes: h

1 ECTS point = 25,00h of the average student’s work,

number of ECTS points = 125,00 h / 25,00 h/ECTS = \[ \frac{125,00}{25,00} \] ECTS

on average 5 ECTS

- including the number of ECTS points for contact hours with direct participation of the academic teacher - 3,00 ECTS points (3,00 z 5),
- including the number of ECTS points for hours completed in the form of the student’s independent work - 2,00 ECTS points (2,00 z 5).