

SUBJECT CARD

Faculty of Medicine and Health Sciences

Field of studies: Medicine

Form of studies: Full-time

Degree: long-cycle Master's program

Specializations: No specialization

Academic year: 2023/2024

CARDIOLOGY I	
SUBJECT	Cardiology I
NUMBER OF ECTS POINTS	4
LANGUAGE OF INSTRUCTION	English
TEACHER(S)	prof. KAAFM dr hab. n.med. Piotr Buszman prof. KAAFM dr hab. Aleksander Żurakowski prof. KAAFM dr hab. n.med. Adam Janas dr n.med. Wojciech Fil dr n.med. Katarzyna Czerwińska-Jelonkiewicz dr n. med. Magdalena Konkolewska dr n. med. Bogdan Gorycki dr n. med. Krzysztof Sanetra dr n. med. Bartosz Skwarna dr n. med. Tadeusz Dzielski lek. Eugeniusz Hrycek lek. Mateusz Kachel dr n. med. Jerzy Matysek (Szpital Św. Rafała) dr n. med. Tomasz Sanderek (Centrum Symulacji Medycznej)
PERSON RESPONSIBLE	Professor Assoc. Piotr Buszman, DM, PhD
NUMBER OF HOURS	
LECTURES	20 h
CLASSES	55 h

GENERAL OBJECTIVES	
OBJECTIVE 1	The student will be acquainted with knowledge in the field of prevention, diagnosis, treatment and rehabilitation of cardiovascular diseases.
OBJECTIVE 2	The student will acquire skills in the application of knowledge in the diagnosis and treatment of cardiological patients.
LEARNING OUTCOMES	
MK1	Knowledge: The student presents the principles of interpretation of laboratory tests results and predicted clinical effects therapies used, including patient safety and monitoring of treatment effectiveness.
MK2	Knowledge: The student lists the symptoms of cardiovascular diseases, defines the diagnosis of diseases and methods of diagnosis.

CARDIOLOGY I

MK3	Knowledge: The student distinguishes the degree of severity of symptoms of cardiovascular disease and lists the indications for invasive and conservative treatment.
MS1	Skills: The student conducts an physical and patients history examination and determines appropriate test pattern.
MS2	Skills: The student interprets the results of laboratory and imaging tests in cardiology and identifies the causes deviations.
MS3	Skills: The student selects appropriate methods of principles of cardiac diagnostics adequate to the patient's health (blood pressure measurement, resting and exercise ECG, chest X-ray, spirometry, Holter ECG, Holter BP and others).
MS4	Skills: The student has the ability to document the patient's illness.
MS5	Skills: The student performs resting ECG along with interpretation of test results.
MS6	Skills: The student can perform electrical cardioversion and cardiac defibrillation.
MS7	Skills: The student performs differential diagnosis of heart disease.
MS8	Skills: The student can propose a rehabilitation plan.

INTRODUCTORY REQUIREMENTS

- [1] The student has knowledge of the genetic, molecular, morphological and pathophysiological background of cardiovascular diseases as well as epidemiology, diagnostic technologies and pharmacotherapy in medicine;
- [2] The student has knowledge and skills in the field of disease propaedeutic, conversation with the patient, conducting physical examination and the use of diagnostic methods adequate to the patient's state of health;
- [3] The student has knowledge and skills in the interpretation of laboratory and imaging tests in medicine.

COURSE PROGRAM

DETAILED DESCRIPTION OF THE TOPIC BLOCKS

LECTURE 1	History and physical examination in cardiovascular diseases. Fundamentals of ECG and cardiac ultrasound (USG). (5h)
LECTURE 2	Ischemic heart disease and acute coronary syndromes, separation, symptoms, laboratory diagnostics, cardiological treatment, imaging diagnostics, surgical treatment. (5h)
LECTURE 3	Arrhythmias, etiology, laboratory diagnostics and pharmacological treatment. Indications for invasive treatment. Rehabilitation in heart disease. (5h)
LECTURE 4	Congenital and acquired heart defects. Diagnostics, imaging, treatment. (5h)

CARDIOLOGY I	
CLASS 1	History and physical examination of the patient. Specificity of physical and subjective examination in cardiovascular diseases. Patient Examination. (St. Rafał's Hospital - dr Matysek). (3h)
CLASS 2	Selected symptoms: chest pain, palpitations, edema, shortness of breath. Selected signs. Basic laboratory tests and non-invasive diagnostic tests (RR measurement, resting ECG, X-ray, Holter EKG, Holter RR, echo of the heart). Patient examination, writing a medical history. (St. Rafał's Hospital - dr Matysek). (3h)
CLASS 3	Signs and symptoms in selected disease entities (heart failure, hypertension, coronary artery disease including ACS, heart defects). Elements of differential diagnosis, planning of diagnostic tests. Examination of patients, writing a medical history (St. Rafał's Hospital - dr Matysek). (3h)
CLASS 4	Ischemic heart disease . Chronic coronary syndromes.. Symptoms, diagnostics, treatment methods. ECG interpretation, basics of heart ultrasonography. Prevention, invasive and conservative treatment. AHP. (6h)
CLASS 5	Acute coronary syndromes. Diagnostics (laboratory, ECG, imaging). Pharmacological and invasive treatment. AHP (6h)
CLASS 6	Heart arrhythmias. ECG diagnostics, treatment. AHP (6h)
CLASS 7	Acquired valvular disease. Diagnosis and treatment. AHP (6h)
CLASS 8	Pulmonary embolism - pathogenesis, diagnosis and treatment. AHP (6h)
CLASS 9	Laboratory 1: Practical information about ECG execution and interpretation. Independent interpretation of ECG recordings with particular emphasis on ischemic changes and arrhythmias, correlation of changes with cardiac diseases available on simulators in CSM. (CSM - Dr. Senderek). (5h)
CLASS 10	Laboratory 2: Practical checking of ECG execution and interpretation skills (CSM - Dr. Senderek). (3h)
CLASS 11	Seminar: Drugs for the treatment of hypertension and atrial fibrillation. Anticoagulant therapy - treatment of bleeding. (Lecturer: TBD). (4h)
CLASS 12	Duty: AHP practical classes. (4h)
DIDACTIC METHODS (APPLIED)	
M2	Laboratory exercises
M16	Lectures
M17	Teaching by the patient's bedside
M13	Case study

CARDIOLOGY I

STUDENTS WORKLOAD

NUMBER OF HOURS UNDER SUPERVISION	75 hours
NUMBER OF PREPARATION HOURS	Preparation for classes: 15 hours Preparation of report, presentation, medical history: 5 hours Preparation for the exam: 40 hours
TOTAL NUMBER OF HOURS FOR THE COURSE	135 hours

CONDITIONS FOR COURSE COMPLETION

Attendance at all lectures and classes is obligatory.
Participation at seminars, clinical classes and classes at the Medical Simulation Center is compulsory. Exceptions are possible only with the prior consent of the teacher. The student is obliged to justify the absence immediately after the obstacle ceases to participate in the course coordinator's classes.

Laboratory 1-2: Performance of an ECG, correctly describing 3 ECG records presented by the assistant.

Classes 1-3: Case description of a patient with a practical skills test (physical and subjective examination) and an oral test of knowledge about a case.

Classes 4-8: Completing clinical exercises and practical skills test

The condition of admission to the written exam (multiple choice test) is passing all classes, clinical classes and classes at the Medical Simulation Center.

METHODS OF ASSESMENT

IN TERMS OF KNOWLEDGE	Discussion and questions during exercises and seminars ended with credit. Oral exam.
IN TERMS OF SKILLS	Demonstration of collecting history as well as physical examination. Evaluation of the prepared report from the physical examination and the history of the disease described.
IN TERMS OF SOCIAL COMPETENCY	Activity during classes, observation of behaviour towards patients, colleagues, assessment of group work.
FORMATIVE	Forming tests. Student's question ended with a credit or a mid-term colloquium.
SUMMATIVE (I & II TERMS)	term (EXAM): An oral exam consisting of 3 to 5 randomly selected questions. I term (RETAKE EXAM): An oral exam consisting of 3 to 5 randomly selected questions.

CARDIOLOGY I

GRADING SCALE

Criteria according to the report from the oral examination of the subject

BASIC LITERATURE

[1] McMaster Textbook of Internal Medicine 2019/2020.

SUPPLEMENTARY LITERATURE

[1] Guidelines of the European Society of Cardiology.