



Syllabus 2021/2022														
Description of the course														
Module/Course	<u>Innovative and emerging approaches in the management of patients with heart diseases</u>										Group of detailed education results			
											Group code	Group name		
											E	<u>Clinical, non-interventional sciences</u>		
Faculty	Medicine													
Major	medicine													
Specialties	Cardiology, internal medicine													
Level of studies	Uniform magister studies <input checked="" type="checkbox"/> * 1 st degree studies <input type="checkbox"/> 2 nd degree studies <input type="checkbox"/> 3 rd degree studies <input type="checkbox"/> postgraduate studies <input type="checkbox"/>													
Form of studies	<input checked="" type="checkbox"/> full-time <input type="checkbox"/> part-time													
Year of studies	IV-V					Semester		<input type="checkbox"/> Winter					<input checked="" type="checkbox"/> Summer	
Type of course	<input type="checkbox"/> obligatory <input type="checkbox"/> limited choice <input checked="" type="checkbox"/> free choice / elective (OPTIONAL)													
Course	<input checked="" type="checkbox"/> major <input type="checkbox"/> basic													
Language of instruction	<input type="checkbox"/> Polish <input checked="" type="checkbox"/> English <input type="checkbox"/> other													
* mark <input type="checkbox"/> with an X														
Number of hours														
Form of education														
Unit teaching the course	Lectures (L)	Seminars (SE)	Auditorium Classes (AC)	Major Classes – not clinical (MC)	Clinical Classes (CC)	Laboratory Classes (LC)	Classes in Simulated Conditions (CSC)	Practical Classes with Patient (PCP)	Specialist Classes – master studies (SCM)	Foreign Language Course (FLC)	Physical Education obligatory (PE)	Vocational Practice (VP)	Self-Study (Student's own work) (SS)	E-learning (EL)
Winter Semester:														
Summer Semester:														
Institute of Heart Diseases (WMU)		10			20									
TOTAL per year:														
Institute of Heart Diseases (WMU)		10			20									
Educational objectives (max. 6 items)														
C1. To acquire the knowledge of the latest scientific findings in the field of cardiology including														



current guidelines for management of the most common cardiovascular diseases.
C2. To acquire the knowledge of the experimental diagnostic and therapeutic techniques and possible indications, contraindications for their use in clinical practice.
C3. To develop the skills of recognizing cardiovascular diseases using modern diagnostic techniques.
C4. To develop the ability to apply the new therapeutic techniques in cardiovascular diseases.
C5. To acquire the knowledge of the applicability and performing of clinical trials.

Education result matrix for module/course in relation to verification methods of the intended education result and the type of class

Number of course education result	Number of major education result	Student who completes the module/course knows/is able to	Methods of verification of intended education results (forming and summarising)	Form of didactic class <i>**enter the abbreviation</i>
K 01	E.W7., E.W8.	Student knows and describes the new diagnostic procedures for cardiovascular diseases.	test	SE
K 02	E.W7.	Student knows and describes the new therapeutic methods for cardiovascular diseases.	test	SE
K 03	E.W7.	Student indicates the appropriate methodology for diagnostics and treatment, depending on the cardiovascular disease.	test	CC
K 04	E.W7.	Student describes possibility of experimental treatment of cardiovascular disease including indication, contraindication and expected effects.	test	SE
U 01	E.U15.	Student interprets the images of new imaging methods and explains its usefulness.	test	CC
U 02	E.U15.	Student is able to interpret the results of clinical trials and use it in clinical practice.	test	SE
U 03	E.U15.	Student plans diagnostics and therapeutic procedures for cardiovascular diseases, including methods based on the medical societies guidelines and the most recent methods.	test	CC
U 04	E.U15., E.U18.	Student proposes individualization of valid guidelines and/or other methods in case of ineffective or contraindications to standard treatment.	test	CC

** L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (master studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning .

Please mark on scale 1-5 how the above effects place your classes in the following categories:
communication of knowledge, skills or forming attitudes:

Knowledge: 4

Skills: 2

Student's amount of work (balance of ECTS points)

Student's workload (class participation, activity, preparation, etc.)	Student Workload (h)
1. Contact hours:	30
2. Student's own work (self-study):	9
Total student's workload	39
ECTS points for module/course	1,5
Comments	



Content of classes (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)

Lectures

- 1.
- 2.
- 3.

Seminars

1. Acute heart failure: biomarkers in diagnostics and risk stratification. New therapeutic methods from clinical trials. Mechanical circulatory support, novel drugs, heart transplantation.
2. Ischemic heart disease: new insights into mechanisms of progressive cardiovascular disease, future directions of percutaneous coronary interventions, bioresorbable materials, methods of flow measurement and quantitative assessment of stenoses, intravascular imaging.
3. New percutaneous treatments for valve diseases (aortic valve replacement, mitral valve repair, tricuspid valve repair). Percutaneous closure of the left atrial appendage.
4. Gene therapy for cardiovascular diseases, regenerative medicine: the potential of stem cells. Nanotechnology applications in cardiology. Digital health-based approach.
5. Applications of cardiac electrophysiology, cardiac implantable devices. Electrical neuromodulation for patients with cardiac diseases.

Classes

1. Ventricular assist devices – indications, contraindications, haemodynamic effects, complications. New methods for haemodynamic monitoring.
2. Clinical cases analysis, percutaneous interventions - indications, contraindications, complications.
3. 3-D imaging echocardiography, cardiac computed tomography, cardiovascular magnetic resonance imaging. An analysis of clinical cases and images.
4. Cardiac mapping and modelling. New approaches to antiarrhythmic therapy.
5. Implantable cardiac devices, programming and device operations.

Other

- 1.
- 2.
- 3.

etc. ...

Basic literature (list according to importance, no more than 3 items)

1. Dennis Kasper, Anthony Fauci, Stephen Hauser, Dan Longo, J. Larry Jameson, Joseph Loscalzo Eds. Harrison's Principles of Internal Medicine, McGraw-Hill; 19 edition, 2015
2. Braunwald's Heart Disease. A Textbook of Cardiovascular Medicine. 7th or 8th Edition. Elsevier.
3. The Guidelines of the European Society of Cardiology,
<https://www.escardio.org/Guidelines/Clinical-Practice-Guidelines>

Additional literature and other materials (no more than 3 items)

1. Maria Dorobanțu, Frank Ruschitzka, Marco Metra. Current Approach to Heart Failure, Springer, 2016

Didactic resources requirements (e.g. laboratory, multimedia projector, other...)

Multimedia projector

Preliminary conditions (minimum requirements to be met by the student before starting the module/course)

Basic anatomy, physiology and pathophysiology

Conditions to receive credit for the course (specify the form and conditions of receiving credit for classes included in the module/course, admission terms to final theoretical or practical examination, its form and requirements to be met by the student to pass it and criteria for specific grades)



Attendance + positive result of a theoretical test.	
Grade:	Criteria (only for courses/modules ending with an examination)
Very Good (5.0)	Student knows and perfectly characterizes several cardiovascular diseases (including infrequent conditions), with comprehensive, complete knowledge on symptomatology (including less specific signs and symptoms), diagnostic criteria from European Society of Cardiology guidelines, and contemporary principles of conservative (evidence-based pharmacotherapy) and interventional (modern techniques, including unique methods performed in specialized centers) therapy.
Above Good (4.5)	Student knows and characterizes several cardiovascular diseases (including infrequent conditions), with comprehensive knowledge on symptomatology (including less specific signs and symptoms), diagnostic work-up, and contemporary principles of conservative (evidence-based pharmacotherapy) and interventional therapy.
Good (4.0)	Student knows and characterizes major important cardiovascular diseases, with comprehensive knowledge on symptomatology, diagnostic work-up, and contemporary principles of conservative and interventional therapy.
Sufficiently Good (3.5)	Student knows and characterizes important cardiovascular diseases, including symptomatology, diagnostics, and general principles of conservative and interventional therapy.
Sufficient (3.0)	Student knows and characterizes major cardiovascular diseases, and has the knowledge on basic symptomatology and general principles of either diagnostic work-up or required therapy.

Name and address of module/course teaching unit, contact: telephone and e-mail address

Institute of Heart Diseases, Wrocław Medical University, ul. Borowska 213, 50-556 Wrocław
Phone 71 733 11 12, aleksandra.erbert@umed.wroc.pl

Coordinator / Person responsible for module/course, contact: telephone and e-mail address

Michał Tkaczyszyn, MD, PhD; tel. 71 736 42 72, e-mail: michal.tkaczyszyn@umed.wroc.pl

List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes.

Prof. Piotr Ponikowski, prof. Krzysztof Reczuch, prof. Ewa Jankowska, dr hab. Piotr Kubler, dr n. med. Krystian Josiak, dr hab. Jan Biegus, dr hab. Robert Zymliński, dr n. med. Piotr Niewiński, dr n. med. Krzysztof Nowak, dr n. med. Wojciech Zimoch, dr n. med. Mateusz Sokolski, lek. Marcin Drozd, dr n. med. Michał Tkaczyszyn, dr n. med. Stanisław Tubek, lek. Michał Kosowski, lek. Paweł Franczuk, dr n. med. Justyna Sokolska, lek. Anna Zapolska, lek. Tomasz Walczak, lek. Marta Brzostowicz, lek. Piotr Gajewski, lek. Jan Kręcicki, lek. Anna Langner-Hetmańczuk, lek. Anna Zoń.

Form of classes for all persons: seminars + practical classes.



Date of Syllabus development

16.07.2021

Syllabus developed by

MICHAŁ TKACZYSZYN

Signature of Head of teaching unit

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