



Syllabus 2019/2020														
Description of the course														
Module/Course	Typical electrocardiographic changes in geriatric population								Group of detailed education results					
									Group code:	Group name:				
									B E	Basic Sciences and Non-interventional Clinical Sciences				
Faculty	Medicine													
Major	medicine													
Specialties	Not applicable													
Level of studies	Uniform magister studies X * 1 <sup>st</sup> degree studies <input type="checkbox"/> 2 <sup>nd</sup> degree studies <input type="checkbox"/> 3 <sup>rd</sup> degree studies <input type="checkbox"/> postgraduate studies <input type="checkbox"/>													
Form of studies	X full-time <input type="checkbox"/> part-time													
Year of studies	II-V					Semester		X Winter or X Summer						
Type of course	<input type="checkbox"/> obligatory <input type="checkbox"/> limited choice X free choice / elective													
Course	X major <input type="checkbox"/> basic													
Language of instruction	<input type="checkbox"/> Polish X 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 – magister studies (SCM)	Foreign language Course (FLC)	Physical Education obligatory (PE)	Vocational Practice (VP)	Self-Study (Student's own work)	E-learning (EL)
Winter Semester														
Department of Pathophysiology				10										
Summer Semester														
Department of Pathophysiology				10										
TOTAL per year:														



Department of Pathophysiology			10											
Educational objectives (max. 6 items)														
C1. General description of the geriatric population and its basic ecg problems														
C2. Practical exercises with typical ecg changes of the geriatric population														
C3. Characteristics of the ecg with pacemaker and implantable cardioverter														
C4. Paying students' attention to main problems and typical difficulties in analysis of ecg of the elderly														
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>				
<b>K 01</b>	B.W.25	Student defines basic heart diseases in geriatric population and explains what kind of changes in electrocardiography they cause				Discussion, ECG exercise				MC				
	E. W.1													
	B.W.28	Student describes the relations between pathological changes including morphological ones in cardiovascular system and electrocardiographic changes that is thickness of myocardium, enlargement of heart chambers, scar tissue in the heart muscle				Power point presentation ECG exercise				MC				
	<b>K02</b>	A. W.1												
	<b>K03</b>	B. W. 30	Student analyzes relationships between decreased and increased body mass and explains difficulties in interpreting such recordings				Discussion, ECG exercise				MC			
<b>K04</b>	B.W.25	Student describes electrocardiographic recordings of the patients with pacemakers and implantable cardioverters-defibrillators (ICD) and explains why in geriatric population the number of implantable devices increase				Discussion, ECG exercise				MC				
	B. W.28													
<b>K05</b>	E.W.8	Student defines the indications to 24-hour ECG Holter monitoring and explains why in geriatric population it is more common necessity, and then student is able make conclusions from this test				Discussion Exercises in Holter laboratory				MC				
	B.W.29													
	E.W.7													
	E. U.16													
<b>S 01</b>	B.U.7	Student resolves problems of ecg changes in the elderly people after myocardial infarct, with hypertrophy of ventricles, with arterial hypertension, with valvular diseases				Evaluation of the ability of the simple ECG description				MC				
<b>S 02</b>	B. U.8	Student uses ecg to determine the basic activity of implantable devices eg. pacemakers				Evaluation of the ability of the diagnosing basic types of stimulation in ECG				MC				
		-student performs simple analysis of the result of Report from 24-ech Holter monitoring and make conclusions				Evaluation of the ability to determine basic conclusions from 24-hour ECG monitoring								



<p>** L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister 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 .</p>	
<p>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: 5....</p>	
<p>Student's amount of work (balance of ECTS points)</p>	
<p>Student's workload (class participation, activity, preparation, etc.)</p>	<p>Student Workload (h)</p>
1. Contact hours:	10
2. Student's own work (self-study):	3
Total student's workload	13
ECTS points for module/course	0.5
<p>Comments</p>	
<p><b>Content of classes</b> (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)</p>	
<p><b>Lectures</b></p> <ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	
<p><b>Seminars</b></p> <ol style="list-style-type: none"> <li>1.</li> <li>2.</li> <li>3.</li> </ol>	
<p><b>Practical classes</b></p> <ol style="list-style-type: none"> <li>1– Repetition of standard ECG description and discussing the characteristic changes in geriatric population.</li> <li>2-Electrocardiographic changes in the elderly patients with arterial hypertension</li> <li>3-Electrocardiographic changes in the elderly patients with coronary artery disease.</li> <li>4-Electrocardiographic changes in the elderly patients with valvular diseases and discussing the most common abnormalities.</li> <li>5-Discussing ecg in patients with implantable devices (ICD, pacemaker) and analysis of ecg.</li> <li>6-Discussing most common arrhythmias in geriatric patients including lethal ones.</li> <li>7- Exercising with electrocardiograms of the elderly people.</li> <li>8- Discussion of basic mistakes in analysis of geriatric ecg.</li> <li>9- Making own description of ECG of the geriatric patients</li> <li>10-Practical exercises in ECG Holter laboratory.</li> </ol>	
<p>Other</p>	



- 1.
  - 2.
  - 3.
- etc. ...

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

1. Advanced ECG: Boards and Beyond. Brendan Phibbs. Elsevier Health Sciences, 2006 - 294
2. 2013 ESC Guidelines on cardiac pacing and cardiac resynchronization therapy The Task Force on cardiac pacing and resynchronization therapy of the European Society of Cardiology (ESC). Developed in collaboration with the European Heart Rhythm Association (EHRA). Authors/Task Force Members The disclosure forms of the authors and reviewers are available on the ESC website [www.escardio.org/guidelines](http://www.escardio.org/guidelines). European Heart Journal (2013), 34, 2281–2329.
3. Epidemiology of Arrhythmias and Conduction Disorders in Older Adults. Grant V. Chow, Joseph E. Marine, Jerome L. Fleg. Clin Geriatr Med. 2012 Nov; 28(4): 539–553.

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

1. 2015 ESC Guidelines for the management of patients with ventricular arrhythmias and the prevention of sudden cardiac death: The Task Force for the Management of Patients with Ventricular Arrhythmias and the Prevention of Sudden Cardiac Death of the European Society of Cardiology (ESC), Endorsed by: Association for European, Eur Heart J (2015) 36 (41): 2793-2867.
2. Cardiac Pacemakers Step-by-Step: An Illustrated Guide. S. Serge Barold, Roland X. Stroobandt, Alfons F. Sinnaeve.

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

PowerPoint projector, blackboard'  
ECG and Holter monitoring laboratory

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

Basic information on anatomy of the heart, heart physiology and basic electrocardiography

**Conditions to receive credit for the course**

- Presence must be 100%
- In case of each absence including rector's days or dean's hours all the absences must be made up – preparation of the presentation or the essay
- Final test passed

<b>Grade:</b>	<b>Criteria for course</b>
Very Good (5.0)	obtaining result of 91-100 % in the final test
Good Plus (4.5)	obtaining result of 90-80 % in the final test
Good (4.0)	obtaining result of 70-80 % in the final test
Satisfactory Plus (3.5)	obtaining result of 61-70 % in the final test
Satisfactory (3.0)	obtaining result of 51% -60 % in the final test

<b>Grade:</b>	<b>Criteria for exam (if applicable)</b>
Very Good (5.0)	
Good Plus (4.5)	
Good (4.0)	
Satisfactory Plus (3.5)	
Satisfactory (3.0)	



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Person responsible for course:	Dr hab. n. med. Małgorzata Poręba
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List of persons conducting specific classes:	degree/scientific or professional title	Discipline	Performer profession	Form of classes
Małgorzata Anna Poręba	Dr hab. n. med.	medicine	physician	Classes non-clinical

Date of Syllabus development

15.07.2019.....

Dr hab. n. med. Małgorzata Poręba  
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**KARDIOLOG**  
2563614

Syllabus developed by

..... Dr hab. n. med.

Małgorzata Anna Poręba MD PhD..

Signature of Head of teaching unit

Signature of Faculty Dean

Wrocław Medical University  
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VICE-DEAN FOR STUDIES IN ENGLISH  
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