|                                |      |              |               |                         |                                   | demic<br>016/2        |                         |                                       |                                      |                               |                         |                          |                           |                 |
|--------------------------------|------|--------------|---------------|-------------------------|-----------------------------------|-----------------------|-------------------------|---------------------------------------|--------------------------------------|-------------------------------|-------------------------|--------------------------|---------------------------|-----------------|
|                                |      |              |               |                         |                                   | on of t               |                         |                                       | 2022                                 |                               |                         |                          |                           |                 |
| Course                         | Ŀ    | Practic      | al Clin       | ical Te                 |                                   | ; – chos              |                         |                                       | ¥.                                   | Group o<br>Group<br>code      |                         | Gro<br>Non-in            | oup nar<br>iterven        | ne<br>Itional   |
| Faculty                        | Fac  | culty o      | f Med         | icine                   |                                   | _                     |                         |                                       |                                      | E                             |                         | _clinic                  | al scie                   | nces            |
| Major                          |      | dicine       |               | icirie                  |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           | 3332            |
| Level of studies               | _    |              |               | ster st                 | udies                             |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Form of studies                | X fı | ull-time     |               | part-ti                 |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Year of studies                |      |              |               | VI                      |                                   |                       |                         | Sem                                   | ester:                               | 1                             | /inter                  | r/Anri                   | 1/0.40.0                  | <del></del>     |
| Type of course                 | Хо   | bligato      | ory           |                         |                                   |                       |                         |                                       |                                      | A 30                          | umme                    | (Apri                    | l/May)                    | -               |
| Language of study              |      | olish        | X En          | glish                   |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
|                                |      |              |               | J                       | Num                               | ber of l              | hours                   |                                       |                                      |                               |                         |                          |                           |                 |
|                                |      |              |               |                         |                                   | of edu                |                         |                                       |                                      |                               |                         |                          | _                         |                 |
|                                |      | 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) | Foreign language Course (FLC) | Physical Education (PE) | Vocational Practice (VP) | Directed Self-Study (DSS) | ng (EL)         |
| Winter semester:               |      | Lectu        | Semin         | Audite                  | Major                             | Clinica               | Labora                  | Classe                                | Practic                              | Foreign                       | Physica                 | Vocatio                  | Directe                   | E-learning (EL) |
|                                |      |              |               |                         | _                                 | 1                     |                         |                                       | ř                                    |                               |                         |                          |                           |                 |
| (Dep. in charge of the coul    | rse) |              |               |                         |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Direct (contact) educati       |      |              |               |                         |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Distance learning <sup>2</sup> |      |              |               |                         |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Summer semester:               |      |              |               |                         |                                   |                       | l'                      |                                       |                                      |                               |                         |                          |                           |                 |
| Institute of Heart Diseas      | es   |              |               |                         |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Direct (contact) education     | on   |              |               |                         |                                   | 180                   |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Distance learning              |      |              |               |                         |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
| TOTAL per year:                |      |              |               |                         |                                   |                       |                         | 1                                     |                                      |                               |                         |                          |                           |                 |
| Institute of Heart Disease     | es   |              |               |                         |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Direct (contact) education     | on   |              |               |                         |                                   | 180                   |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Distance learning              |      |              |               |                         |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |
| Educational objectives         | (max | . 6 iten     | ns)           |                         |                                   |                       |                         |                                       |                                      |                               |                         |                          |                           |                 |

<sup>2</sup> Education with applied methods and techniques for distance learning

 $<sup>^{1}\,\</sup>text{Education}$  conducted with direct participation of university teachers or other academics

C1. To acquire the knowledge of taking history and performing physical examination in adult patient.

C2. To acquire the knowledge of the symptomatology of cardiovascular, hormonal, hematological, occupational and rheumatoid disorders in adult patients.

 $C^3$ . To develop the skills of interpretation of abnormalities found on additional tests, particularly in  $C^{ardiovascular}$  diseases.

C4. To develop the ability to perform differential diagnosis in adult patients.

C5. To know the rules of the contemporary treatment regiments of internal diseases, particularly in cardiovascular disorders.

C6. Development social competences needed to practice the medical profession, in accordance with graduate's profile.

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

|   | of class:  |   |  |
|---|--|---|--|
| Number of<br>detailed<br>education result | Student who completes the course knows/is able to  | Methods of verification of intended education results | Form of didactic<br>class<br>*enter the abbreviation |
| E.U1                                      | Skills of taking directed medical history of adult   | exam of   | CC   |
|   | patient  | practical skills                                      |  |
| E.U3                                      | Skills of conducting complete physical examination of adult patient  | exam of practical skills                              | CC   |
| E.U16                                     | Ability to plan the diagnostic, therapeutic and preventive procedures  | exam of   | CC   |
| E.U24                                     | Ability to interpret the results of laboratory tests and identify the causes of abnormalities  | practical skills exam of practical skills             | CC   |
| E.U29                                     | Perform basic medical procedures and treatments including:  1) measurement of body temperature (surface and deep), heart rate measurement, non-invasive blood pressure measurement, 2) monitoring of vital signs with a cardiomonitor, pulse oximetry, 3) spirometric examination, oxygen treatment, support and mechanical ventilation, 4) inserting an oropharyngeal tube, 5) intravenous, intramuscular and subcutaneous injections, peripheral venous cannulation, collection of peripheral venous blood, collection of blood for culture, collection of arterial blood, collection of arterialised capillary blood, 6) taking nasal, throat and skin swabs, 7) bladder catheterisation in women and men, gastric probing, gastric lavage, enema, 8) standard resting electrocardiogram with interpretation, electrical cardioversion and cardiac defibrillation, 9) simple strip tests and blood glucose measurement; | exam of practical skills                              | CC   |
| E.U38                                     | 9) simple strip tests and blood glucose measurement; maintain patient medical records  | exam of   | CC   |
| - Pr - Pr                                 |  | practical skills                                      |  |

\* L- lecture; SE- seminar; AC- auditorium classes; MC- major classes (non-clinical); CC- clinical classes; LC- laboratory classes; CSC- classes in simulated conditions; PCP- practical classes with patient; FLC- foreign language course; PE- physical education; VP-vocational practice; DSS- directed self-study; EL- E-learning

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

| Student's workload                                 | Student Workload |  |  |
|--|------------------|--|--|
| (class participation, activity, preparation, etc.) |                  |  |  |
| 1. Number of hours of direct contact:              | 180              |  |  |
| 2. Number of hours of distance learning:           | n/a              |  |  |
| 3. Number of hours of student's own work:          | 90               |  |  |
| 4. Number of hours of directed self-study          | n/a              |  |  |
| Total student's workload                           | 270              |  |  |
| ECTS points for course                             | 12,0             |  |  |

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 – n/a

## Seminars - n/a

## Classes

- 1. Physical examination of the patient, particularly of cardiovascular system.
- 2. Laboratory parameters in internal diseases, particularly in cardiovascular disorders.
- 3. Imaging techniques in cardiology.
- 4. Drugs used in cardiology.
- 5. Mitral regurgitation. STEMI. Coronary angiography and PCI. ECG 10 cases.
- 6. Advanced life support. ECG 10 cases.
- 7. Mitral stenosis. Bradyarrhythmias and conductance disturbances. ECG 10 cases.
- 8. NSTEMI. Unstable angina. ECG 10 cases.
- 9. Aortic regurgitation. SVT. AF/AFl. Prophylaxis of arterial and venous trombotic events. ECG 10 cases.
- 10. Aortic stenosis. VT. Sudden cardiac death. Stable angina pectoris.
- 11. Blood pressure measuring. Arterial hypertension. ECG 10 cases.
- 12. Electrophysiology study, Holter- ECG. PM + CRT + ICD.
- 13. Prevention of cardiovascular diseases.
- 14. Chronic heart failure. Cardiopulmonary exercise test. Heart transplantation.
- 15. Acute heart failure (including pulmonary oedema, cardiogenic shock, right ventricular failure, hyperkinetic heart failure).
- 16. Infective endocarditis. Pericarditis. Cardiac tamponade.
- 17. Pulmonary embolism and vein trombosis. Prophylaxis of arterial and venous trombotic events.
- 18. Pulmonary hypertension. Congenital heart diseases. Cardiac tumours.

## Other – n/a

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

- 1. Oxford Handbook of Clinical Medicine, 10<sup>th</sup> ed. Wilkinson, Raine, Wiles et al. Oxford University Press, 2017.
- 2. Harrison`s Principles of Internal Medicine, 20<sup>th</sup> ed. Jameson, Fauci, Kasper et al., McGraw-Hill, 2018. Additional literature and other materials: (no more than 3 items)
- 1. Current Guidelines from European Society of Cardiology (www.escardio.org/guidelines)

Preliminary conditions: (minimum requirements to be met by the student before starting the course)
Completion of the classes included in the study plan, in particular: Anatomy, Medical Ethics, Physiology,
Pathophysiology, Propaedeutics of Internal Medicine, Pharmacology and Toxicology, Internal Medicine (1),
Internal Medicine (2)

Conditions to receive credit for the course: (specify the form and conditions of receiving credit for classes included in the 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 in direct contact is obligatory. Every absence must be made up for during a duty in the hospital or by the preparation of a presentation.

Active participation in classes and exam of practical skills.

| Grade:                  | Criteria for courses ending with a grade <sup>3</sup>  |  |  |
|-------------------------|--|--|--|
| Very good (5,0)         | Result of the practical skills test 91-100%            |  |  |
| Above good (4,5)        | Result of the practical skills test 81-90%             |  |  |
| Good (4,0)              | Result of the practical skills test 71-80%             |  |  |
| Sufficiently good (3,5) | Result of the practical skills test 61-70%             |  |  |
| Sufficient (3,0)        | Result of the practical skills test 51-60%             |  |  |
|                         | Criteria for courses ending with a credit <sup>3</sup> |  |  |
| Credit                  | n/a  |  |  |

| Department in charge of the course: | Institute of Heart Diseases        |  |
|-------------------------------------|------------------------------------|--|
| Department address:                 | Borowska str. 213, 50-556, Wrocław |  |
| Telephone:                          | 71 736 42 36                       |  |
| E-Mail:                             | etzbieta. kvwak@umw.edu.pl         |  |

| Person in charge for the      | course: Prof. dr    | Prof. dr hab. Piotr Ponikowski |                      |                 |  |  |  |  |
|-------------------------------|---------------------|--------------------------------|----------------------|-----------------|--|--|--|--|
| Telephone:                    | 71 733 :            | 71 733 11 12                   |                      |                 |  |  |  |  |
| E-Mail:                       | piotr.po            | piotr.ponikowski@umw.edu.pl    |                      |                 |  |  |  |  |
| List of persons conducti      |                     |                                | <u> </u>             |                 |  |  |  |  |
| Name and surname              | Degree/scientific o | n<br>Discipline                | Performed profession | Form of classes |  |  |  |  |
| Piotr Ponikowski              | Professor           | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Krzysztof Reczuch             | Professor           | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Ewa Jankowska                 | Professor           | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Marta Negrusz-Kawecka         | Professor           | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Monika Przewłocka-<br>Kosmala | Professor           | Medical sciences               | Physician, academic  | СС              |  |  |  |  |
| Wojciech Kosmala              | Professor           | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Andrzej Mysiak                | Professor           | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Wiktor Kuliczkowski           | Assistant Professor | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Piotr Kübler                  | Assistant Professor | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Jan Biegus                    | Assistant Professor | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Marcin Protasiewicz           | Assistant Professor | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Robert Zymliński              | Assistant Professor | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Piotr Niewiński               | MD, PhD             | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Krystian Josiak               | MD, PhD             | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Konrad Kaaz                   | MD, PhD             | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Wojciech Zimoch               | MD, PhD             | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Stanisław Tubek               | MD, PhD             | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Krzysztof Nowak               | MD, PhD             | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Michał Tkaczyszyn             | MD, PhD             | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Michał Kosowski               | MD                  | Medical sciences               | Physician, academic  | CC              |  |  |  |  |
| Brunon Tomasiewicz            | MD                  | Medical sciences               | Physician, academic  | CC              |  |  |  |  |

Date of Syllabus development 30.06.2021

Syllabus developed by

Piotr Niewiński MD, PhD, Piotr Kübler MD, Assistant Professor

<sup>&</sup>lt;sup>3</sup> The verification must cover all education results, which are realize in all form of classes within the course



Dean's signature

Wrocław Medical University

prof. Beata Sobieszczańska, PhD

Appendix No.3 to Resolution No. 2303 of Senate of Wroclaw Medical University of 28 April 2021

Signature of Head(s) of teaching unit(s)

Uniwersytet Medyczny we Wrocławiu
Wydzia: Lekarski
INSTYTUT CHORÓB SERCA
p.o. dyrektora

prof. dr hab. Piotr Ponikowski