





TOTAL per year:													
	5	4		20									
Educational objectives (max. 6 items)													
<b>C1. Functional assessment of person with disabilities.</b> <b>C2. Rudiments of physiology of physiotherapy</b> <b>C3. Functional assessment of movement apparatus, cardiovascular system, respiratory system and nervous system</b> <b>C4. Physical modalities in pain management.</b> <b>C5. Principles of formulating the rehabilitation program</b> <b>C6. Rules of orthopedic devices selection</b>													
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>			
W1	E.W30	knows and understands the concept of disability and impairment;				presentation, oral response, colloquium				L, SE, CC			
W2	E.W31	knows the role and the methods used in medical rehabilitation;				presentation, oral response, colloquium				L, SE, CC			
U1	E.U22.	assess functional disabled person				presentation, oral response, colloquium				L, SE, CC			
U2	E.U23.	formulates the rehabilitation program in most common diseases				presentation, oral response, colloquium				L, SE, CC			
W3	E.W7	knows and understands the causes, symptoms, diagnosis and therapeutic proceedings of the most common internal diseases occurring in adults, and their complications: a) cardiovascular diseases, including coronary heart disease, heart defects, diseases, endocarditis, pericarditis, myocarditis, heart failure, hypertension: primary and secondary, pulmonary hypertension, b) respiratory diseases, including chronic obstructive pulmonary disease, asthma, cystic fibrosis, interstitial lung diseases, infections of the respiratory system, obstructive and central sleep apnea, respiratory failure (acute and chronic), cancers of the respiratory system, c) rheumatic diseases, including systemic diseases of connective tissue: systemic vascular inflammations, inflammations of the				presentation, oral response, colloquium				L, SE, CC			



		joints of the spine, metabolic diseases, particular in osteoporosis and osteoarthritis, gout, h) allergic diseases, including: anaphylaxis and angioedema,		
<b>W4</b>	<b>E.W8.</b>	knows and understands the process and the signs of the aging process, as well as the principle of an overall assessment and interdisciplinary geriatric care of the elderly patient	presentation, oral response, colloquium	L, SE, CC
<b>W5</b>	<b>E.W9.</b>	understands the causes of the most common diseases and knows their basic differences occurring in the elderly and knows the procedure in basic geriatric syndroms	presentation, oral response, colloquium	L, SE, CC
<b>W6</b>	<b>E.W11.</b>	knows and understands the risks associated with hospitalization of elderly people;	presentation, oral response, colloquium	L, SE, CC
<b>W7</b>	<b>E.W13</b>	know and distinguish the symptoms of basic neurological syndroms;	presentation, oral response, colloquium	L, SE, CC
<b>W8</b>	<b>E.W14</b>	know and understand the causes, symptoms, diagnosis and therapeutic proceedings in the most common diseases of the nervous system a) vascular diseases of the brain, stroke, b) dementia, Alzheimer disease, vascular and frontal dementia, , c) diseases of the basal ganglia, Parkinson's disease, d) demyelinating diseases multiple sclerosis, e) neuro-muscular diseases – amyotrophic lateral sclerosis, sciatic neuralgia, f) cranio-cerebral trauma, in particular concussion	presentation, oral response, colloquium	L, SE, CC
<b>W9</b>	<b>F.W1</b>	know and understand the causes, symptoms, diagnosis and principles for therapeutic treatment of the most common diseases requiring surgical intervention, taking into account the distinctiveness of childhood a) limb disorders b) bone fractures and injuries of organs;	presentation, oral response, colloquium	L, SE, CC
<b>W10</b>	<b>F.W2.</b>	knows selected issues of Pediatric Surgery, including Traumatology, inherited defects and acquired disease that are an indication for surgical treatment	presentation, oral response, colloquium	L, SE, CC
<b>U3</b>	<b>E.U1.</b>	interviews the adult patient	presentation, oral response, colloquium	L, SE, CC
<b>U4</b>	<b>E.U2.</b>	interviews the pediatric patient and his family	presentation, oral response, colloquium	L, SE, CC
<b>U5</b>	<b>E.U3.</b>	performs the physical examination of the adult patient	presentation, oral response, colloquium	L, SE, CC



U6	E.U4	performs a physical examination of the child at any age;	presentation, oral response, colloquium	L, SE, CC
U7	E.U7.	evaluates the general condition, consciousness and awareness of the patient;;	presentation, oral response, colloquium	L, SE, CC
U8	E.U12	performs differential diagnosis the most common diseases of adults and children	presentation, oral response, colloquium	L, SE, CC
U9	E.U13	assesses and describes the patient's somatic and psychological condition	presentation, oral response, colloquium	L, SE, CC
U10	E.U16	plans diagnostic, therapeutic and preventive actions	presentation, oral response, colloquium	L, SE, CC
U11	E.U20.	Qualifies patients for in- or outpatient treatment;	presentation, oral response, colloquium	L, SE, CC
U12	E.U21.	defines the conditions in which time life expectancy, functional status or patient preferences limit further procedures in accordance with the guidelines for the disease;	presentation, oral response, colloquium	L, SE, CC
U13	E.U32	Plans consultations	presentation, oral response, colloquium	L, SE, CC
U14	E.U38.	keep a record of the medical patient	presentation, oral response, colloquium	L, SE, CC

\*\* 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 .

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 (K): 4**

**Skills (S):3**

**Social competences: 3**

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

Student's workload (class participation, activity, preparation, etc.)	Student Workload (h)
1. Contact hours:	29
2. Student's own work (self-study):	11,6
Total student's workload	40,6
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. – 2,5 h
  - a. Functional assessment of movement apparatus, cardiovascular system, respiratory system and nervous system
  - b. Principles of formulating the rehabilitation program
  - c. Rudiments of physiology of physiotherapy.
  - d. Rules of orthopedic devices selection.
2. – 2,5 h
  - a. Rehabilitation in orthopedic and traumatology
  - b. Rehabilitation in rheumatology
  - c. Neurologic rehabilitation
  - d. Rehabilitation in internal medicine
  - e. Physical therapy

**Seminars**

1. Physical therapy (seminars) -2h

- Rudiments of physiology of physiotherapy
- Legal Concerns
- Thermal Modalities
  - Transmission of Thermal Energy
  - Cryotherapy
  - Thermotherapy
    - Shortwave Diathermy
    - Microwave Diathermy
- Ultrasound
  - Phonophoresis
- Electrotherapy
  - Ionotophoresis
  - Interferential Currents
  - Low Intensity Stimulators
  - High-Voltage Pulsed Stimulation
  - Transcutaneous Electric Nerve Stimulation /TENS/
  - Neuromuscular Stimulation
  - Point Stimulation
- Low Level Laser Therapy
- Magnet Therapy
- Extracorporeal Shock Wave Therapy (ESWT)
- Safety in Using Therapeutic Modalities

2. Rehabilitation in respiratory tract diseases (seminars) -2h

- Definition and concept of pulmonary rehabilitation
- Physical Examination
- Conditions with predominant oxygenation impairment
- Conditions with predominant ventilatory impairment
- Formulating pulmonary rehabilitation program
  - medical evaluation and management,
  - initial assessment and goal setting,
  - therapeutic modalities of exercise training,
  - psychosocial counseling,



- nutritional counseling,
- daily living training and energy management,
- education,
- evaluation of outcomes,
- maintenance program
- the integrative cardiorespiratory exercise test
- exercise training
- Breathing retraining
- improving performance of daily activities
- education

### **Practical classes**

#### **1. Rehabilitation in orthopedic surgery and traumatology – 8h**

##### **a. 1<sup>st</sup> semester – 4h**

- Basic Science on Injury and Repair of Skeletal Muscle, Ligaments and Tendons
- Physical Forces Used in Musculoskeletal Rehabilitation
- Common Physical Therapy Techniques
- Orthopaedic devices
- Rehabilitation After Total Joint Replacement

##### **b. 2<sup>nd</sup> semester -4h**

- Functional assessment of movement apparatus
- Principles of formulating the rehabilitation program
- Gait Analysis
- Prevention of bed rest complications
- Principles of Sports Rehabilitation

#### **2. Cardiac rehabilitation: (classes) -4h**

- definition and goals of cardiac rehabilitation
- risk factors modification
- medical evaluation before exercises
- physical activity: exercise prescription, intensity of exercise, duration and frequency of exercise, types of exercises, risk of exercise
- cardiac rehabilitation phases
- rehabilitation following MI
- special situations ( heart transplantation, heart failure, CABG, elderly patients)

#### **3. Rehabilitation in vascular and metabolic diseases: (classes) -4h**

- vascular diagnostic testing
- rehabilitation in TOS and Raynaud Phenomenon
- rehabilitation in lymphatic disease: manual lymphatic massage, types of compression, patients' education
- Prevention of venous thromboembolic disease
- rehabilitation in venous diseases: chronic venous insufficiency, DVT profilaxis
- rehabilitation for patients with PAOD: walking training, Buerger-Allen exercises, PNC, circulation boot, HBOT
- rehabilitation for obese patients
- rehabilitation for patients with: polimetabolic syndrome and diabetes mellitus: types of exercises, safety, health resorts

#### **4. Rehabilitation in neurology (classes) -4h**

- Definition and concept of neurologic rehabilitation
- Physical Examination



- Examination in rehabilitation
- Movement disorders
- Upper motor neuron disorders
- Rehabilitation of spasticity
- Spinal cord lesions disorders
- Lower motor neuron disturbances
- Brain plasticity
- Terminology for Postinjury Gains Orthoses and medical problems with prevention substitution and stabilisation
- Orthoses and medical problems with prevention substitution and stabilisation

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

1. Rehabilitation for medical students. Wrzosek Z., Bolanowski J. Sutkowska E. , *Wrocław Medical University, 2011*
2. Physical Medicine and Rehabilitation: Principles and Practice DeLisa JA, Gans BM, Walsh NE, *Lippincott Williams & Wilkins, 2005*
3. Practical Evidence-based Physiotherapy E-Book, 2nd Edition, Herbert R, Jamtyedt G, Hagen KB, Mead J, *Elsevier*

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

1. Advances in Rehabilitation. AWF Warszawa
2. Archives of Physical Medicine and Rehabilitation. *ACRM (American Congress of Rehabilitation Medicine)*
3. PM&R *Elsevier*

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

*multimedia projector, laptop, TPI device, PUP device, treadmill, measure tape, BIODEX, gym hall, Doppler device*

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

Finished courses : "Internal medicine" and "Orthopedic and Traumatology" , general knowledge of human anatomy and physiology  
4<sup>th</sup> year graduation.

**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)

Obligatory presence on all exercises and seminars. Positive test's result.

<b>Grade:</b>	<b>Criteria</b> (only for courses/modules ending with an examination)
Very Good (5.0)	above 90% of maximum test result
Good Plus (4.5)	above 80% of maximum test result
Good (4.0)	above 70% of maximum test result
Satisfactory Plus (3.5)	above 60% of maximum test result
Satisfactory (3.0)	above 50% of maximum test result



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

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ul. Borowska 213, 50-556 Wrocław

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

Dr hab. Edyta Sutkowska , 503077016; edyta.sutkowska@umed.wroc.pl

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

- Edyta Sutkowska, dr hab. n. med., doctor, physiotherapist – lectures, classes, seminars
- Iwona Demczyszak, dr n. k. fiz. physiotherapist - classes, seminars
- Justyna Mazurek, dr n. k. fiz., doctor - classes, seminars
- Natalia Kuciel, dr n. med, physiotherapist classes, seminars
- Michał Sokołowski, dr n. med., doctor, physiotherapist - classes, seminars

**Date of Syllabus development**

8/03/2018

**Syllabus developed by**

Dr Michał Sokołowski

**Signature of Head of teaching unit**

Uniwersytet Medyczny we Wrocławiu  
KATEDRA I ZAKŁAD REHABILITACJI  
kierownik

dr hab. n. med. Edyta Sutkowska

Wrocław Medical University  
FACULTY OF MEDICINE

Signature of Faculty Dean

M. Sobieszkańska

Prof. Małgorzata Sobieszkańska, MD, PhD