



**48SJ-REHA**  
**ECTS: 2.00**  
**CYCLE: 2023L**

## Course syllabus - part A Rehabilitation

### SUBJECT MATTER CONTENT

#### LECTURE

1.Assumptions of 'Polish School of Rehabilitation'. General consequences of immobility after CNS, polytrauma and stroke. Methods of treatment in rehabilitation. Physiotherapy. Tools and specialized devices in rehabilitation. 2.Cerebral Palsy. Brain plasticity. Methods of spasticity rehabilitation and treatment. Medical equipment in rehabilitation. Orthopedic equipment. 3.Posture abnormalities in pediatric population. Body statics. Diagnostic measurement tools, prophylaxis and rehabilitation of posture abnormalities. Scoliosis - treatment and therapy evaluation. 4.Congenital spine deformations - diagnostics, pre-operative and post-operative rehabilitation. 5.Principles and components of orthopedic equipment - prosthetics, orthotics, orthotic aids for locomotion, upright standing and nursing. Medical equipment in rehabilitation. Content description and essentials of following terms: rehabilitation, physiotherapy, physical therapy vs. kinesiotherapy, occupational therapy. Definition and physiological basis of rehabilitation. Comprehensive rehabilitation. Factors facilitating and impeding rehabilitation process. Prophylaxis issues in rehabilitation. Orthopedic equipment - prosthetics, orthotics, orthotic aids for locomotion, upright standing and nursing. Medical equipment in rehabilitation. Special approach to patients with impairments of musculoskeletal system. Physiotherapy and its profile in: neurology, cardiology, pulmonology, pediatrics, geriatrics, psychiatry. Physiotherapy for patients with disability and impairments of CNS. Rehabilitation protocols for hypotonia and hypertonia. Rehabilitation of patients with CNS vascular disease (stroke). Rehabilitation of patients with CNS progressive disease. Combination therapy for pain. Definition, classification and characteristics of scoliosis and postures abnormalities. Physiology of movement and body posture. Regulation of muscle tone. Consequences of spinal cord injury. Activity of CNS. Neuromatrix-neuronal nets. Brain plasticity.

#### CLASSES

1. Orthopedic examination. Planning rehabilitation after endoprosthesis, in degenerative disease 2. Neurological examination. Planning rehabilitation after spinal cord injury, brain trauma, cerebral palsy. 3. Practical Classes in prevention of back pain 4. Scoliosis, Scheuermann's disease, postural abnormalities, interview, examination, X-ray. 5. Back pain - interview, examination, rehabilitation.

#### SEMINAR

1. Neurological rehabilitation I: rehabilitation after spinal injuries, neuroplasticity. 2. Fundamentals of kinesiotherapy and physical therapy in rehabilitation 3. Neurological rehabilitation II: after brain trauma with and without coma, stroke, ICF. 4. Back pain syndromes - C and L segment discopathy. 5. Rehabilitation of developmental age - developmental delay, cerebral palsy, scoliosis.

### TEACHING OBJECTIVE

**Legal acts specifying learning outcomes:**  
672/2020

**Disciplines:** medical sciences

**Status of the**

**course:**Obligatoryjny

**Group of courses:**B -

przedmioty kierunkowe

**Code:** ISCED 0912

**Field of study:**Medicine

**Scope of education:**

**Profile of education:**

General academic

**Form of studies:** full-time

**Level of studies:** uniform

master's studies

**Year/semester:** 4/8

**Types of classes:** Lecture,  
Classes, Seminar

**Number of hours in semester:**Lecture: 10.00,  
Classes: 15.00, Seminar:  
10.00

**Language of**

**instruction:**English

**Introductory subject:**

anatomy, physiology,  
orthopedics, neurology,  
diagnostic imaging

**Prerequisites:** Students  
taking classes in the subject  
of Rehabilitation should have  
knowledge of human  
anatomy, physiology,  
orthopedics, neurology and  
diagnostic imaging.

**Name of the organisational  
unit conducting the**

**course:**Katedra Rehabilitacji i  
Ortopedii

**Person responsible for the  
realization of the**

**course:**prof. dr hab. n. med.

Ireneusz Kowalski

**e-mail:** rehab@uwm.edu.pl

**Additional remarks:** -

Students should acquire the basics of rehabilitation knowledge. Students should become familiar with the definition, assumptions and methodology of the Polish Rehabilitation School. Students should get acquainted with topics covering physiotherapy, assistive technology in rehabilitation; should know and understand the principles of directing a patient to rehabilitation. Students should be able to assess and perform a functional examination of a patient in the Rehabilitation Department.

## **DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:**

### **Symbols for outcomes related to the discipline:**

M/NM+++ , M/NMA\_P7S\_KR+++ ,  
M/NMA\_P7S\_KO+++ , M/NMA\_P7S\_WG+++ ,  
M/NMA\_P7S\_UW+++

### **Symbols for outcomes related to the field of study:**

E.U38.+ , KA7\_UU8+ , F.W13.+ , K.2.+ , E.U2.+ ,  
E.U18.+ , E.U23.+ , K.3.+ , E.U3.+ , E.U16.+ ,  
KA7\_UU7+ , E.W30.+ , K.5.+ , E.W13.+ , E.U32.+ ,  
E.U1.+ , E.W14.+ , E.W31.+ , E.U20.+ , K.1.+ ,  
E.U22.+

## **LEARNING OUTCOMES:**

### **Knowledge:**

W1 - He knows and understands the concept of disability and invalidity.

W2 - He knows and understands the role of medical rehabilitation and the methods used in it.

W3 - Knows and understands the basic complexes of neurological symptoms.

W4 -

W5 -

### **Skills:**

U1 - He can conduct a medical interview with an adult patient.

U2 - Can conduct a medical interview with a child and his family.

U3 - Can conduct a full and targeted physical examination of an adult patient.

U4 - Can plan diagnostic, therapeutic and prophylactic procedures.

U5 - Can propose individualisation of the current therapeutic guidelines and other methods of treatment in the case of ineffectiveness or contraindications to standard therapy.

U6 - Can qualify a patient for home and hospital treatment.

U7 - He can perform a functional assessment of a patient with a disability.

U8 - He can propose a rehabilitation program for the most common diseases.

U9 - Can plan specialist consultations.

U10 - Can keep patient's medical records.

U11 - Can perform selected complex medical procedures and activities in a patient before the age of 18, including participating in planning a rehabilitation program in the most common diseases of patients up to the age of 18.

U12 - He can assist during the performance and performs selected complex medical procedures and activities, including implementation of procedures, treatment and rehabilitation in outpatient and home conditions in chronically ill patients, assesses the ability of a disabled patient to function.

### **Social competence:**

K1 - He can establish and maintain a deep and respectful contact with the patient, as well as show understanding for worldview and cultural differences.

K2 -

K3 - Adheres to medical confidentiality and patient rights.

K4 - He notices and recognizes his limitations and makes a self-assessment of deficits and educational needs.

## **TEACHING FORMS AND METHODS:**

Lecture(W1;W2;W3;W4;W5;U1;U2;U3;U4;U5;U6;U7;U8;U9;U10;U11;U12;K1;K2;K3;K4;):The method of a traditional lecture, supported by an audiovisual presentation.

Classes(W1;W2;W3;W4;W5;U1;U2;U3;U4;U5;U6;U7;U8;U9;U10;U11;U12;K1;K2;K3;K4;):Exercises take place in the hospital ward, they consist in accompanying the doctor to work in the ward, examining patients, analyzing the history of diseases and results, discussing the therapy and its goals.

Seminar(W1;W2;W3;W4;W5;U1;U2;U3;U4;U5;U6;U7;U8;U9;U10;U11;U12;K1;K2;K3;K4;):Using a multimedia presentation to discuss thematic issues.

## **FORM AND CONDITIONS OF VERIFYING LEARNING**

### **OUTCOMES:**

Lecture (Oral exam) - Form and manner of obtaining credit in the course Rehabilitation: 1. The course ends with an oral examination. 2. A student is allowed to take the examination in Rehabilitation only after receiving positive credits from lectures, practical classes and seminars. 3. For the final evaluation of Rehabilitation learning outcomes a standardised oral exam (OSCE - Objective Structured Clinical Examination) has been introduced. The exam is held in groups of 4-5 students, in front of the commission composed of a professor, assistant and/or lecturer. 3. The exam questions are divided into two groups - theoretical and practical: - theoretical questions cover material from lectures and seminars, - practical questions cover material from seminars and practical classes, - during the exam student draws two questions: one theoretical and one practical. 4. The exam commission evaluates student's answers according to the following criteria: a) the scope of theoretical knowledge, b) general understanding of the issue, c) skills of analyzing the problem, d) skills of problem resolving, e) concision of the answer, f) skills of giving practical recommendations. 5. The final examination grading system is as follows: - 5 (very good) - obtaining 6 points according to the criteria - 4.5 (more than good) - obtaining 5 points according to the criteria - 4 (good) - obtaining 4 points according to the criteria - 3.5 (fairly good) - obtaining 3 points according to the criteria - 3 (satisfactory) - obtaining 2 points according to the criteria - 2 (fail) - obtaining 1 or no points according to the criteria. -

Lecture (Part in the discussion) - Presence. -

Classes (Evaluation of the work and cooperation in the group) - Participation in the discussion, patient examination, analyzing medical history and results, discussing therapy and its goals. -

Seminar (Evaluation of the work and cooperation in the group) - Presence, involvement and participation in the discussion. -

### **BASIC LITERATURE:**

1. Kowalski I.M., Topór M., *Rehabilitation programmes for children and adolescents with bad posture, vertebral column curvatures and pelvic deformities. Eu cooperation programme.*, Wyd. Kaliningrad, R. 2008

2. Cooper G., *Essential Physical Medicine and Rehabilitation*, Wyd. Humana Press, R. 2006

3. Sackheim K.A., *Rehab Clinical Pocket Guide. Rehabilitation Medicine*, Wyd. Springer New York, R. 2013

### **SUPPLEMENTARY LITERATURE:**

1. , *Polish Annals of Medicine*, Wyd. , R. 2008.2021



## Detailed description of ECTS credits awarded - part B

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### Rehabilitation

The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

- participation in: Lecture	10.0 h
- participation in: Classes	15.0 h
- participation in: Seminar	10.0 h
- consultation	5.0
	Total: 40.0 h.

2. Independent work of a student:

**Prowadzący nie przypisał wszystkich godzin pracy studenta lub przedmiot ma zmienioną ilość godzin i jest ich za dużo, wynik ECTS może być niepoprawny.**

Total: 10.0 h

contact hours + independent work of a student Total: 50.0 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS credit = 50.0 h : 25.0 h/ECTS = 2.00 ECTS on average: 2.0 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher: 0,00 ECTS points,

- including the number of ECTS credits for hours of independent work of a student: