*Attachment No. 2 to the Rector’s Ordinance No. 90 /2018*

**description of the course of study**

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| **Course code** | **0912-7LEK-C5.1-R** |
| **Name of the course in:**  | Polish | **Rehabilitacja** |
| English | **Rehabilitation** |

1. **LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES**

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| **1.1. Field of the studies** |  |  |  |  | Medicine |
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| **1.2. Mode of the studies** |  |  |  |  | Full-time |
|  |  |  |  |  |  |  |
| **1.3. Level of the studies** |  |  |  |  | Uniform Master’s studies |
| **1.4. Profile of study\*** |  |  |  |  | General academic |
|  |  |  |  |  |  |  |
| **1.5. Person/s preparing the course description** |  |  Prof. dr hab. Marek Żak |
|  |  |  |  |  |
| **1.6. Contact** |  |  |  |  | mkzak@ujk.edu.pl |

1. **General characteristicS of the course of studIES**

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| **2.2. Language of instruction** | English |
| **2.4. Prerequisites\*** | Key information comprised in the curriculum for medical students, pertaining to the scope of anatomy, physiology, laboratory diagnostics, orthopaedics, neurology, internal medicine, and pharmacology. In particular, the structure and function of the osteoarticular system, nervous system, circulatory, as well as respiratory system. Basic typology of disorders affecting the motor system, as well as nervous, cardiovascular, and respiratory systems. |

1. **DETAILED CHARACTERISTICS OF THE COURSE OF studIES**

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| * 1. **Form of classes**
 | LECTURE: 15 (including 3 hours of e-learning), CLASSES - 15; PRACTICAL CLASSES: 20 |
| * 1. **Place of classes**
 | Lecture – Courses held within the teaching facilities of the UJK, Exercises WnoZ worhshops,  |
| * 1. **Form of assessment**
 | LECTURE – E, CLASSES - Zo (Credit with grade) |
| * 1. **Teaching methods**
 | Lecture, tutorial, case-study pursued within operational medical facilities |
| * 1. **Bibliography**
 |  **Required reading** | 1. Catherine H. Balthazar, Ann M. Vendrely. ***Rehabilitation Research*,** 6th Edition Elsevier **2021**, eBook ISBN: 978032368044, Paperback ISBN: 9780323680431
2. Cara Pelser, Helen Banks, Ganesh Bavikatte. ***A Practical Approach to Interdisciplinary Complex Rehabilitation*,** 1st Edition Elsevier **2022**, eBook ISBN: 9780702082771, Paperback ISBN: 9780702082764
3. Dale Avers, Rita Wong. ***Guccione's Geriatric Physical Therapy*,** 4th Edition Elsevier **2019,** eBook ISBN: 9780702082771, Paperback ISBN: 9780702082764
4. Michael A. Pagliarulo. ***Introduction to Physical Therapy***, 6th Edition Elsevier **2021,** eBook ISBN: 9780702080173, Paperback ISBN: 9780323673488
 |
|  **Further reading** | 1. Karen Kenyon, Jonathan Kenyon. ***The Physiotherapist's Pocketbook - Essential Facts at Your Fingertips,*** 3rd Edition Elsevier **2018**,eBook ISBN: 9780702077982, Paperback ISBN: 9780702055065
2. Shane O'Hanlon, Marie Smith. ***A Comprehensive Guide to Rehabilitation of the Older Patient*,** 4th Edition Elsevier **2021**, eBook ISBN: 9780702080173, Paperback ISBN: 9780702080166
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1. **Objectives, syllabus CONTENT and ANTICIPATED LEARNING outcomes**

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| * 1. **Course objectives *(including format of classes)***

C 1 Getting acquainted with the key issues of medical rehabilitation, definitions, objectives, therapeutic methods and the background of its development as a specific field.C 2 Getting acquainted with the elements of clinical trials for rehabilitation purposes, and key principles of therapeutic management aimed at comprehensive functional enhancements of the patients involved in therapyC 3 Introducing students to the issues of complex rehabilitation of patients affected by organ dysfunctions, improving treatment of the patients following acute spinal trauma, accompanied by neurological complications, rehabilitation treatment of patients after the injuries of motor organs, comprehensive rehabilitation treatment of degenerative changes in the motor organs, as well as defining its status within the scope of interdisciplinary proceedings (including surgical interventions), conservative treatment of spinal disorders, rehabilitation in the patients affected by the disorders of the respiratory tract and the cardiovascular system. |
| * 1. **Detailed syllabus (including format of teaching)**

Lectures 5 lec. x 3 hours= 15 hours1. CNS neuroplasticity and neurogenesis as the basis for medical rehabilitation. Polish model of medical rehabilitation. The role of a specialist in medical rehabilitation and cooperation as part of a rehabilitation team with a specialist in Physiotherapy. Rehabilitation objectives, specific tasks and its status within the healthcare system. Individual disability juxtaposed against medical rehabilitation process.
2. Definition and physiological basis of rehabilitation, comprehensive rehabilitation, impact measures in rehabilitation, determinants of effectiveness and obstacles faced in rehabilitation, rehabilitation and prevention of disability, specificity of rehabilitation in the disorders of the musculoskeletal, circulatory-respiratory, and nervous systems; individuals in the developmental, as well as in senior age.
3. Select neurophysiological methods applied in rehabilitation. Functional assessment of a patient. Indication and contraindications for rehabilitation. Basics of the hands-on therapy in rehabilitation.
4. Basics of kinesiotherapy, including diverse types of therapeutic exercises. The specifics of rehabilitation pursued in the disorders of the musculoskeletal, circulatory-respiratory, and nervous systems; individuals in the developmental, as well as in senior age.
5. Physical factors in therapeutic improvement, types of energy input applied. Radiological and imaging research in rehabilitation.

**Classes (Theoretical background) 15 hours** 1. Evaluation of overall effectiveness of the musculoskeletal system in static and dynamic conditions. Mapping out the optimal physiotherapeutic strategies in correlation with the results of physical examination.
2. Rehabilitation in the disorders of the musculoskeletal system. Orthopaedic surgery in orthopaedics, traumatology and rheumatology (extracts, plaster dressings). Comprehensive prevention of adverse outcomes of individual immobilization. Physiotherapy offered to post-surgery patients, originally affected by the disorders of the musculoskeletal system. Faulty posture and scoliosis. Treatment of back pain. Rehabilitation in osteoporosis.
3. Clinical issues and referrals for rehabilitation of patients affected by the disorders of the central and peripheral nervous system. Neuro-rehabilitation methods based on brain plasticity. Principles of physiotherapy in the individuals with increased or reduced muscle tension. Spasticity and rigidity-methods of treatment. Posture defects and scoliosis
4. Clinical issues and principles of physiotherapy in peripheral vascular diseases and select metabolic disorders. Principles of primary and secondary prevention of cardiovascular disease. Rehabilitation methods in the diseases of the circulatory and respiratory systems.
5. Pain therapy. Improving conditions in the individuals affected by chronic progressive disease. Psycho-social problems affecting the disabled individuals.
 |
| **Practical (hands-on) classes** (20 hours)1. Practical implementation of general and differential diagnostics for the purposes of medical rehabilitation. Practical application of select methods of physical therapy and kinesiotherapy. Appreciation of neurorehabilitation methods based on brain plasticity. 2. Key issues in the rehabilitation of patients affected by the disorders of the central and peripheral nervous system.   Principles of rehabilitation for the individuals with increased or reduced muscle tone. Methods of treating spasticity and muscle stiffness.  Clinical issues and key principles of rehabilitation in the developmental age. Rehabilitation of children with sensory modulation disorders.  Clinical issues and key principles of rehabilitation of children with neuro-developmental delay. Rehabilitation of scoliosis and posture defects in children. Clinical issues and key principles of orthopedic rehabilitation.  Clinical issues and key principles of rehabilitation in the individuals affected by rheumatic disorders.  Clinical issues and key principles of rehabilitation in cardiovascular and respiratory disorders.3. Clinical issues and key principles of physiotherapy in peripheral vascular diseases and select metabolic disorders.  Clinical issues and key principles of rehabilitation of gynecological diseases.  Clinical issues and key principles of neurological, geriatric and psychiatric rehabilitation.  Clinical issues and key principles of rehabilitation in surgical specialties.  Clinical issues and key principles of oncological rehabilitation.1. Prognosis as a foundation for mapping out a medical rehabilitation program. Praxeological stages, goals and their hierarchy in the medical rehabilitation program. General outline of medical rehabilitation programming. Designing individually tailored medical rehabilitation programs. Optimal and minimal program in the process

of medical rehabilitation. Comprehensive character of the medical rehabilitation process. The results of scientific research as the key criterion for choosing optimal solutions and a stimulus for progress in medical rehabilitation. 1. Adverse effects of erroneously designed structural framework for medical rehabilitation.

The need for modification of the timeline for medical rehabilitation. Monitoring of the outcomes as the key guideline for verification and any subsequent modification of the medical rehabilitation program. Assessment of the failures of previous rehabilitation ventures as the key guideline for verification and any subsequent modification of the medical rehabilitation program. The most common errors committed when mapping out the structure medical rehabilitation program.  |

* 1. **Education outcomes in the academic discipline**

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| **Code** | **A student who passed the course with credit** | **Relation to teaching****outcomes** |
| within the desired scope of **knowledge** appreciates and understands: |
| W01 |  environmental and epidemiological conditions for the most common diseases | E.W1. |
| W02 | concept of individual disability  | E.W30. |
| W03 | role of medical rehabilitation and methods applied within its scope | E.W31. |
| within the desired scope of **ABILITIES** knows how to: |
| U01 |  conduct a full and specifically targeted physical examination of the adult patient | E.U3. |
| U02 |  assess a patient’s general condition and awareness | E.U7. |
| U03 | complete differential diagnosis of the most common disorders in adults and children | E.U12. |
| U04 |  assess and articulate the somatic and mental status of patients | E.U13. |
| U05 |  recognize any directly life-threatening medical conditions  | E.U14. |
| U06 |  plan diagnostic, therapeutic and preventive procedures | E.U16. |
| U07 |  conduct the analysis of any likely side-effects of each specific medication and any potential interaction between them | E.U17. |
| U08 | refer the patient to home-based treatment and/or hospitalization | E.U20. |
| U09 |  recognize the conditions in which the functional status of the patient or his specific preferences may potentially cause any restrictions in the treatment, whilst remaining in conflict with applicable medical guidelines  | E.U21. |
| U10 |  conduct functional assessment of the patient affected by any disability | E.U22. |
| U11 |  propose a program of rehabilitation for common medical complaints | E.U23. |
| U12 |  assess laboratory test results and identify the actual reasons for deviations from the referential values | E.U24. |
| U13 |  plan and order specialist medical consultations | E.U32. |
| U14 |  comply with all applicable aseptic and antiseptic regulations | F.U3. |

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| * 1. **Methods of assessment of the desired teaching outcomes**
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| **Teaching** **outcomes****(code)** | **Method of assessment (+/-)** |
| **Exam oral/written\*** | **Test\*** | **Project\*** | **Effort** **in class\*** | **Self-study\*** | **Group work\***  | **Others\*** |
| ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** | ***Form of classes*** |
| *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* | *L* | *C* | *...* |
| W01 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| W02 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| W03 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U01 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U02 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U03 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U04 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U05 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U06 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U07 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U08 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U09 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U10 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |
| U11 | ***+*** | ***+*** |  | ***+*** | ***+*** |  |  | ***+*** |  |  | ***+*** |  |  |  | ***+*** |  | ***+*** |  |  | ***+*** |  |

***\*delete as appropriate***

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| * 1. **Criteria of assessment of the desired learning outcomes**
 |
| **Form of classes** | **Grade** | **Criterion of assessment** |
|  **lecture (L)** | **3** | od 61%-68% (10pkt-12pkt) |
| **3,5** | od 69%-76% (12,5pkt-14,5pkt)  |
| **4** | od 77%-84%(15pkt-16pkt) |
| **4,5** | od 85%-92%(16,5pkt-17,5pkt) |
| **5** | od 93%-100%(18pkt-20pkt) |
| **classes (C)\*** | **3** | od 61%-68% (10pkt-12pkt) |
| **3,5** | od 69%-76% (12,5pkt-14,5pkt)  |
| **4** | od 77%-84%(15pkt-16pkt) |
| **4,5** | od 85%-92%(16,5pkt-17,5pkt) |
| **5** | od 93%-100%(18pkt-20pkt) |
| **others (...)\*** | **3** | od 61%-68% (10pkt-12pkt) |
| **3,5** | od 69%-76% (12,5pkt-14,5pkt)  |
| **4** | od 77%-84%(15pkt-16pkt) |
| **4,5** | od 85%-92%(16,5pkt-17,5pkt) |
| **5** | od 93%-100%(18pkt-20pkt) |

1. **BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT**

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| **Category** | **Student's workload** |
| **Full-time****studies** |
| *NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/* | ***50*** |
| *Participation in lectures\** | 15 |
| *Participation in classes, seminars, laboratories\** | 35 |
| *Preparation in the exam/ final test\** |  |
| *Others\** |  |
| *INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/* | **25** |
| *Preparation for the lecture\** | 15 |
| *Preparation for the classes, seminars, laboratories\** | 10 |
| *Preparation for the exam/test\** |  |
| *Gathering materials for the project/Internet query\** |  |
| *Preparation of multimedia presentation* |  |
| *Others (please specify e.g. e-learning)\** |  |
| *TOTAL NUMBER OF HOURS* | **75** |
| ECTS credits for the course of study | **3** |

***\*delete as appropriate***

***Accepted for execution*** *(date and legible signatures of the teachers running the course within a specific academic year)*

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