

## Subject card

|                                             |                                                                                                                                                      |                                                          |                                         |                                     |                                                                                                                                                |            |     |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----|
| Subject name and code                       | Principles of neuro-rehabilitation, PG_00154595                                                                                                      |                                                          |                                         |                                     |                                                                                                                                                |            |     |
| Field of study                              | Medical Biology                                                                                                                                      |                                                          |                                         |                                     |                                                                                                                                                |            |     |
| Date of commencement of studies             | October 2025                                                                                                                                         |                                                          | Academic year of realisation of subject |                                     | 2027/2028                                                                                                                                      |            |     |
| Education level                             | Bachelor's studies                                                                                                                                   |                                                          | Subject group                           |                                     | Obligatory subject group in the field of study<br>Optional subject group<br>Subject group related to scientific research in the field of study |            |     |
| Mode of study                               | full-time studies                                                                                                                                    |                                                          | Mode of delivery                        |                                     | at the university                                                                                                                              |            |     |
| Year of study                               | 3                                                                                                                                                    |                                                          | Language of instruction                 |                                     | Polish                                                                                                                                         |            |     |
| Semester of study                           | 6                                                                                                                                                    |                                                          | ECTS credits                            |                                     | 3.0                                                                                                                                            |            |     |
| Learning profile                            | academic                                                                                                                                             |                                                          | Assessment form                         |                                     |                                                                                                                                                |            |     |
| Conducting unit                             | Department of Animal and Human Physiology -> Faculty of Biology -> Rector                                                                            |                                                          |                                         |                                     |                                                                                                                                                |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor                                                                                                                                   |                                                          | dr Emilia Leszkowicz                    |                                     |                                                                                                                                                |            |     |
|                                             | Teachers                                                                                                                                             |                                                          |                                         |                                     |                                                                                                                                                |            |     |
| Lesson types                                | Lesson type                                                                                                                                          | Lecture                                                  | Tutorial                                | Laboratory                          | Project                                                                                                                                        | Seminar    | SUM |
|                                             | Number of study hours                                                                                                                                | 0.0                                                      | 30.0                                    | 0.0                                 | 0.0                                                                                                                                            | 0.0        | 30  |
|                                             | E-learning hours included: 0.0                                                                                                                       |                                                          |                                         |                                     |                                                                                                                                                |            |     |
|                                             | Additional information:<br>going to public utility facilities                                                                                        |                                                          |                                         |                                     |                                                                                                                                                |            |     |
| Learning activity and number of study hours | Learning activity                                                                                                                                    | Participation in didactic classes included in study plan |                                         | Participation in consultation hours |                                                                                                                                                | Self-study | SUM |
|                                             | Number of study hours                                                                                                                                | 30                                                       |                                         | 5.0                                 |                                                                                                                                                | 40.0       | 75  |
| Subject objectives                          | To familiarize students with methods used in broadly understood neurorehabilitation and techniques supporting the functioning of the nervous system. |                                                          |                                         |                                     |                                                                                                                                                |            |     |

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|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Learning outcomes                                        | Course outcome                                                                                                                                                                                                                          | Subject outcome                                                                                                                                                                                                                                                                                                                      | Method of verification                                  |
|                                                          | [BIOLMEDL3_K04] is able to form opinions about individuals and social groups in a professional context                                                                                                                                  | Is able to formulate opinions regarding the needs and methods of neurorehabilitation in the context related to the profession of a medical biologist.                                                                                                                                                                                | [SK8] observation of student's independent or team work |
|                                                          | [BIOLMEDL3_K09] is ready to work with honesty and integrity in his scientific and professional work                                                                                                                                     | Understands the need for honesty and reliability in scientific and professional work.                                                                                                                                                                                                                                                | [SK8] observation of student's independent or team work |
|                                                          | [BIOLMEDL3_W07] has advanced knowledge of medical biology and is familiar with the health sciences terminology                                                                                                                          | Has knowledge of neurorehabilitation methods and knows terminology in this field.                                                                                                                                                                                                                                                    | [SW4] test/exam - oral or written                       |
|                                                          | [BIOLMEDL3_W18] knows the basic principles of occupational health and safety and ergonomics                                                                                                                                             | Knows the basic principles of occupational health and safety and ergonomics.                                                                                                                                                                                                                                                         | [SW1] oral statement/ conversation/discussion           |
|                                                          | [BIOLMEDL3_U07] is able to identify problems corresponding to the needs of an individual and a social group and to undertake basic diagnostic, preventive and educational activities appropriate to the profession of medical biologist | Is able to identify problems corresponding to the needs of an individual and a social group and to undertake basic preventive and educational activities in the field of neurorehabilitation                                                                                                                                         | [SU8] observation of student's independent or team work |
|                                                          | [BIOLMEDL3_W12] is oriented in the development and current state of knowledge and the latest trends in medical biology; indicates their relationship with other disciplines of natural or medical sciences                              | Familiar with the development, current state of knowledge and the latest trends in neurorehabilitation; knows their relationship with other medical science disciplines                                                                                                                                                              | [SW4] test/exam - oral or written                       |
|                                                          | [BIOLMEDL3_W11] posiada zaawansowaną wiedzę dotyczącą metod oceny stanu zdrowia oraz objawów i przyczyn wybranych zaburzeń i zmian chorobowych oraz zna podstawy zdrowego trybu życia, potrafi je uzasadnić i promować                  | Has knowledge of assessing the symptoms and causes of nervous system disorders and knows the basics of ensuring its proper functioning.                                                                                                                                                                                              | [SW4] test/exam - oral or written                       |
| Subject contents                                         | Zootherapy, DBS, TMS, tDCS, tFUS, Biofeedback, Manual therapies, bioprotheses and others.                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                      |                                                         |
| Prerequisites and co-requisites                          |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                      |                                                         |
| Assessment methods and criteria                          | Subject passing criteria                                                                                                                                                                                                                | Passing threshold                                                                                                                                                                                                                                                                                                                    | Percentage of the final grade                           |
|                                                          |                                                                                                                                                                                                                                         | 51.0%                                                                                                                                                                                                                                                                                                                                | 100.0%                                                  |
| Recommended reading                                      | Basic literature                                                                                                                                                                                                                        | Farsin Hamzei i wsp.: Neurorehabilitacja oparta na dowodach naukowych<br><br>Volker Dietz, Nick Ward (eds): Oxford Textbook of Neurorehabilitation<br><br>David J. Reinkensmeyer, Laura Marchal-Crespo, Volker Dietz (eds): Neurorehabilitation Technology<br><br>or other items on neurorehabilitation available in the UG library. |                                                         |
|                                                          | Supplementary literature                                                                                                                                                                                                                | Relevant articles in English                                                                                                                                                                                                                                                                                                         |                                                         |
|                                                          | eResources addresses                                                                                                                                                                                                                    | Adresy na platformie eNauczanie:                                                                                                                                                                                                                                                                                                     |                                                         |
|                                                          |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                      |                                                         |
| Example issues/ example questions/ tasks being completed |                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                      |                                                         |
| Work placement                                           | Not applicable                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                      |                                                         |

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