UNIVERSITETI I EVROPËS JUGLINDORE
УНИВЕРЗИТЕТ НА ЈУГОИСТОЧНА ЕВРОПА
SOUTH EAST EUROPEAN UNIVERSITY

Study program	Clinical Rehabilitation in the Field of Neurodevelopmental Disorders and Neurodegenerative Diseases (2025/2026)
Faculty	Health Sciences
Study Cycle	Second Cycle (Postgraduate)
ECTS	60
Code	NDND-60
Title	Specialist Applied in Clinical Rehabilitation in the Field of Neurodevelopmental Disorders and Neurodegenerative Diseases
Accreditation archive number [60]	03-3105/3
Accreditation archive number []	
Decision for starting of the program	
Accreditation date	18.12.2025

Description of the program

The justification for organizing a second cycle of specialist professional studies for Physical Technician - Specialist in Clinical Rehabilitation of Neurodevelopmental Disorders and Neurodegenerative Diseases at the Faculty of Health Sciences is based on the need for:
- training professional staff in the field of health to acquire narrowly specialized education in a given health area;
- harmonization with the standards of the European Union relating to regulated professions in the domain of health sciences;
- enabling staff to improve their knowledge and skills in certain areas;
The main objective of this study program is to train students in a range of generic skills and clinical competencies, the application of scientific and professional achievements in clinical practice, including further professional development, in accordance with the principles of good scientific and clinical practice.
That is, through the study program Physical Technician - Specialist in Clinical Rehabilitation of Neurodevelopmental Disorders and Neurodegenerative Diseases, the goal is to respond to the needs of the healthcare system for the education of physiotherapists to provide healthcare services in the specified narrower area, in accordance with global needs.

Career

The pathologies that older people face are very diverse and they also suffer from them with varying intensity. As for neurological changes, these are diseases that affect aspects such as motor skills or the correct flow of thought, and are therefore particularly harsh. Palliative care, on the other hand, alleviates suffering in irreversible cases.
These two areas are very important, since they relate to two very sensitive issues that can worsen the quality of life of older people. Due to that, specific knowledge and skills are needed, for the updating and establishment of which this professional

program for specialist professional studies for a nurse, specialist in Community Health Care in the field of Neurogeriatrics and Palliative Care, at the Faculty of Health Sciences, is planned.
The need, attractiveness, and modernity of this study program are confirmed by modern living conditions, the progress of science, but also by the experience of European countries and countries around the world in organizing studies with the same or similar structure and focus on the students' competencies.
The curriculum of the study program is designed in accordance with all the needs of the medical profession and science, with the aim of forming professional staff who, in addition to their theoretical knowledge of neurogeriatrics and palliative care, will have a wide range of adopted practical skills, applicable in the process of general and special principles of neurogeriatrics and palliative care.
The world's population is aging and, in that context, the demand for medical staff educated to provide quality health care to this vulnerable group of the population in the world and in our country is growing.
Future nurses/technicians - Specialists in Neurogeriatrics and Palliative Care will be qualified to work in: geriatric and gerontological centers, neurorehabilitation clinics, memory clinics for patients with dementia, home visiting services for the elderly, etc.

Learning outcomes

Knowledge and understanding

- Demonstrates broad knowledge of the sciences on which neurogeriatric and palliative healthcare is based, i.e. demonstrates in-depth knowledge in the fields of: neurology, psychiatry, geriatrics, palliative medicine, important for medical education in the nursing profession;
- Demonstrates broad knowledge of: etiopathogenesis, symptomatology, diagnostics, treatment and prevention of neurogeriatric diseases and diseases requiring palliative care.
- Demonstrates knowledge of research methods used in basic and applied research in all aspects of neurogeriatrics and palliative medicine.
- Demonstrates knowledge of the principles of prevention of neurogeriatric diseases and diseases requiring palliative care.

Applying knowledge and understanding

Ability to conduct specific assessment and nursing diagnosis in order to provide better quality neurogeriatric and palliative healthcare. With his/her communication skills, to help develop positive relationships with the patient and his/her family in order to build motivation that is necessary in the therapeutic and rehabilitation process. To apply his/her knowledge in the education of undergraduate students and other professionals in healthcare and other institutions.

Making judgement

Demonstrates the ability to correctly interpret various clinical situations, including diagnostic parameters, and uses clinical judgment to make a selection among the possible options that make up the phases of physiotherapy in collaboration with a specialist doctor (personal assessment, diagnosis and prognosis of physiotherapy, intervention plan, rehabilitation of disabilities, proposal of prostheses and aids).To confirm the effectiveness of the rehabilitation program by documenting professional activities, to be critical of one's work, to analyze and solve problems using appropriate national and international recommendations and evidence. Ability to use one's knowledge to motivate patients for rehabilitation treatment and to propose effective educational strategies.

Communication skills

Apply communication skills effectively while working in a team, communicating with the patient and family through oral presentations, or written reports, using medical terminology and vocabulary.
Finds appropriate solutions, concepts and ideas in the field of nursing, discusses and shares them with the nursing association, medical associations and the general public.
Participates in teamwork, actively collaborates in group work, a common form of work in primary health care, by sharing responsibilities and various activities.

Learning skills

Demonstrates skills for independent problem-solving, shows understanding of the need for professional development through continuing medical education and training.
Demonstrates the ability to self-assess the level of one's own education in order to maintain knowledge at the highest level necessary for professional practice, as well as to interpret and apply scientific knowledge in health.

Attends professional meetings.

List of courses

Semester 1

- [CM280] [6.0 ECTS] **Neurology (Neurodegenerative Disorders)**
- [CM281] [6.0 ECTS] **Pediatric Neurology (Neurodevelopmental Disorders)**
- [CM282] [6.0 ECTS] **Neurophysiology**
- [CM283] [6.0 ECTS] **Clinical Practice (Department of Neurology)**
- [6.0 ECTS] **Elective Course**

Semester 2

- [CM285] [6.0 ECTS] **Theoretical Basics of Clinical Rehabilitation in Neurology (Neurodegenerative and Neurodevelopmental Disorders)**
- [CM286] [6.0 ECTS] **Motor Rehabilitation in Common Neurodegenerative Disorders**
- [CM284] [6.0 ECTS] **Physical Therapy and Kinesiotherapy in Common Neurodevelopmental Disorders**
- [CM287] [6.0 ECTS] **Clinical Practice (Balneology Medical Centers)**
- [CM289] [6.0 ECTS] **Specialist's Thesis**

Description of courses

Core courses

- **Neurology (Neurodegenerative Disorders)**
  Objectives of the course program: Introducing the trainee to neurodegenerative diseases (changes that occur in the brain in these diseases, clinical picture and possibilities for their treatment); Introducing the trainee to the condition and quality of life of the patient in neurodegenerative diseases; Evaluation of the effects during treatment.

- **Pediatric Neurology (Neurodevelopmental Disorders)**
  This course aims to equip students with in-depth knowledge of neurodevelopmental disorders in children, including diagnosis, management, and rehabilitation strategies. Upon completion, students will be able to: • Identify and classify neurodevelopmental disorders in children. • Apply diagnostic methods for assessing these disorders. • Develop individualized treatment and rehabilitation plans. • Collaborate with multidisciplinary teams in managing complex cases.

- **Neurophysiology**
  By the end of this course, students will learn to: - Identify the main neuroanatomical systems and explain their functions. - Explain the molecular and cellular mechanisms of neuronal communication (ion channels, cellular excitability, synaptic transmission, and synaptic plasticity) within neuroanatomical systems, particularly in the integrative nervous system. - Describe how the most common impairments of the main neuroanatomical systems manifest in everyday neurological and neuropsychological practice. - Explain how the principles of clinical neuropsychology are applied to specific populations, particularly children and older adults.

- **Clinical Practice (Department of Neurology)**
  Objectives of the Course Program: Neurological Rehabilitation and Physiotherapy is a specialized field of rehabilitation focused on treating individuals with neurological disorders. Physiotherapy not only helps patients regain movement, strength, balance, or coordination but also restores their confidence and independence. Rehabilitation planning for neurodevelopmental disorders and neurodegenerative diseases is tailored individually for each person. To achieve this, the individual must first undergo a detailed neuropsychological screening and evaluation. Cognitive strengths and weaknesses (areas needing improvement) should be identified, and areas requiring rehabilitation support must be determined. The importance of the rehabilitation process after setting its objectives can only be realized effectively through the individual's regular participation and effort. Progress is very difficult, even impossible, to achieve with one-sided effort from the expert alone. For this reason, the individual's motivation, willingness, and effort are crucial, followed by support from their relatives. The aim of Neurological Rehabilitation or Neurorehabilitation is, through the physiotherapist's use of specialized methods, to improve the functions impaired due to nervous system disorders, reduce symptoms, enhance quality of life, and bring the patient to the highest level of independence. Public education on preventing various diseases that can lead to dysfunction - hindering the ability

to perform daily activities - is essential. People should also be aware of the benefits of normal movement and functioning.

- **Theoretical Basics of Clinical Rehabilitation in Neurology (Neurodegenerative and Neurodevelopmental Disorders)**
  On completion of this course, students will be expected to be able to demonstrate the following specific skills: - An advanced knowledge of the basic principles of neurorehabilitation; - An advanced understanding of the etiology and pathogenesis of different neurological conditions; - Advanced clinical skills and techniques for rehabilitation of common neurodegenerative conditions; - Recent advances in relevant physiotherapy areas, including assessment techniques, clinical reasoning and decision-making skills in developing treatment plans and comprehensive patient management. - A capacity to undertake detailed searching, analysis and interpretation of functional assessment; - An ability to promote evidence-based practice in physiotherapy.

- **Motor Rehabilitation in Common Neurodegenerative Disorders**
  During the course, students are introduced to modern principles and methods in motor rehabilitation, as a non-drug therapeutic approach in the treatment of various neurodegenerative diseases. Knowledge of basic and modern methods for evaluating functional disorders of the nervous system allows them to prepare for the effective use of resources, as a basic strategic goal of education and practice in the long term.

- **Physical Therapy and Kinesiotherapy in Common Neurodevelopmental Disorders**
  Upon completion of this course, students will be expected to be able to demonstrate the following specific skills: - Advanced knowledge of the basic principles of neurophysiology, neuropsychology and neurorehabilitation. Advanced understanding of the etiology and pathogenesis of various neurological conditions; - Assessment of the degree of development and plan of the process; - Modern skills and techniques for the rehabilitation of common neurodegenerative conditions; - Capacity to undertake detailed search, analysis and interpretation of functional assessment; - Ability to promote evidence-based practice in physiotherapy.

- **Clinical Practice (Balneology Medical Centers)**
  After completing this program, students will learn to measure, monitor, and record dysfunctions in neurodevelopmental and neurodegenerative disorders. They will be able to create a scheme and rehabilitation plan for the most common neurodegenerative diseases and neurodevelopmental disorders in spa treatment conditions. Also, students will have knowledge of the procedures used in neurorehabilitation in spa treatment conditions.

- **Specialist’s Thesis**
  After passing examinations, the student may begin the procedure of filing, making and public defense of Specialist’s Thesis. The student chooses the mentor, who gives him instructions for preparation of the application of Specialist’s Thesis. The application must be granted by the Graduate Studies Educational Collegium and the Teaching-Scientific Council of the Faculty. After preparing the final version of Specialist’s Thesis, Teaching-Scientific Council of the Faculty forms a three-member committee, which prepares the report, which may be accepted or rejected. The positive report is approved by the Teaching-Scientific Council of the Faculty, and it is set the date of public defense.

Elective courses

- **Neurological Rehabilitation in Parkinson Disease and Atypical Parkinson Syndrome**
  Upon completion of this course, graduates will be expected to be able to demonstrate the following specific skills: Advanced knowledge of the basic principles of neurorehabilitation. Advanced understanding of the etiology and pathogenesis of various neurological conditions. Advanced clinical skills and techniques for rehabilitation of common neurodegenerative conditions. Recent advances in relevant areas for physiotherapy, including assessment techniques, clinical judgment and decision-making skills in the development of treatment plans and comprehensive patient management. Capacity to undertake detailed research, analysis and interpretation of functional assessment. Ability to promote evidence-based practice in physiotherapy.

- **Effects of Nutrition on Neurodegenerative Diseases and Neurodevelopmental Disorders**
  Course objectives: To understand the relationship between dietary patterns and brain function. To identify the role of nutrients in protecting against or aggravating neurodegenerative processes. To describe the mechanisms through which nutritional factors influence oxidative stress, inflammation, etc. To assess the importance of micronutrients such as vitamin B12, vitamin D, omega-3, antioxidants, etc. To develop research and analytical skills in reviewing scientific literature on the role of nutrition in health.

- **Ethical Principles in Pediatric Neurology: Neurodevelopmental Disorders**
  Upon completion of this course, the student will: - Understand the approach to ethical treatment of normal and the most common patterns of abnormal development. - Be capable of taking detailed patient histories in a supportive manner. - Develop ethical sensitivities for conducting clinical examinations of children of all ages, including developmental assessments. - Attain competency in neurological examination and neurodevelopmental assessment in newborns, infants, and older children. - Be able to independently develop research projects or papers relevant to the field of pediatric neurology, incorporating ethical principles.

- **Neuropsychological Evaluation in Neurodegenerative and Neurodevelopmental Disorders**
  This course is designed to be an introduction to neuropsychological theory. The course will cover the major functional domains typically assessed by neuropsychologists. Assessment across the lifespan will be discussed, with an emphasis on the evaluation of children and adolescents. Some of the most commonly used neuropsychological instruments will be taught. In addition, various disorders commonly encountered by neuropsychologists and their impact on neuropsychological test performance will be reviewed.