**ACADEMIC DISCIPLINE OVERVIEW**

1. **Program data**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1.1.** | **GRIGORE T. POPA UNIVERSITY OF MEDICINE AND PHARMACY IASI** | | | | | | | |
| **1.2.** | **FACULTY OF MEDICAL BIOENGINEERING** | | | | | | | |
| **1.3.** | **PROGRAMME:** Physio-kinetotherapy and rehabilitation | | | | | | | |
| **1.4.** | **STUDY FIELD:** Health | | | | | | | |
| **1.5.** | **STUDY CYCLE**: UNDERGRADUATE | | | | | | | |
| **1.6.** | **STUDY PROGRAMME:** INENGLISH | | | | | | | |
| 1. **Subject data** | | | | | | | | |
| **2.1.** | **Subject: Pediatrics and child rehabilitation / RE1302** | | | | | | | |
| **2.2.** | **Module leader: Lecturer, PhD Dana – Teodora Anton-Paduraru**  **Lecturer, PhD Simona Gavrilescu** | | | | | | | |
| **2.3.** | **Seminar leader: Lecturer, PhD Dana – Teodora Anton-Paduraru**  **Lecturer, PhD Simona Gavrilescu** | | | | | | | |
| **2.4. Year of study** | | **III** | **2.5. Semester in which is taught** | **I** | **2.6. Evaluation type** | Exam | **2.7. Subject status** | Mandatory |

1. **Estimated total time (hours/semester of didactic activity)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **3.1.Number of hours / week** | 4 | **3.2. Courses number of hours / week** | 2 | **3.3.Seminar / l practical classes** | 2 |
| **3.4. Total number of learning hours** | 56 | **3.5. Courses** | 28 | **3.6. Seminar / practical classes** | 28 |
| **3.7. Distribution of the available time** | | | | | Hours |
| **Study based on the manual, lecture support, bibliography and hand notes** | | | | | 12 |
| **Supplementary documentation in the library, using specialised platforms via internet and by field work** | | | | | 14 |
| **Preparation for seminars / practical classes, study themes, reviews, portofolio, and essays** | | | | | 10 |
| **Tutorship** | | | | |  |
| **Examinations** | | | | | 8 |
| **Other activities** | | | | |  |
| **3.8. Total hours of individual study** | | | | | 44 |
| **3.9. Total hours pes semester** | | | | | 100 |
| **3.10. Number of credits** | | | | | 4 |

1. **Prerequisites (as needed)**

|  |  |
| --- | --- |
| **4.1 Curriculum** | **-** |
| **4.2 Skills** | **-** |

1. **Conditions (as needed)**

|  |  |
| --- | --- |
| **5.1. Lectures** | **Video logistical support** |
| **5.2. Seminars/Laboratories** | **The students will have suitable equipment** |

1. **Specific competences acquired**

|  |  |
| --- | --- |
| Professional competences (expressed as knowledge and abilities) | C1.2 Fundamental knowledge to explain the pediatric syndromes and / or diseases  C1.3 Application of kinetic therapy programs in conjunction with the fuctional diagnosis and according to the indications of the doctor, also performing the secondary prophylaxis  C1.4 Using suitable parameters in the techniques aiming to increase the mobility of joints, muscular strength, coordination, balance, in improving some changed parameters (cardiovascular, respiratory, neuromuscular, etc.)  C1.5 Development and implementation of new physical therapy protocols  C2.1 The definition of general and local effects of the medical massage, a description of the main massage techniques for different body regions, with their indications and contraindications  C2.2 Basic knowledge for the explanation and interpretation of the opportunity of kinetic therapy programs adapted to the treated region and to the type of pathology  C2.3 Application of massage programs characteristic to every pathology and treated region  C2.4 Analysis of the use of parameters of intensity and duration of the massage techniques adapted to the pathology, considering the muscle tone, the pain sensitivity, before and after the massage.  C2.5 Implementation of new massage protocols  C3.1 The identification of the physiological mechanisms of the thermoregulation, the effects of the thermal factors on the human body systems and apparatuses; identification of hydrothermaltherapy techniques (HTT) with indications, contraindications and precautions.  C3.2 Knowledge regarding the procedures of hydrothermotherapy for the proper choice of a therapy strategy  C3.3 Evaluation and integration of the hydrothermotherapy procedures in the therapeutical program, according to the type of pathology and objectives.  C3.4 Evaluation of the suitable parameters in applying all the forms of hydrothermotherapy establishing the opportunity and the associations between the procedures.  C3.5 Development and preparation of new protocols for HTT  C4.3 Applying procedures for electrotherapy, phototherapy, magnetotherapy, ultrasound therapy; use of parameters and a timetable of applications adapted to the pathology and the treated area.  C4.4 Using suitable parameters in all the forms of electrotherapy, assessing the effects of analgesics, muscle relaxants, or the intensity of muscle contraction depending on the applied procedure  C4.5 Implementation of various strategies for the development of new protocols for electrotherapy |
| Transverse competences (of role, of professional development, personal) | Identification of the objectives to be achieved, of the available resources, of the conditions for their completion, of the work phases, the working time, related deadlines and risks  Identification of roles and responsibilities in a multidisciplinary team and the application of the techniques of networking and effective work within the team and in the relationship with the patient |

1. **Objectives of the study discipline (according to the grid of specific competences acquired)**

|  |  |
| --- | --- |
| **7.1 General objective of the discipline** | * Explanation of cardiovascular syndromes and diseases, kinetic therapy programs, hydrothermotherapy, electrotherapy, functional assessment methods adapted to the treated area and the type of pediatric pathology |
| **7.2 Specific objectives** | - Assessment and integration of the kinetic therapy procedures, hydrothermotherapy, electrotherapy, applying appropriate scores for initial assessment and for assessing the functional deficit reduction, the socio-professional independency acquired after the applied therapies |

1. **Contents**

**8. 1. Course**

|  |  |  |
| --- | --- | --- |
|  | **Teaching methods** | **Obs** |
| 1. Infections of the upper and lower airways: general data, rhinopharyngitis, adenoiditis, sinusitis, acute bronchiolitis, asthma in infants and children. Aerosol therapy Hydrotherapy Kinetic therapy Respiratory gymnastics. 2. Juvenile idiopathic arthritis (oligoarticular forms, poliarticular forms, systemic forms), spondyloarthropathy and reactive arthritis in the pathology of child and adolescent. Recovery techniques and methods. 3. Lupus Erythematosus. Acute articular rheumatism. Dermatomyositis. Juvenile scleroderma. Periartrithis Nodosa in infants. Kinetic therapy, balneotherapy, adjuvant therapy. 4. Physically disabled child (emotional disorder, autism, mental retardation), auditory, visual and/or verbal disability: therapeutic approach, the role of the kinetic therapy in the medical assistance to such children. 5. Genetic disorders: Pancreatic cystic fibrosis (mucoviscidosis). Down syndrome. Chronic pain. Assessment and recovery methods 6. Neuro-muscular diseases in pediatric pathology: Duchenne Muscular Dystrophy, peripheral facial palsy. Central motor infirmity (infantile cerebral paralysis). Techniques and methods of recovery 7. Obesity in children and adolescents: Techniques and methods of recovery (the role of physical therapy, methods associated to physical therapy - diet, behavioural therapy) 8. Particularities of the osteo - articular system in children.Particularities of fractures in children. Ischemic osteonecrosis of the femoral head (Legg – Calvé – Perthes - Waldenström disease). Recovery techniques and methods 9. Congenital arthrogryposis multiplex. Cerebral palsies. Recovery techniques and methods. 10. Scoliosis. Kyphosis. Congenital muscular torticollis. 11. Acute transient synovitis of the hip. Congenital hip dislocation. Recovery techniques and methods 12. Postinjectional quadriceps retraction. Chronic instabilities of patella. Recovery techniques and methods 13. Incorrect walking. Postural deformations of the foot. Congenital club foot.Congenital talus valgus foot. Recovery techniques and methods 14. Flat foot. Recovery techniques and methods. Burns in children. Recovery techniques and methods. | **Powerpoint presentations, interactive courses** | **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours**  **2 hours** |

**8.2.Practical Classes**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| 1. Presentation of the consultation sheet for children and adolescents (data collection, history of the disease, examination of systems and apparatuses, the interpretation of the laboratory data, anthropometric measurements, formulation of the diagnosis) 2. Examination and preparation of a custom plan for the recovery of a patient with airway infections sinusitis, rhynopharyngitis, adenoiditis, acute bronchiolitis, asthma (clinical methods, spyrometric methods at home or in a health facility, kinetic therapy in chronic ventilatory dysfunction), individualized recovery plan. Aerosol therapy 3. Kinetic therapy of idiopathic juvenile arthritis.   Special methods of treating the patient and family; willingness to achieve a custom kinetic therapy program.   1. Presentation of management strategies on the rehabilitation of children with mental cognitive deficiency and other disabilities 2. Practical presentation of functional locomotion balance (algometry, inclinometry etc.). Laser therapy, electrotherapy, magnetic therapy and other techniques applied in the treatment of pediatric disorders. Conclusions and prospects 3. Methods of assessing and drawing up a plan of kinetic therapy for patients with motor disability. Examination and preparation of a custom plan for the recovery of a patient with musculoskeletal disease. 4. Assessment methods and drawing up a custom plan of kinetic therapy for the patients with neuro-motor deficit. 5. Examination and drawing up a custom plan for the recovery of a patient with Down's syndrome. Examination and preparation of a custom plan for the recovery of a patient with cystic fibrosis 6. Obesity in children and adolescents: assessment methods and drawing up a custom kinetic therapy plan 7. The role and importance of kinetic therapy in orthopedic therapy in children. Clinical examination of the post-traumatic patient in children - case presentation. 8. The role and importance of kinetic therapy treating the Perthes disease - various stages, kinetic therapy programs, case presentation. The role of kinetic therapy in deficiencies of the spine in Sprengel's deformity 9. Kinetic therapy in the treatment of congenital dislocation of the hip in children - case presentation, preparation of exercise routines. Functional recovery in postinjectional retraction of the quadriceps in children - case presentation, exercise routines. 10. Functional recovery of the club foot, talus valgus, metatarsus adductus, convex foot - case presentation, kinetic therapy programs. 11. The importance of the kinetic therapy in the recovery of the limitations of the movement amplitude (joint pain) after fractures - case presentation, exercise routines. | **Discussions, case presentations, practical demonstrations, experimental work** | **2hours**  **2hours**  **2hours**  **2hours**  **2hours**  **2hours**  **2hours**  **2hours**  **2hours**  **2hours**  **2hours**  **2hours**  **2hours**  **2hours** |
| **Bibliography**  **Mandatory**  1.Anton-Paduraru Dana-Teodora – the course  2.Ciofu P, Ciofu C. Esenţialul în pediatrie (The essential pediatrics). Ediţia a-2a, Ed. Medicală Amaltea, Bucureşti, 2002.  **selective**  1. Ailioaie C. Boli imune şi alergice la copil (Immune and allergic diseases in children) Ed. Tehnopress, Iaşi, 2003.  2. Goţia S, Ailioaie C, Ailioaie L. Boli reumatismale şi kinetoterapia la copii (Rheumatic diseases and kinetic therapy in children). Editura TEHNOPRESS, Iaşi, 2004.  3. Ailioaie C, Ailioaie L. Managementul durerii reumatismale cronice la copil (Managing the chronic rheumatic pain in children) Ed. PIM, Iasi, 2008,  4. Ailioaie LM, Ailioaie C. Biofizica locomoţiei umane. Aparatul locomotor la copil: aspecte clinice şi metode de investigaţie (Biophysics of human locomotion. Musculoskeletal issues in children: clinical aspects and investigative methods). - Editura Vasiliana ’98, Iasi, 2000.  5. Goţia S, Moraru E, Ailioaie C, Rugina A, Murgu A. Pediatrie- Boli respiratorii, boli cu mecanism imun, hepatologie (Respiratory diseases, immune mechanism diseases, hepatology). Ed. Editura Vasiliana ’9, Iaşi, 2008  6. Ailioaie C, Ailioaie Laura în Managementul non-farmacologic al durerii cronice musculo-scheletale la copil şi adolescent, în Durerea acută şi cronică la copil (The non-pharmacological management of the musculoskeletal chronic pain in children and adolescents, The acute and chronic pain in children). Editor and author coordinator Goţia Stela. Editura Vasiliana’98, Iaşi, 2009. | | |

1. **Correlation of the discipline contents with the expectations of the epistemic community, professional associations, and representative employers from the afferent program field**

|  |
| --- |
| Knowledge and abilities are established as didactic objectives and specified as such in the analytic programs that are revised yearly. After their analysis by the study discipline staff, these are discussed and approved in the Curricular Committee, towards curricular harmonization among the various study disciplines. Along this entire process systematic evaluation is performed, directly if possible, regarding the correspondence of the contents to the expectations of the academic community and of the representatives of the social community, professional associations, and employers. |

1. **Evaluation**

|  |  |  |  |
| --- | --- | --- | --- |
| **10.1. Activity type** | **10.2. Evaluation criteria** | **10.3. Evaluation method** | **10.3 Percentage of the final grade** |
| **10.4 Lecture** | **Acquiring concepts and theoretical aspects presented in the course** | **Written exam** | **50%** |
| **10.5 Seminar/laborator** | **Activities carried out in laboratory** | **Midterm tests + assistant's grade**  **Colloquium exam** | **10%**  **40%** |
| **The minimum condition for being promoted:**  **The initial evaluation and appreciation of the decrease of the functional deficit, socio-professional independence acquired after the applied therapies** | | | |

**Completition date, Course holder signature,**

20. 01.2017 Lecturer, PhD Anton Paduraru Dana -Teodora

Lecturer, PhD. Simona Gavrilescu

**Department approval date, Head of the Departament Signature**

30.01. 2017

Lecturer Matei Daniela Viorelia, Ph-D