**ACADEMIC DISCIPLINE OVERVIEW**

**1. Program Data**

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| **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**
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| **2.1.** | **Subject: Human motion. Psychomotor rehabilitation** RE 1117 |
| **2.2.** | Module leader: Associate professor phd Mariana Rotariu  |
| **2.3.** | Seminar leader: Asist.phd. Ionite catalin |
| **2.4. Year of study** | **I** | **2.5. Semester in which is taught** | **II** | **2.6. Evaluation type** | Exam | **2.7. Subject status** | Mandatory DS |

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

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| **3.1.Number of hours / week** | 2 | **3.2. Courses number of hours / week** | 1 | **3.3.Seminar / l practical classes** | 1 |
| **3.4. Total number of learning hours** | 28 | **3.5. Courses** | 14 | **3.6. Seminar / practical classes** | 14 |
| **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** | 6 |
| **Preparation for seminars / practical classes, study themes, reviews, portofolio, and essays** | 4 |
| **Tutorship** | 2 |
| **Examinations** | 2 |
| **Other activities** |  |
| **3.8. Total hours of individual study** | 22 |
| **3.9. Total hours pes semester** | 50 |
| **3.10. Number of credits** | 2 |

1. **Preconditions (where applicable)**

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| **4.1 Curriculum** | Anatomy, Physiology |
| **4.2 Skills** | The key competences include skills such as to identify the appropriate parameters of joint mobility growth techniques, of muscular forces growth, of coordination, of balance and the improvement of some modified parameters  |

1. **Conditions (where applicable)**

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| **5.1. Lectures** | **Video logistical support** |
| **5.2. Seminars/Laboratories** | **-** |

1. **Specific competences acquired**

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| Professional competences (expressed as knowledge and abilities) | C1.1 Description of concepts, theories and fundamental notions of physiological and pathological mechanisms of the human body and in relation to the mechanics of motion. Symptoms and clinical signs, identification methods and techniques of physiotherapy. C1.2 Formulation of hypotheses and operationalization of key concepts to explain syndromes and / or diseasee |
| Transverse competences (of role, of professional development, personal) | CT1. Identify objectives to be achieved, available resources, conditions for completion of their work flow, working time, deadlines and related risks.CT2. Identifying roles and responsibilities in a multidisciplinary team and application techniques and effective work relationships within the team and the relationship with the patient |

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

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| **7.1.** General objective | Knowledge and description of human types of motion, knowledge of human motion evaluation and assessment |
| **7.2.** Specific objectives | Knowledge of human motion reference planes, key components and determinants of motion in normal and in pathological cases.- Knowledge of gait analysis, normal and pathological gait parameters- Knowledge of motion assistive technology used in rehabilitation |

1. **Contents**

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| **8. 1. Lecture** | **Teaching methods** | **Obs** |
| 1. Introduction to human motion. Fundamental concepts in human motion. General Basis of psychomotricity.
2. The main stages of evolution of psychomotricity. Basic behavior of motricity: static and dynamic balance.
3. Neuromotric behavior - muscle tone. Perceptive behaviors of motricity: body scheme, laterality.
4. Motric forms of expression of bodily activities: expression, communication and achievement of motricity. Motion assessment and analysis. Parameters of motion.
5. Gait assesment and analysis. Parameters of gait. Basic notions of podology.
6. Assistive technology in human motion.
7. Performance in human motion
 | Powerpoint presentations, interactive courses | 2 hours2 hours2 hours2 hours2 hours2 hours2 hours |

**8.2. Laboratory**

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| 1. Displacement. Inertia. Velocity. Center of gravity and mass.
2. Work, energy and power parameters assessment in motion. Optimizing energy consumption in motion.
3. Kinematic chains. Joint movement. Equilibrium evaluation. Pathologies. Stability in pathological context.
4. Posturology assesment. Methods of motion evaluation.
5. Psychomotor tests – Ozeretski. Psychomotor tests – psychomotor assessment.
6. Psychomotor tests – for preschool children. Psychomotor tests - children from birth to 3 years.
7. Assessment of motion parameters in various pathologies. Assessment of gait parameters in various pathologies. Motion evaluation in sport and rehabilitation

  | Case presentation, Power Point presentations, interactive discussions  | 2 hours2 hours2 hours2 hours2 hours2 hours2 hours |

**Bibliography**

**mandatory**

1. **Munteanu Fl. Botez. P – Biomecanica aparatului locomotor (vol I), Editura Venus, 2006**

**selective**

1. **Zatsiorsky V. - Kinematics of Human Motion, Editura Human Kinetics 1997**
2. **Zatsiorsky V. - Kinetics of Human Motion, Editura Human Kinetics 2002**
3. **Perry J. - Gait Analysis Normal And Pathological Function. Slak, New Jersey, 1992.**
4. **Bartlett R. - Introduction to Sports Biomechanics: Analysing Human Movement Patterns, Editura Routledge, 2007**
5. **Correlation of the discipline contents with the expectations of the epistemic community, professional associations, and representative employers from the afferent program field**

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| 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**

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| **Type of activity** | **Type of activity** | **Evaluation methods** | **Contribution to the final grade** |
| **Lecture** | Acquisition of the theoretical concepts and ideas presented during the lectures | Written exam | 50% |
| **Seminar/practical classes** | Knowledge of practical activity material | Colloquium practical activity | 40% |
| Lab activity and quality of term papers | Tests throughout the semester | 10% |
| **Minimal performance standard:** Knowledge of the physiological mechanism of muscular contraction and of the ways the heart adapts to effort. |

**Date, Course holder signature,**

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| Module leader: Associate professor phd Mariana Rotariu  |
| Seminar leader: Asist.phd. Ionite catalin |

23.09.2019

**Department approval date**

30.09.2019

 **Head of the Departament Signature,**

 Lecturer Matei Daniela Viorelia, Ph-D