**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** | | | | | | | | |
| **2.1.** | **Subject: Anatomy /RE1101** | | | | | | | |
| **2.2.** | **Module leader: Lecturer** **Riscanu Laura Adriana, PhD** | | | | | | | |
| **2.3.** | **Seminar leader: Lecturer Riscanu Laura Adriana, PhD** | | | | | | | |
| **2.4. Year of study** | | **I** | **2.5. Semester in which is taught** | **1** | **2.6. Evaluation type** | EXAM | **2.7. Subject status** | Mandatory  DF |

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

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| --- | --- | --- | --- | --- | --- |
| **3.1.Number of hours / week** | 4 | **3.2. Courses number of hours / week** | 2 | **3.3.Seminar / 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** | | | | | Sem I |
| **Study based on the manual, lecture support, bibliography and hand notes** | | | | | 19 |
| **Supplementary documentation in the library, using specialised platforms via internet and by field work** | | | | | 25 |
| **Preparation for seminars / practical classes, study themes, reviews, portofolio, and essays** | | | | | 25 |
| **Tutorship** | | | | | 2 |
| **Examinations** | | | | | 4 |
| **Other activities** | | | | |  |
| **3.8. Total hours of individual study** | | | | | 69 |
| **3.9. Total hours pes semester** | | | | | 125 |
| **3.10. Number of credits** | | | | | 5 |

1. **Preconditions (where applicable)**

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| **4.1.** of curriculum |  |
| **4.2.** of competences |  |

1. **Conditions (where applicable)**

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| **5.1.** for lectures | Logistic video support |
| **5.2.** for seminars / practical classes | Students will wear protective clothing (lab coat) |

1. **Specific competences acquired**

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| Professional competences (expressed as knowledge and abilities) | C1.1 description of concepts, theories and fundamental concepts of physiological and pathological mechanisms of the body, 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 diseases C1.4 Using parameters appropriate techniques to increase joint mobility, muscle strength, coordination, balance, the improvement of the modified parameters: cardiovascular |
| Transverse competences (of role, of professional development, personal) | CT1. Identify objectives to be achieved, the resources available, the 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 | Knowing the shape and structure of the human body and anatomy of various body systems  The formation of a biological thinking |
| **7.2.** Specific objectives | Gaining knowledge on the functioning of themisculosckeletal, cardiovascular, respiratory, digestive, urinary, nervous sistems  Integration anatomical data and functional unit of the living organism. |

1. **Contents**

**SEMESTER 1**

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| **8.1. Lecture- THE APPLIED ANATOMY OF THE LOCOMOTOR SYSTEM** | **Teaching methods** | **Observations** |
| **1** Viscerocranium neurocranium skeleton and skull in general. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| **2** Functional organization of the head and neck muscles, muscle innervation and vasculature head and neck. Muscle innervation and vasculature head and neck. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 3 Central nervous system, spinal cord, brainstem, cerebellum. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 4 Nervous sistem -cranial nerves, descriptive anatomy, functional organization. Cerebral hemispheres - descriptive anatomy, functional organization. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 5 Peripheral nervous system - functional organization. The endocrine system - general notions on the endocrine glands, classification, conformation | Interactive lectures,  Discussion, Explanations | **2 hours** |
| **6** Functional organization of the autonomic nervous system, centers medullary sympathetic, parasympathetic centers. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 7 Motor systems, efferent system of voluntary motility, motion control systems efferent.  Senses - morphofunctional organization of optical systems, auditory, vestibular, gustatory and olfactory | Interactive lectures,  Discussion, Explanations | 1. **hours** |
| 8 Shoulder complex- surface anatomy and surface marking | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 9 Elbow and Forearm- surface anatomy and surface marking | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 10 Wrist and Hand - surface anatomy and surface marking | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 11 Hip- surface anatomy and surface marking | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 12.Knee- surface anatomy and surface marking | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 13.Ankle and foot- surface anatomy and surface marking, the arches of the foot. The anatomy of walking. Three important zones of the lower limb the femoral, triangle, adductor canal ans popliteal fossa. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 14.Head, Neck and Trunk- surface anatomy and surface marking | Interactive lectures,  Discussion, Explanations | **2 hours** |
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| **8.2. Seminar / practical classes**  **THE APPLIED ANATOMY OF THE LOCOMOTOR SYSTEM** | **Teaching methods** | **Observations** |
| 1 Viscerocranium neurocranium skeleton and skull in general | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 2Functional organization of the head and neck muscles, muscle innervation and vasculature head and neck. Muscle innervation and vasculature head and neck. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 3 Central nervous system, spinal cord, brainstem, cerebellum. Cerebral hemispheres - descriptive anatomy, functional organization. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 4 Peripheral nervous system - functional organization. The endocrine system – general organization. The endocrine system - general notions on the endocrine glands, classification, conformation | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 5 Functional organization of the autonomic nervous system, centers medullary sympathetic, parasympathetic centers | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 6 The analyzer visual, olfactory, gustatory, descriptive and functional anatomy. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 7The acoustic -vestibular analyzer, kinesthetic analyzer. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 8 Shoulder complex - osteology, artrology, myology, vascularization, inervation. Types of moves. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 9 Elbow and Forearm - osteology, artrology, myology, vascularization, inervation. Types of moves. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 10 Wrist and Hand - osteology, artrology, myology, vascularization, inervation. Types of moves. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 11 Hip- osteology, artrology, myology, vascularization, inervation. Types of moves. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 12.Knee - osteology, artrology, myology, vascularization, inervation. Types of moves. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 13.Ankle and foot- osteology, artrology, myology, vascularization, inervation. Types of moves. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| 14.Head, Neck and Trunk- osteology, artrology, myology, vascularization, inervation. Types of moves. | Interactive lectures,  Discussion, Explanations | **2 hours** |
| **Bibliography**  **mandatory** Atlas of Human Anatomy , 6th Edition, Frank Netter, Saunders , 2014Anatomy: An Essential Textbook Pap/Psc Edition, [Anne M Gilroy](https://www.amazon.com/Anne-M-Gilroy/e/B008S0268S/ref=dp_byline_cont_book_1), 2010 **selective** Atlas of Anatomy 2nd Edition, [Anne M Gilroy](https://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&text=Anne+M+Gilroy&search-alias=books&field-author=Anne+M+Gilroy&sort=relevancerank), [Brian R MacPherson](https://www.amazon.com/s/ref=dp_byline_sr_book_2?ie=UTF8&text=Brian+R+MacPherson&search-alias=books&field-author=Brian+R+MacPherson&sort=relevancerank), [Lawrence M Ross](https://www.amazon.com/s/ref=dp_byline_sr_book_3?ie=UTF8&text=Lawrence+M+Ross&search-alias=books&field-author=Lawrence+M+Ross&sort=relevancerank) [Michael Schuenke](https://www.amazon.com/s/ref=dp_byline_sr_book_4?ie=UTF8&text=Michael+Schuenke&search-alias=books&field-author=Michael+Schuenke&sort=relevancerank) , [Erik Schulte](https://www.amazon.com/s/ref=dp_byline_sr_book_5?ie=UTF8&text=Erik+Schulte&search-alias=books&field-author=Erik+Schulte&sort=relevancerank) , [Udo Schumacher](https://www.amazon.com/s/ref=dp_byline_sr_book_6?ie=UTF8&text=Udo+Schumacher&search-alias=books&field-author=Udo+Schumacher&sort=relevancerank) [Lippincott Williams & Wilkins](https://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&text=Lippincott+Williams+%26+Wilkins&search-alias=books&field-author=Lippincott+Williams+%26+Wilkins&sort=relevancerank), 2011Gray's Anatomy: The Anatomical Basis of Clinical Practice, 41e 41st Edition Gray's Anatomy: The Anatomical Basis of Clinical Practice, 41e 41st Edition , [Susan Standring PhD DSc](https://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&text=Susan+Standring+PhD++DSc&search-alias=books&field-author=Susan+Standring+PhD++DSc&sort=relevancerank), 1977Clinically Oriented Anatomy, Sixth Edition and Grant's Atlas of Anatomy Twelfth Edition  1. Grant's Atlas of Anatomy,[Arthur F Dalley](https://www.google.ro/search?sa=X&biw=1600&bih=762&q=grant%27s+atlas+of+anatomy+arthur+f+dalley&stick=H4sIAAAAAAAAAOPgE-LSz9U3MMsqKMozUAKzTSvyipMrtWSyk630k_Lzs_XLizJLSlLz4svzi7KtEktLMvKLAO1JUtM4AAAA&sqi=2&ved=0ahUKEwiFyJbjvuTRAhUDVhQKHcNUAx0QmxMIzAEoATAO), [Anne MR Agur](https://www.google.ro/search?sa=X&biw=1600&bih=762&q=grant%27s+atlas+of+anatomy+anne+mr+agur&stick=H4sIAAAAAAAAAOPgE-LSz9U3MMsqKMozUAKzTcuKi9OytWSyk630k_Lzs_XLizJLSlLz4svzi7KtEktLMvKLABVSf8o4AAAA&sqi=2&ved=0ahUKEwiFyJbjvuTRAhUDVhQKHcNUAx0QmxMIzQEoAjAO), 21e 21st Edition 2008 | | |

1. **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** | Acquiring theoretical notions and presented in the course | Written exam | 50% |
| **Seminar/practical classes** | Practical works themes | Colloquium practical activity | 40% |
| Activities carried out in laboratory and conducted quality essays | Tests during the semester | 10% |
| **Minimal performance standard:** Recognition at least 10 of anatomical landmarks of those given to practical activities. | | | |

**Date Signature of head of discipline**

Lecturer **Riscanu Laura Adriana**, Ph-D

25.09.2019

**Department approval date**

30.09.2019

**Signature of department director**

Lecturer Daniela-Viorelia Matei, Ph-D