**ACADEMIC DISCIPLINE OVERVIEW**

1. **Program data**

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| 1.1. Higher education institution | Grigore T. Popa University of Medicine and Pharmacy Iasi |
| 1.2. Faculty | Medical Bioengineering |
| 1.3. Department | Biomedical Sciences |
| 1.4. Field of study | Health |
| 1.5. The cycle of studies | Bachelor |
| 1.6. Study program / qualification | Balneo-physiokinetotherapy and rehabilitation – english language / Physiokinetotherapist |

**2. Discipline data**

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| 2.1. Name of the discipline / Code | | | | **Anatomy** | | **RE1101** |
| 2.2. Teaching staff in charge with lectures | | | | **Lecturer Laura Adriana Rîșcanu, MD, PhD** | | |
| 2.3. Teaching staff in charge with practical activities | | | | **Assistant Professor Loredana Toma, MD, PhD candidate** | | |
| 2.4. Year of study | **I** | 2.5. Semester | **1** | 2.6. The type of assessment | **Exam, E1** | |
| 2.7. Discipline type | | **Mandatory** | | **Fundamental discipline** | | |

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

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| 3.1. Number of hours / week: | | 3.2. Courses number of hours / week | | 3.3. Seminars / practical classes  number of hours / week | | | |
| Semester 1 | **2** | **1** | | **1** | | | |
| Semester 2 |  |  | |  | | | |
| 3.4. Total number of learning hours: | **28** | 3.5. Of which: Courses | **14** | 3.6. Of which: Seminars / practical classes: | | | **14** |
| 3.7. Distribution of individual study time: | | | | | Hours sem. 1 | Hours sem. 2 | |
| Study time using course book materials, bibliography and hand notes | | | | | 6 |  | |
| Supplementary documentation in the library, using specialised platforms via internet and by field work | | | | | 6 |  | |
| Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays | | | | | 10 |  | |
| Tutorship | | | | | 2 |  | |
| Examinations | | | | | 4 |  | |
| Other activities | | | | |  |  | |
| Total hours of individual study (*without examinations*) | | | | | **22** |  | |
| 3.8. Total hours per semester | | | | | **28** |  | |
| 3.9. Number of credits | | | | | **2** |  | |

**4. Preconditions (where applicable)**

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

5. **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) |

**6. Specific competences acquired**

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| **Professional competencies** | **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 |

7**.** **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 |
| 7.2. Specific objectives | Gaining knowledge on the functioning of the musculoskeletal, cardiovascular, respiratory, digestive, urinary, nervous sistems  Integration anatomical data and functional unit of the living organism. |

**8. Contents**

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| 8.1. Lectures SEMESTER 1 | | Teaching methods | Observations |
| 1 | Central nervous system: spinal cord, brain stem, cranial nerves | Interactive lectures,  Discussion, Explanations | 2 hours |
| 2 | Central nervous system: cerebellum, cerebral hemispheres-functional organization | Interactive lectures,  Discussion, Explanations | 2 hours |
| 3 | Peripheral nervous system - functional organization. | Interactive lectures,  Discussion, Explanations | 2 hours |
| 4 | Sympathetic and parasympathetic vegetative nervous system | Interactive lectures,  Discussion, Explanations | 2 hours |
| 5 | Sense organs - morpho-functional organization of the optic, gustatory and olfactory systems, | Interactive lectures,  Discussion, Explanations | 2 hours |
| 6 | Sense organs - kinesthetic, auditory, vestibular analyzer | Interactive lectures,  Discussion, Explanations | 2 hours |
| 7 | Endocrine system: general concepts of endocrine glands, classification, external conformation, functional organization | Interactive lectures,  Discussion, Explanations | 2 hours |

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| 8.2. Practical activities - practical class sem 1 | | Teaching methods | Observations |
| 1 | Central nervous system  Spinal and cranial meninges  Spinal cord, external conformation, internal structure. | Interactive lectures,  Discussion, Explanations | 2 hours |
| 2 | Central nervous system: cranial nerves brainstem, cerebellum, | Interactive lectures,  Discussion, Explanations | 2 hours |
| 3 | Central nervous system  Cerebral hemispheres,  cerebral ventricles | Interactive lectures,  Discussion, Explanations | 2 hours |
| 4 | Vascularization of the central nervous system, | Interactive lectures,  Discussion, Explanations | 2 hours |
| 5 | Endocrine glands: thyroid, pituitary, endocrine pancreas, adrenal glands. | Interactive lectures,  Discussion, Explanations | 2 hours |
| 6 | Visual, olfactory, gustatory, descriptive and functional anatomy | Interactive lectures,  Discussion, Explanations | 2 hours |
| 7 | Acoustic-vestibular analyzer, kinesthetic analyzer | Interactive lectures,  Discussion, Explanations | 2 hours |

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| **8.3. Bibliography:** |
| Mandatory:  1.Course notes, e-Learning platform  2.Practical work notes, e-Learning platform  3. Gray's Anatomy: The Anatomical Basis of Clinical Practice, 41e 41st Edition Gray's Anatomy: The Anatomical Basis of Clinical Practice, 51st 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), 2012 |
| 4. Atlas of Human Anatomy , 6th Edition, Frank Netter, Saunders Edit , 2014  5.Gray's Anatomy for Students - Richard Drake, A. Wayne Vogl, Adam W. M. Mitchell, [Richard L. Drake](https://www.librariadelfin.ro/autor/richard-l-drake--i12018), [A. Wayne Vogl](https://www.librariadelfin.ro/autor/a-wayne-vogl--i12019), [Adam W. M. Mitchell](https://www.librariadelfin.ro/autor/adam-w-m-mitchell--i12020), [Elsevier](https://www.librariadelfin.ro/editura/elsevier--i794) Edit,  2019  6.Gray s anatomy , H.Gray, F.R.S., Running Press, Philadephia, 2021  7.The digestive system, Cristinel Ionel Stan, Anca Sava, Diana Bulgaru Iliescu, Grigore Tinica, UMF Iasi edit. 2021  8.The cardiovascular system, Cristinel Ionel Stan, Anca Sava, Diana Bulgaru Iliescu, Grigore Tinica, UMF Iasi edit. 2020  9.The respiratory system, Cristinel Ionel Stan, Anca Sava, Diana Bulgaru Iliescu, Grigore Tinica, UMF Iasi edit. 2021 |

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| ***Elective:*** |
| 1. Abrahams' and McMinn's Clinical Atlas of Human Anatomy, [Peter H. Abrahams](https://www.libristo.ro/ro/autor/Peter%20H.%20Abrahams), [Jonathan D. Spratt](https://www.libristo.ro/ro/autor/Jonathan%20D.%20Spratt), [Marios Loukas](https://www.libristo.ro/ro/autor/Marios%20Loukas), [Albert-Neels van Schoor](https://www.libristo.ro/ro/autor/Albert-Neels%20van%20Schoor), [Ralph T. Hutchings](https://www.libristo.ro/ro/autor/Ralph%20T.%20Hutchings)   [Elsevier](https://www.librariadelfin.ro/editura/elsevier--i794) Edit,  2019   1. 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), 2011 2. Clinically oriented anatomy, [Keith L. Moore](https://www.google.ro/search?sa=X&biw=1600&bih=762&q=keith+l+moore&stick=H4sIAAAAAAAAAOPgE-LSz9U3SDaszCi0UOIEsy0M49O0ZLKTrfST8vOz9cuLMktKUvPiy_OLsq0SS0sy8osAnV1yTzcAAAA&ved=0ahUKEwjkmvjEvuTRAhVMNxQKHYRiBoQQmxMIyQEoATAU), Arthur F. Dalley, [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), 2012 |
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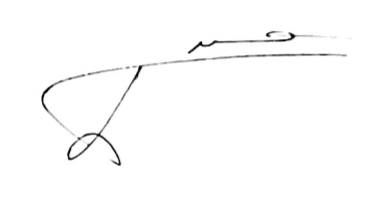
**9. *Correlation of the discipline contents with the expectations of the epistemic community, professional associations, and representative employers from the afferent program field***

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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. |

**10. Evaluation**

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| Type of activity | Assessment criteria | Evaluation methods | Contribution to the final grade |
| Lectures | Acquiring theoretical notions and presented in the course | Written exam.  MCQ Examination | 80 % |
| Practical activities | Activities carried out in laboratory and conducted quality essays. | Colloquium practical activity | Admitted/ Rejected |
| Individual study | Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays.  Individual study using coursebook materials, bibliography and hand notes, documentation in the library, using specialised platforms via internet and by field work. | Tests during the semester | 20 % |
| Minimal performance standard:   * Basic knowledge of the components of each apparatus and system of the human bod | | | |

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| Date | Holder of course / signature, | Holder of practical activities / signature, |
| 11.09.2024 | Lecturer Laura Adriana Rîșcanu, MD, PhD | Assistant Professor Loredana Toma, MD, PhD candidate |



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| Date of approval in the Department Council/Teaching Council, | | |
| 19.09.2024 |  | Department director / signature, |

Associate Professor Daniela-Viorelia Matei, MD, PhD