**SYLLABUS**

1. **Programme Details**

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| **1.1.** | **GRIGORE T. POPA UNIVERSITY OF MEDICINE AND PHARMACY IASI** |
| **1.2.**  | **FACULTY : MEDICINE / DEPARTMENT: MORPHO-FUNCTIONAL SCIENCES II** |
| **1.3.** | **DISCIPLINE: CLINICAL BIOCHEMISTRY** |
| **1.4.**  | **FIELD of STUDY:** **HEALTH** |
| **1.5.** | **STUDY CYCLE: BACHELOR**  |
| **1.6.** | **PROGRAMME of STUDY: Medicine - English**  |
| 1. **Discipline Details**
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| **2.1.** | **Name of the Discipline: CLINICAL BIOCHEMISTRY** |
| **2.2.** | **Teaching staff in charge with lectures:** Șef lucrari Dr. Stănescu Raluca Ștefania  |
| **2.3.** | **Teaching staff in charge with seminar activities:** Conf. Dr. Petrescu-Dănilă Elena, Asist. Dr. Bordeianu Gabriela |
| **2.4. Year** | **IV** | **2.5. Semester** | **I/II** | **2.6. Type of evaluation**  | C1/C2 | **2.7. Discipline regimen**  | Compulsory |

1. **Overall Time Estimates (hours/semester of didactic activity)**

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| * 1. **Number of hours per week**
 | 5 | **Of which: 3.2. lectures** | 2 | * 1. **seminar/ laboratory**
 | 3 |
| * 1. **Total hours in the curriculum**
 | 14 | **Of which: 3.5. lectures** | 6 | **3.6. seminar/ laboratory** | 8 |
| **Distribution of time**  |  |  |  |  | Hours |
| **Study time using coursebook materials, bibliography and notes**  | 15 |
| **Further study time in the libray, online and in the field** | 10 |
| **Preparation time for seminars / laboratories, homework, reports, portfolios and essays** | 9 |
| **Tutoring** |  |
| **Examinations** | 2 |
| **Other activities** |  |
| **3.7. Total hours of individual study** |  | 36 |
| **3.8. Total hours / semester** |  | 50 |
| **3.9. Number of credits**  |  | 2 |

1. **Prerequisites (where applicable)**

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| **4.1. curriculum** | Biochemistry, physiology, pathophysiology, medical semiology |
| **4.2. competences** | Not necessary |

1. **Conditions (where applicable)**

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| **5.1. for lecture delivery** | Lecture hall, equipped with whiteboard and laptop, videoprojector and suitable software – Power Point |
| **5.2. for seminar / laboratory delivery** | Seminar room, equipped with whiteboard and laptop, videoprojector and suitable software – Power Point |

1. **Specific Competences Acquired**

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| **Professional Competences (knowledge and skills)** | 1. Interpretation of biochemistry laboratory test results
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| **Transversal Competences (roles, personal and professional development)** | 1. To demonstrate the capacity of team work
2. To demonstrate the capacity of acting with individual autonomy by participating in the elaboration of scientific papers
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1. **Obiectives of the Discipline (related to the acquired competences)**

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| **7.1. General Obiective** | * Understanding the biochemical mechanisms that underlie various pathological conditions
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| **7.2. Specific Obiectives**  | * Correlating the clinical data with biochemical parameters in order to conduct a diagnosis
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1. **Contents**

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| **8.1. Lecture** | **Teaching methods**  | **Comments** |
| 1. Biochemical exploration of atherosclerosis and cardiovascular diseases. | Interactive lecture / video presentation | 2h |
| 2. Metabolic effects and mechanism of action of insulin. Biochemical exploration of diabetes mellitus. | Interactive lecture / video presentation | 2h |
| 3. Biochemical exploration of hepatobilliary diseases. Biochemical exploration of kidney diseases.  | Interactive lecture / video presentation | 2h |
| **Bibliography**1.Rae P, Crane M, Pattenden R. *Clinical Biochemistry – Lecture Notes*, 10th ed., Wiley Blackwell, John Wiley & Sons Ltd. 2018.2.Crook MA. *Clinical Biochemistry and Metabolic Medicine*. 8th edition. Hodder Arnold, Hodder & Stoughton Ltd, 2012.3. Kaplan LA, Pesce AJ. *Clinical Chemistry. Theory, analysis, correlation*. 5th edition. Mosby Elsevier, 2010.4. Arneson W, Brickell J. *Clinical Chemistry. A Laboratory Perspective*. F. A. Davis Company, 2007. |
| **8.2. Seminar / Laboratory** | **Teaching methods**  | **Comments** |
| 1. Biomarkers of atherosclerosis. Biochemical markers for diagnosis and monitoring of cardiovascular diseases. | Practical applications (case reports)  | 2h |
| 2. Biochemical markers for the diagnosis and monitoring of diabetes mellitus. | Practical applications (case reports)  | 2h |
| 3. Biochemical markers for the diagnosis of liver diseases. | Practical applications (case reports)  | 2h |
| 4. Biochemical markers for the diagnosis of kidney diseases. | Practical applications (case reports)  | 2h |
| **Bibliography** Carl A. Burtis, Edward R. Ashwood. *Tietz textbook of Clinical chemistry*. 3rd edition, 1999.  |

1. **Correlations between the contents of the discipline and the expectations of the epistemic community, of profesional associations and of employers in the field**

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| The knowledge and the skills are established as didactic objectives and specified as such in the curricula that are revised annually. After the analysis performed at the discipline level, these are discussed and approved by the Curricular Bureau, in order to harmonize them with other disciplines. During all this process, an evaluation is performed concerning the correspondence between the contents and the expectations of the academical community, community representatives, professional associations and employers. As a primary objective, the discipline aims to offer the students optimal prerequisites for the following years of the Medicine bachelor study cycle, in order to be able to involve successfully in internship programs in Romania and in other countries from the European Union, immediately after graduation. |

1. **Evaluation**

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| **Type of activity**  | **10.1. Evaluation criteria:**  | **10.2. Methods of evaluation** | **10.3. Percentage of final grade** |
| **10.4. Lecture** | Grade for multiple choice test | colloquium (MCQ test) | 80% |
| **10.5. Seminar / Laboratory** | Average grade of ongoing examinations | ongoing evaluation | 20% |
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| **Minimum standard of performance: at least grade 5 to pass the discipline** |

**Date: Signiture of Didactic Coordinator**

**Conf. Dr. Cristiana Filip**

**27.09.2019**

 **Signiture of Department Director Prof. Dr. Carmen-Elena Cotrutz**