**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 | **a. Devices used in Dermato-cosmetology** | **RE1224** |
| 2.2. Teaching staff in charge with lectures | **-** |
| 2.3. Teaching staff in charge with practical activities | **Professor Anca Zbranca, MD, PhD** |
| 2.4. Year of study | **II** | 2.5. Semester | **2** | 2.6. The type of assessment | **Colloquium, C2** |
| 2.7. Discipline type | **Elective** | **Specialty 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 |  |  |  |
| Semester 2 | **1** |  | **1** |
| 3.4. Total number of learning hours: | **14** | 3.5. Of which: Courses |  | 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 |  | 10 |
| Supplementary documentation in the library, using specialised platforms via internet and by field work |  | 10 |
| Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays |  | 10 |
| Tutorship |  | 2 |
| Examinations |  | 2 |
| Other activities |  | 6 |
| Total hours of individual study (*without examinations*) |  | **36** |
| 3.8. Total hours per semester |  | **50** |
| 3.9. Number of credits |  | **2** |

**4. Preconditions (where applicable)**

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| 4.1. of curriculum | Fundamentals of skin pathophysiology.  |
| 4.2. of competences | Knowledge of different methods, exploration techniques(imaging), paraclinical techniques, integration level of the human biosystem under certain circumstances.Pathophysiological manifestations of the most common medical conditions, and the ability to recognize/decide wich treatment is the most suitable. |

5. **Conditions (where applicable)**

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| 5.1. for lectures |  |
| 5.2. for seminars / practical classes | Video support/Projector. Access to medical devices and equipmets used in dermato-cosmetology.  |

**6. Specific competences acquired**

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| **Professional competencies** | **C 5.4** | Identify different types of skinDescribe various skin imperfections Knowledge of various medical device with dermato-cosmetic aplicability and their role in skin healing and rejuvenating Recognizing symptoms of adverse reactions in dermato-cosmetology and identifying an adequate rehabilitation plan. |
| **C 6.4** | Technical management in the use of IPL type devices - Safety rules in the case of using devices with LASER Emission, IPL, ultraviolet light (PUVA, PUVB), infrared (IR), radio frequency devices, vacuum, ultrasound (US) and anesthesia devices. Operating principles of devices with LASER emission, IPL, ultraviolet light, infrared, radio frequency devices, vacuum, ultrasound and anesthesia devices. Basic principles of working in a sterile environment. Principles of medical ethics in the case of dermatological treatments that require the use of medical devices and apparatus. Forms of freely declared consent. Explaining, interpreting and exemplifying the safety in operation of medical devices and devices used in dermatology. |

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

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| 7.1. General objective | Achieving necessary knowledge regarding skin structure / disorders / aesthetic imperfections and the most suitable medical device developed for dermato-cosmetic treatment. |
| 7.2. Specific objectives | Knowledge of most performant medical device and procedures used in dermato-cosmetology.Knowledge of differences among action principles and mechanisms.Ability to select the most suitable device / pprocedure according to skin problem. |

**8. Contents**

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|  **Practical activities - practical class**  | **Teaching methods** | **Observations** |
| 1 | Physical examination of the skin: visual and tactile examination.Different skin types and imperfections. Daily routine according to different skin types. Differences between cometics and dermato-cosmetics.  | Powerpoint presentations.Handouts.Interactive discussions. | 2 hours |
| 2 | Lasers in dermato-cosmetology. Principle and mechanism of action. Hair removal laser: principle of action, performance chriteria, esthetic and medical indications. | 2 hours |
| 3 | Fractional laser and fractional radio-frequency: principle and mechanism of action, advantages, indications.  | 2 hours |
| 4 | Microneedling: natural collagen induction therapy – principle and mechanism of action, indications. | 2 hours |
| 5 | Peeling: types of peeling, active ingredients, indications, benefits, protocols.  | 2 hours |
| 6 | Dermabrasion: mechanism of action, benefits. | 2 hours |
| 7 | Special esthetic treatment and devices: botullinum toxin, HA fillers, bioresorbable threads. Advantages, risks, legislations.  | 2 hours |

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| **8.3. Bibliography:** |
| ***Mandatory:***1. Courses from E-learning platform
2. A. Dragomirescu, Dermatocosmetologie cu profil farmaceutic, Ed. BrumaR,Timișoara, 2020
3. A.Zbranca, capitol Utilizarea peptidelor Matrikin-Mimetice in dermato-cosmetica, (Provocari clinice si sanatate publica in dermatologie, L.Gheuca-Solovastru), Ed.”Gr.T.Popa” U.M.F. Iași 2018.
4. Handbook of Lasers in Dermatology. Keyvan Nouri. Ed. Springer 2014.
5. Cosmetic Dermatology – Products and procedures. Zoe.D.Draelos, Ed.Wiley-Blackwell 2010.
 |
| ***Elective:***1. U. Borellini, Cosmetologia de la dermatocosmetică la cosmeceutică, Ed. Porta Communication, 2017
2. Laser and Lights.vol I.Jeffrey S.Dover, David .J.Goldberg, Ed. Elsevier Saunders 2005.
3. Laser and Lights.vol II.Jeffrey S.Dover, David .J.Goldberg, Ed. Elsevier Saunders 2005.
4. Les lasers en dermatologie, Serge Dahan et Thierry Michaud, Collection Dermatologie pratique, Editions Doin, 2004.
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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 |  |
| Practical activities | Activities carried out in laboratory and conducted quality essays. | Colloquium practical activity | 80% |
| Individual study | Preparation time for seminars / practical classes, study themes, reviews, portfolio and essays.Study time 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:* Enumeration of devices and medical procedures used in dermatology.
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| Date | Holder of course / signature, | Holder of practical activities / signature, |
| 11.09.2024 |  | Professor Anca Zbranca, MD, PhD |

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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 |