Physical-Chemical Analytical Methods for Life and Environmental Quality

1. **Admission Requirements:**
    - **Prerequisites**:
        - Graduates with a bachelor's degree from a bachelor's degree course or graduates with an equivalent degree from a long-term university course may apply for admission to the master's degree course.
        - Non-EU Citizens - Contingent upon the presentation of the Graduation Certificate from the preparatory year (excluding those who have completed their previous studies in the Romanian language) and obtaining the Letter of Acceptance issued by the Ministry of Education.
        - EU Citizens + Swiss Confederation - Contingent upon the presentation of the Graduation Certificate from the preparatory year (excluding those who have completed their previous studies in the Romanian language) and the recognition of their studies by the National Centre for Recognition and Equivalence of Diplomas (CNRED).
    - **Entrance Exams**: The admission process includes a structured interview on a predetermined topic.
2. **Degree Levels:**
    - Master's Degree: 2-year program following a bachelor's degree.
3. **Curriculum:**
    - **Core Courses:**

      Mandatory courses that all students in the program must take:
        - Inorganic Pollutants
        - Environmental Physics
        - Organic Pollutants
        - Sampling and Processing Methods
        - Research Methodology
        - Separation Methods
        - Spectroscopic Methods of Analysis
        - Nuclear Methods of Analysis
        - Ethics and Academic Integrity
        - Validation of Analysis Methods
        - Depollution Methods
        - Monitoring the Quality of Life and the Environment
        - Sensors and Biosensors for Environmental Study
        - Environmental Legislation and Accreditation Requirements for Laboratories
    - **Electives:**
        - Biological Methods for Evaluating the State of the Environment
        - Techniques of Experimental Data Processing
        - Sustainable Management of Forest Ecosystems
    - **Major/Concentration:**

The Master Study Program is designed to provide advanced and specialized knowledge in the application of physical-chemical analytical methods for assessing the quality of life and the environment. This program integrates principles from both the physical and chemical sciences, focusing on their application to analyze and understand complex systems in life sciences and environmental contexts.

- **General Education Requirements:**
  - Successful completion of the mandatory courses, seminars and labs, completion of the three internships and the dissertation thesis.

4. **Credits:**
   - Each semester carries a weight of 30 ECTS, with a total of 120 ECTS required for graduation. An additional allocation of 10 ECTS is designated for the dissertation exam.
5. **Internships and Practical Experience:**
   - Engaging in practical stages and internships provides invaluable hands-on experience and a real-world perspective. These opportunities offer a dynamic platform for students to apply theoretical knowledge in professional settings, fostering a bridge between academic learning and practical implementation.
6. **Research Requirements:**
   - In order to meet the criteria for presenting their master's thesis, students are required to engage in extensive study, resulting in a thorough and coherent completion of their academic endeavors.
7. **Academic Advising:**
   - A supervising professor is assigned to each year of study and partially assisted activities are coordinated by supervising professors.
   - The dissertation thesis is also supervised by a scientific supervisor.
8. **Extracurricular Activities:**
   - Students have the option to participate in clubs, organizations, student scientific circles, or extracurricular activities related to their field of study or personal interests.
9. **Examinations:**
   - The specific requirements for exams in a given discipline are explicitly outlined in the discipline syllabi. Professors communicate these requirements to students during the initial course session. Students must meet various criteria before taking the exam, which include active participation in all laboratory sessions, successful defense of the lab colloquium, and the satisfactory completion and presentation of the semester project with a minimum acceptable grade. The specific criteria vary based on the nature and intricacies of each discipline.
10. **Thesis Defense:**
    - Prior to defending the dissertation before a committee, a crucial initial step involves subjecting the work to a thorough plagiarism check using specialized software.

- The dissertation must encompass all required content chapters, ensuring scientific rigor, accurate calculations, and conclusions grounded in evidential data. The presentation should be clear, demonstrating the graduate's professional knowledge and transversal abilities.

11. **Graduation Requirements:**
    - To fulfill program requirements, students must earn 120 ECTS by passing exams in all outlined disciplines. The culmination of their academic journey involves defending a dissertation during the final examination.
12. **Degree Awarding:**
    - Master's Degree in in Chemistry (Physical-Chemical Analytical Methods for Life and Environmental Quality)