

Material Engineering

1. Admission Requirements:

Prerequisites:

- Successful completion of 300 ECTS (European Credit Transfer and Accumulation System) credits, spanning both undergraduate and Master's degree programs, or equivalent.
- 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:

- Admission to the doctoral program involves a comprehensive interview, centered around a doctoral essay submitted by the candidate.

2. Degree Levels:

- Doctoral Degree (Ph.D.): 4-year program following a master's degree.

3. Curriculum:

• Core Courses:

Mandatory courses that all students in the program must take:

- Ethics and Academic Integrity
- Research Methodology
- Doctoral Thesis Theme-Based Individual Applied Seminar

• Major/Concentration:

The core of the Material Engineering program includes:

- Developing doctoral candidates with the knowledge and skills required for research in the field of Materials Engineering, focusing on areas such as nanocomposite materials, ceramics, refractories, alloys, etc.
- Equipping students with the necessary abilities for the development and management of scientific research projects in the field of Materials Engineering and related domains.

- Fostering a critical mindset for the objective evaluation of research results.
- Educating doctoral candidates in the principles of scientific research ethics.
- Providing training for specialists highly qualified for employment in the workforce.

• **General Education Requirements:**

- Successfully fulfilling both mandatory courses and seminars, engaging in advanced research within the chosen theme, defending required study reports, delivering two presentations at scientific conferences, and publishing two peer-reviewed articles are essential components of the academic requirements.

4. **Credits:**

- Each semester carries a weight of 30 ECTS, with a total of 240 ECTS required for graduation.

5. **Internships and Practical Experience:**

- Engage in hands-on research in the field in the Institute of Multidisciplinary Research for Science and Technology and the dedicated research centers.

6. **Research Requirements:**

- Conducting advanced research within the chosen theme, submitting articles for peer-review, and presenting findings at thematic conferences are integral components of the academic process.

7. **Academic Advising:**

- In addition to doctoral supervisor, three other academic advisors will provide guidance to each doctoral student in structuring their academic trajectory, publishing research, and addressing any concerns they may encounter.

8. **Extracurricular Activities:**

- Students have the option to participate in clubs, organizations, or extracurricular activities related to their field of study or personal interests.

9. **Examinations:**

- The courses will span 12 weeks during the first semester and conclude with oral, written, or practical examinations. Successful completion of these exams is mandatory to earn study credits. Furthermore, the mandatory study reports will be adeptly defended before a committee consisting of the supervisor and the three academic advisors.
- The preliminary defense of the thesis will be undertaken before a committee, consisting of the supervisor and the three academic advisors,

with a minimum qualitative assessment of "satisfactory." Following this, the final defense of the thesis will be conducted before a committee comprising the president, the supervisor, and three experts in the field.

10. Thesis Defense:

The prerequisites for defending a thesis or dissertation before a committee include:

- Attainment of 240 ECTS credits throughout the program.
- Completion of the mandatory number of articles and conference presentations.
- Receiving a minimum qualitative assessment of "good" during both the preliminary and final defenses of the thesis.

11. Graduation Requirements:

- Graduation necessitates the fulfillment of all program requirements, encompassing the completion of the required credit hours and the successful defense of the thesis.

12. Degree Awarding:

- Doctor of Engineering in Material Sciences.