

Engineering of Sustainable Materials

1. Admission requirements:

To apply for the upcoming Master's program in Sustainable Materials Engineering (taught in English), must be submitted via an application file that follows the standard structure of "Valahia" University of Târgoviște, with the mandatory inclusion of an English language proficiency certificate.

The required documents, categorized by candidate type, are as follows:

Mandatory documents for all candidates

- Bachelor's Degree and Diploma Supplement (transcript of Records) – original and copy (for "certified true copy" verification).
- High School Diploma (Baccalaureate) – original and copy.
- Birth Certificate – copy.
- Marriage Certificate (if applicable) – copy.
- Standard Medical Certificate – stating that you are fit for university studies.
- Identity Document – copy of ID card or passport.
- Passport-sized color photos (usually 2 or 3).
- Proof of application fee payment (200 RON for Romanian/EU/SEE/CE citizens or 100 EUR for non-EU citizens: RO75RNCB0128045419210114, Banca Comerciala Romana, Calea Victoriei nr. 15, Sector 3, Bucuresti. Cod postal 030023, cod Swift: RNCBROBU, Universitatea „Valahia” din Targoviste. Without the registration fee, the file will not be processed). [Taxe-tarife-universitare-valabile-pentru-anul-universitar-2026-2027-anexa-nr.-1.pdf](#)

Specific documents for the English-taught Master's

English Language Proficiency Certificate: A minimum level of B2 is required (e.g., TOEFL, IELTS, Cambridge, or a certificate issued by a specialized university faculty). If you do not hold a certificate, you must pass an eliminatory language proficiency test organized by the university prior to the interview.

Additional documents for EU / international citizens

- Certificate of Recognition of Studies (CNRED): mandatory for degrees obtained outside of Romania.
- Notarized translations: for all study and civil status documents not issued in Romanian, English, or French.

Examination

The admission process will evaluate:

- Bachelor's Degree Final Exam Grade (GPA) (50%).

- Professional interview (50%): This will be conducted in English and will assess basic knowledge in materials engineering and your motivation regarding sustainability.

2. Degree levels:

Master's Degree: 2-year program following a bachelor's degree.

3. Comprehensive curriculum:

The courses are structured to provide a holistic understanding of the "green" industrial revolution:

- **Advanced Materials & Nano-Tech:** Nanomaterials and nanotechnologies, Sustainable composite materials, Bio-based and synthetic materials.
- **Processing & Performance:** Processing of polymeric materials and circularity, Thin film technology for green transition, Metal and ceramic matrix composites, Degradation of polymer materials.
- **Systems & Simulation:** Modelling and simulation methods in materials green industry, Analytical methods for sustainable materials.
- **Management & Strategy:** Sustainable development of materials, Project management for multidisciplinary research, Advanced financial accounting, Professional internship.

Major/Concentration:

The study program programme is dedicated to excellence in sustainable engineering through:

- **Expertise in sustainable materials:** Developing deep knowledge in the synthesis and application of eco-friendly materials.
- **Digital engineering & simulation:** Mastering the processing, characterization, and performance evaluation of materials using advanced computer-aided engineering (CAE) tools.
- **Eco-design integration:** Embedding sustainability principles directly into the material design and selection process.
- **Advanced engineering strategies:** Implementing functionalization and supramolecular engineering to create high-performance materials.
- **Interdisciplinary leadership:** Cultivating research management and leadership skills essential for managing complex, multidisciplinary projects.

General education requirements:

Successful completion of the mandatory courses, seminars and labs, completion of the professional internships and the dissertation thesis.

4. Credits:

Each semester carries 30 ECTS, with a total of 120 ECTS required for graduation.

5. Internships and practical experience:

Professional internship is present in all 4 semesters and is credited with 40 ECTS. The program's structure is built upon established partnerships between the Faculty of Materials Engineering and Mechanics at Valahia University of Targoviste and an extensive network of employers,

comprising both regional leaders and international stakeholders. This strategic partnership is anchored by Kik Compounds (Main Partner) and further bolstered by the transnational expertise of RL Compound SRL (Italy), a company specializing in high-performance polymer compound manufacturing. The consortium is additionally supported by SC Gold Plast Production SRL. These collaborations transcend formal agreements, maintaining a functional and operational character designed to bridge the gap between academia and industry. The partnerships are actively leveraged through:

- Applied internships.
- Dissertation themes focused on real-world industrial challenges.
- Joint R&D initiatives and technology transfer projects.

These integrated activities contribute directly to enhancing the employability of graduates and ensuring their readiness for the global labor market.

6. Academic advising:

Each master's group is supervised by a tutor professor who coordinates all curricular and extracurricular activities throughout the two-year duration of the program. Partially assisted activities and the semester professional internship are managed by coordinating professors, while the dissertation thesis is overseen by a scientific supervisor.

7. Extracurricular activities:

Master's students have the opportunity to participate in a variety of cultural and recreational activities, including theater, cinema, museum visits, excursions, and sports. The city of Targoviste provides excellent conditions and facilities for these pursuits, offering students a wide range of options to complement their academic life through cultural engagement and personal interests.

8. Examinations:

The courses will span 14 weeks during each semester and conclude with oral, written, or practical examinations. Successful completion of these exams is mandatory to earn study credits.

9. Thesis defense:

The prerequisites for presenting a dissertation thesis before a committee include: attainment of 120 ECTS credits throughout the program and the approval of the scientific supervisor to present the dissertation thesis.

10. Graduation requirements:

Successful graduation requires the fulfillment of all program requirements, including the acquisition of the mandatory credit hours and the successful defense of the dissertation thesis.

11. Degree awarding:

Master's Degree in Engineering of Sustainable Materials.