

## Why choose the master specialization Waste Recovery Engineering?

Would you like to learn about practical and cost-effective solutions for the recovery and recycling of wastes, in compliance with the principles of sustainable development? In this case, the master specialization Waste Recovery Engineering is for you.

This Environmental Engineering master program in Romanian aims to train specialists to put into practice the theoretical and specialized notions regarding the technologies for the recovery, reuse and recycling of industrial and/or domestic wastes, regardless of their nature.

The Waste Recovery Engineering master program in Romanian is attractive both for the Bachelor graduates in the fields of environmental protection, and for those in the associated fields such as Economy, Sociology, Geography, Ecology, Environmental Engineering, Biology, etc.

## What will you learn throughout the years of study?

You will acquire updated knowledge on waste recovery and recycling technologies, technological disasters management, materials technology, waste processing fundamentals, waste landfills design elements, waste deposits monitoring, toxic and dangerous waste treatment, industrial pollution prevention, etc.

### Core disciplines:

#### 1<sup>st</sup> Year:

Materials technology, Waste management, treatment and reuse (recovery), Fundamentals of waste processing, Waste management legislation and regulations, Ethics and methodology of scientific research, Risk management and assessment of dangerous chemicals, Technologies for recovery and recycle of metallic, Eco-responsible entrepreneurship, Treatment of toxic and dangerous wastes, Legal instruments of environmental protection at International level, Plastic, rubber and artificial fiber waste recycling technologies.

#### Research fieldwork

#### Professional fieldwork

#### 2<sup>nd</sup> Year:

GIS analysis in environmental studies, Traceability and management of packaging waste, Analysis of chemical compounds produced by waste, The environmental impacts of mineral resources usage, Management of contaminated sites, Circular Economy and Life Cycle Assessment, Microbiological processes in waste biodegradation, Design elements for waste landfills

#### Optional courses:

Treatment and recovery of radioactive waste OR Methods and techniques for environmental impact assessment

Technologies for the recovery and recycle of industrial wastes OR Waste landfills monitoring

**Elaboration of dissertation thesis**

**Practice for the dissertation thesis**

In order to give you the best professional training opportunities, we follow closely the requirements of the market as well as the current knowledge necessities in developing our curricula.

**What skills will you possess after completing your studies and how will these help you in the future?**

The professional skills you will develop will prepare you for:

- **Plan waste management, recovery and integrated management activities** aligned with the European trends, waste management policies in Romania, current legislative framework in the field and other relevant criteria.
- **Apply knowledge on the design, building and monitoring of landfills**, depending on the specific of wastes that are to be stored.
- **Apply methods, techniques and procedures used within the recovery and recycling technologies** of domestic and industrial wastes.
- **Use measures to mitigate the amounts of wastes and to reuse them**, but also measures to mitigate their impact on the environment.

**Beside these key skills, you will develop even more transversal skills**, such as communication abilities, multidisciplinary teamwork capacities, analytical and critical thought on environmental problems and sustainable development.

**After graduation you may choose various professional trajectories**, such as engineer in integrated municipal/industrial waste management, pollution control engineer, environmental protection scientist or environmental protection engineer.

Also, you can choose to continue the **doctoral studies**, in Romania (within the Environmental Science Doctoral School) or abroad.

