

EUROPEAN CENTER OF EXCELLENCE FOR
THE ENVIRONMENT



ECEE



"Dunărea de Jos" University of Galați
Faculty of Sciences and Environment



111 Domnească Street, S building, 800201 Galați, România

ABOUT

The European Center of Excellence for the Environment (ECEE) operates within the Faculty of Sciences and Environment, Department of Chemistry, Physics and Environment. The center was established in 1999, under the name of the Inter-Environment Department, being financially supported by the Dutch government (Matra Program RO / 97/04).

In 2001, as a result of a rigorous competition organized by the European Union (PHARE program RO 9706.01.02), the Inter-Environment Department of the "Dunărea de Jos" University of Galați was classified as the European Center of Excellence for the Environment (ECEE), thus becoming the only Romanian center classified as such by the European Union. The RDI activity carried out by the ECCE center within the smart specialization domains for the strategic cycle of 2014-2020:

- Energy, environment and climate change
- Eco-nanotechnologies and advanced materials
- Health
- Cultural heritage and identity.

ORGANIZATION

The ECEE comprises, in its structure, ten scientific research laboratories necessary to achieve the strategic objectives on specific research directions, as follows:

1. Regional center for research and monitoring environmental quality, **Credential**
2. Laboratory for monitoring waste water, sewage sludge and soils, **Launeso**
3. Determination of biological indicators in water and sediment laboratory, **Biosed**
4. Laboratory of statistical analysis and cadastral applications, **Lasac**
5. Synthesis and organic analysis laboratory, **CyBiocat**
6. Atmospheric studies and air circumsters environment, **Atmos-air**
7. Food products analysis sensors and biosensors laboratory, **Biosens**
8. Electrochemistry of surfaces, analytical and inorganic application, electrochemistry, **Electrochim**
9. Laboratory of display and microencapsulation systems, **Laborcaps**
10. Interdisciplinary laboratory for vibroacutic measurements in employment, **Pem**



THE TEAM

Prof. dr. eng. Lucian P. GEORGESCU – **Responsible**

Prof. dr. Cătălina ITICESCU - **Scientific responsible**

Scientific Coordination Council:

1. Prof. dr. Constantin APETREI
2. Prof. dr. Rodica DINICĂ
3. Prof. dr. Gabriel MURARIU
4. Prof. dr. Mirela VOICULESCU

OBJECTIVES

ECEE aims to carry out the activity of scientific research and technological development in the excellence areas of the University. In regards to its development strategy, the ECCE mainly aims at:

- being part of national and international networks, together with other academic and non-academic institutions, which deal with issues related to the sustainable development of the environment;
- actively participating in various research and development projects financed through national and international programs
- joining the local and national administration partners in organizing projects on environmental protection, sustainable development and the influence of environmental factors on the population health;
- training specialists in different fields related to the environment;
- providing consultancy and expertise on a wide range of issues that are directly or indirectly linked to the environment;
- organizing students and academic staff exchanges that are financially supported by international institutions that grant scholarships or by ECEE partners through international projects that funds grants from their budgets;
- organizing national and international conferences, seminars and workshops related to environmental monitoring, quality and management.

EXPERTISE AREAS

A. Research-development-innovation primary areas:

- Environmental science and engineering, Earth sciences: environmental and resource management, ecology, climate change, climatology;
- Water quality monitoring, water pollution, soil science, soil pollution, ecology, biogeochemistry, environmental chemistry;
- Meteorology, physics and chemistry of the atmosphere, air pollution (air quality) and climate variability, high ionosphere atmosphere, geomagnetism, space sciences, interplanetary environment, terrestrial means of satellite observations;
- Foods and medicines functionalization through micro and nano-encapsulation techniques.
- Extraction and synthesis of organic compounds by conventional and green chemistry methods (biocatalysis, ultrasound, microwave);
- Separation and purification of organic compounds;
- Physico-chemical and biochemical analysis of natural and synthetic organic compounds.

B. Research-development-innovation secondary areas:

- Numerical simulations;
- Numerical and statistical analysis;
- Applied statistics in environmental engineering and biostatistics;
- Biomathematics;
- Bathymetry;
- Algorithmization of physical, chemical and biological parameters for the quality classes determination of surface aquatic ecosystems;
- Molecular interactions of organic compounds-biomolecules;
- Advanced functional surfaces (biomaterial coatings) for the selective adsorption of biomolecules;
- Studies for new functional biosensors of compounds that involve organic structures with nitrogen;
- Electrochemical studies related to metal / microorganisms in the production of materials for the food industry (packaging, paper, polymer, composite);
- Functional surfaces modeling;
- Emulsions and biofunctional crystals studies.

C. Services, microproduction:

- Studies on the interaction of anthropic factors with ecosystems;
- Biogenic amine sensors;
- FT-IR, NMR-H1 spectra;
- High Performance Liquid Chromatography (HPLC);
- High Performance Thin Layer chromatography (HPTLC);
- Biochemical analysis.

CONSULTANCY, EXPERTISE AND SERVICES

The ECEE center offers consultancy, expertise and services in the following domains:

1. Environmental Science and Engineering, Earth Sciences: Environmental and Resource Management, Ecology, Environmental Change, Geophysics, Climatology.
2. Foods and medicines functionalization through micro and nano-encapsulation techniques.
3. Extraction and synthesis of organic compounds by conventional and green chemistry methods (biocatalysis, ultrasound, microwave).



ECEE

RELEVANT EQUIPMENT

1. Research boat
2. NITON XLt 793 WY XRF Analyzer
3. Motor boat, 75 hp, with bottom sediment dredging winch
4. PARR 6765EF calorimeter
5. Drone for cadastral applications
6. Drone for environmental monitoring
7. Dacia Duster 4x4 car, Diesel, 110 HP (2017)
9. Sp150 Potentiostat / Galvanostat BIOLOGIC SCIENCE INSTRUMENTS
10. Bruker ALPHA-E FT-IR spectrometer with ATR Eco-ZnSe
11. UV-1601 spectrophotometer

