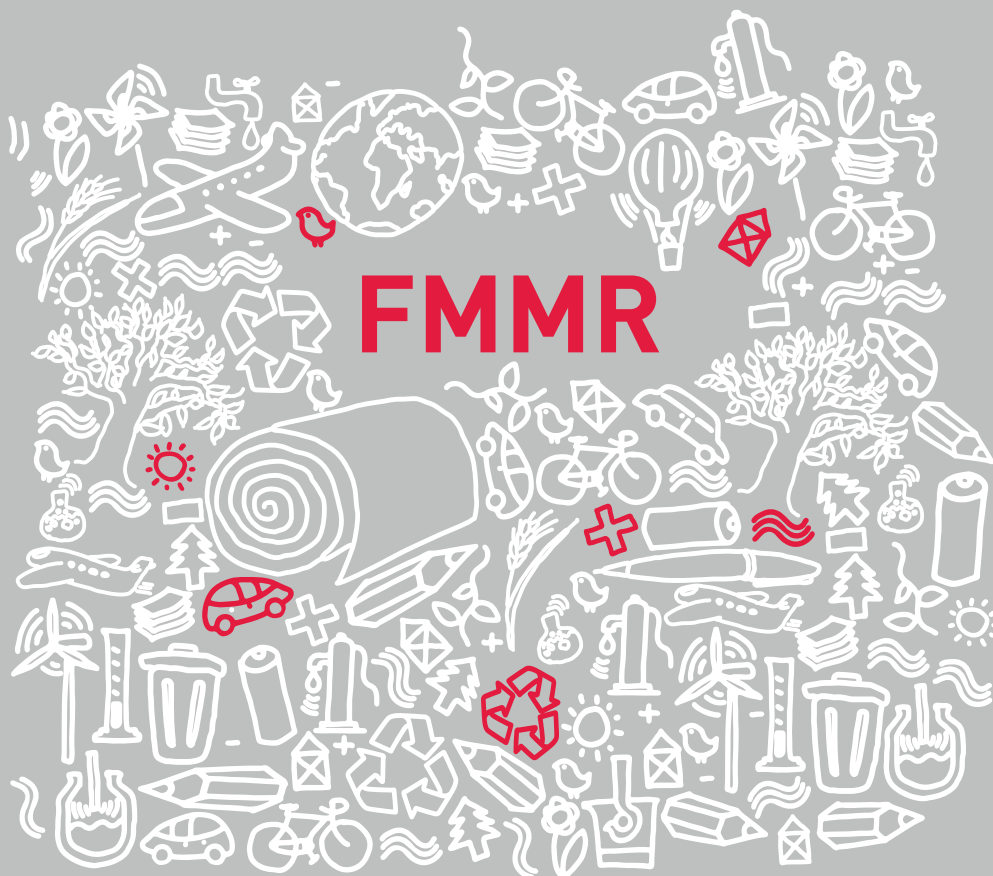




TECHNICAL UNIVERSITY OF KOŠICE
Faculty of Materials, Metallurgy
and Recycling



fmmr.tuke.sk

TECHNICAL UNIVERSITY OF KOŠICE (TUKE)

TUKE caters for a wide range of educational needs not only in Slovakia but also in Central Europe, as in many specializations it is the only centre of education and research in this area. TUKE closely co-operates with other universities and with industrial organizations throughout the region and the Slovak Republic.

In recent years there has been a considerable increase in demand from foreign students to study, whereby TUKE has been established on an international scale as a distinguished educational institution. Students from forty countries attend the university.

FACULTY OF MATERIALS, METALLURGY AND RECYCLING (FMMR)

FMMR is a modern faculty with long-standing traditions focused on education, research and development in materials and quality engineering, metallurgy and recycling.

Thanks to the effort and invention of all scientific and pedagogical staff, the FMMR became the reliable part of the TUKE and prominent scientific and educational institution oriented in metallurgy and material technologies, exceeding by its significance and results the borders of Slovakia and Middle Europe.

BACHELOR STUDY PROGRAM AT FMMR TUKE:

- 1. *Metallurgy, Materials and Recycling***
- 2. *Environmental Chemistry***



<https://fmmr.tuke.sk/wps/portal>

BACHELOR STUDY PROGRAM: METALLURGY, MATERIALS AND RECYCLING

Graduates of a three-year study bachelor program Metallurgy, Materials and Recycling acquire the first-level degree (Bachelor's degree) of University education in the field of Metallurgy. During the study, they gain a theoretical background in natural sciences, especially chemistry, physics and mathematics, as well as knowledge in programming, which they apply in the field of metallurgical processes, material engineering, recycling or energetics in Metallurgy. They will acquire knowledge about the whole life cycle of metallic and non-metallic materials, from the preparation of input raw materials, production, treatment, characterisation of its properties as well as recycling. The graduates will obtain knowledge of modelling and simulation of metallurgical processes, management of production processes, knowledge of the environmental impact of technological processes, knowledge in the field of establishment and operation of small and medium-sized manufacturing companies, skills in the application of information and communication technology.

Graduates get theoretical and practical knowledge from these disciplines:

- Mathematical fundamentals for the theory of technological processes.
- Physical fundamentals of Metallurgy.
- Inorganic and physical chemistry.
- Theory of metallurgical processes.
- Material science.
- Fundamentals of thermal technology.
- Management systems.
- Commercial, labour and environmental law.
- Fundamentals of the utilization of CAD (Computer-Aided Design) and CFD (Computational Fluid Dynamics) software.
- Establishment and operation of small and medium-sized companies.

Graduate employment

- in the departments of metallurgy, thermal energetics, materials development or recycling in domestic and foreign production plants,
- in design departments using CAD systems, simulation programs, information and communication technologies at the application level,
- in the field of independent business in metallurgy and other areas of small and medium-sized business enterprise.

BACHELOR STUDY PROGRAMME: ENVIRONMENTAL CHEMISTRY

Environmental chemistry is the study of chemical processes occurring in the environment which are impacted by humankind's activities. These impacts may be felt on a local scale, through the presence of urban air pollutants or toxic substances arising from a chemical waste site, or on a global scale, through depletion of stratospheric ozone or global warming. The spread of contamination problems worldwide and their effects on the natural resources led to the evolution of the environmental chemistry. This evolution relies on the integrations of inorganic, organic, physical, and analytical chemistry to facilitate the scientific investigations of the contamination extent and optimize remediation efforts. Environmental chemistry is a fundamental tool for the understanding of diverse issues relevant to human health and resources preservation (natural and human-made). This special issue is directed to cover different aspects of environmental chemistry.

Graduates get theoretical and practical knowledge from these disciplines:

- Chemistry (general, inorganic, organic, analytical, physical chemistry, biochemistry, environmental chemistry, macromolecular chemistry, general toxicology).
- Sampling, processing and analysis of different nature and industrial samples.
- Industrial technologies and their waste treatment practice.
- Application of computer technology in chemistry.

Graduate employment:

- in environmental departments of state administration and local self-government,
- as middle-level management of enterprises,
- as analysts in chemical, pharmaceutical and clinical laboratories in the position of qualified employee, which will be able independently provide laboratory analyzes, conduct an agenda, perform partial methodological work, participate practically and conceptually in environmental monitoring section.

