

University Politehnica Timisoara
Faculty of Engineering Hunedoara

**Bachelor studies program: ECONOMIC ENGINEERING IN THE
CHEMICAL AND MATERIAL INDUSTRY**

Domain of study: Engineering and Management

Mission of the *Economic engineering in chemical and materials industry* qualification is part of the overall mission of the Faculty of Engineering Hunedoara, which is to train specialists with higher education in technical, economic and managerial engineering fields, particularly for economic sectors of manufacturing, design and research with chemical and materials specific.

Through curricula of the study domain, it is provided useful background knowledge for understanding the functionality of productive systems, based on which the graduates may become managers of the various organizational entities. Also, assumed mission includes training of engineers able to adapt to requirements of market economy and new technologies by covering a learning process designed within the European area of higher education and focused on a basic polyvalent and specialized training to ensure the graduate an advanced knowledge and real opportunities in the competition on the labor market.

The *Economic engineering in chemical and materials industry* qualification was taught at the Faculty of Engineering Hunedoara since academic year 2001/2002 and was accredited by ARACIS in 2009. *Engineering and Management* domain of study, which comprises *Economic engineering in chemical and materials industry* qualification, meets the growing demand for specialists with knowledge of economic and technical-engineering for industry, research and design, including addressing issues of modeling, simulation and process analysis by current informatical means.

Professional competences:

- Performing calculations, demonstrations and applications in order to solve tasks specific to the fields of management and engineering, based on the knowledge acquired from fundamental and engineering sciences.
- Drawing up and interpretation of the technical, economic and management specifications.
- Management of production activities in companies, including small and medium-sized ones, and of related logistic networks.
- Manufacturing, processing and description of materials.
- Technical and technological design of processes specific to chemical and material industries; quality assurance and control of resulting products.
- Management of activities specific to chemical and material industries; design of economic and financial flows in a company; project management.

Cross- disciplinary competences:

- Responsible application of the principles, norms and values of professional ethics in performing professional tasks and in identifying objectives, available resources, work stages, execution time, deadlines and risks.
- Identification of specific roles and responsibilities within a multi-disciplinary work team and implementation of communication and organizational effectiveness.
- Identification of lifelong learning opportunities and effective use of information and documentation sources, as well as of computer-assisted professional development resources (web portals, specific software applications, databases, online courses, etc.) both in Romanian and in a language of international circulation.