

**Code and title of specialty (direction):** 161 “Chemical technology and Engineering”

**Title of specialization:** “*Chemical technologies of Processing Polymer and Composite Materials*”

**Code and title of the field of knowledge:** 16 “Chemical and bioengineering”

**Qualification:** *master of chemical technology and engineering*, specialty “*Chemical technologies of Processing Polymer and Composite Materials*”

**Number of credits:** 90 ECTS credits

**Grade of higher education:** the second (Master), corresponds to the seventh qualification level of Ukrainian National Framework of Qualifications.

**Requirements to the previous education grade:** a person has the right to acquire a Master's degree in case of possession of a Bachelor's or a Specialist degree in the appropriate specialty (direction) with the additional exams compiling. Provided that the previous degree was obtained in another country, it requires nostrification.

**Qualification requirements:** the higher education document is issued to a person who had successfully completed the educational program and was certified. Graduation certification is carried out by assessing the degree of competence formation. Form of attestation – public defense of a Master’s thesis.

**Program study results:** to use conceptual knowledge, including knowledge of modern achievements, to solve complicated unpredictable tasks and problems of the industry; to use theories, principles, methods and concepts of general engineering sciences in studying and professional activity; to collect and interpret information and to choose methods and tools for professional problems solving; to apply innovative approaches for professional problems solving; to bring to the specialists and non-experts information, ideas, problems, decisions and own experience in the field of professional activity; to manage complex actions or projects; to form a communication strategy; to use a foreign language at a professional level; to be responsible for the professional development of individuals and / or groups of persons; to be responsible for making decisions in unpredictable conditions; to study with a high level of autonomy. Technological professional activity: to substantiate the choice of technical and technological means for the industrial process realization for the polymeric and composite materials processing; to recommend a substantiated technological production scheme; to calculate optimal variants of technological, material, energy-thermal and other flows of production; to analyze the parameters of the main technological equipment for the optimal choice; to choose basic and auxiliary equipment for the technological process implementation; to develop the optimal technological route of the product manufacture; to determine the data of the physical-mechanical and technological characteristics of the object design for the technological regulations development; to be able to design a technological line for the technological process implementation; to make a sketchy production project. Organizational professional activity: to carry out technical support of the existence stages of the activity objects of the Master of Chemical Technology and Engineering on the specialty "Chemical technologies of processing polymeric and composite materials"; to monitor the production technical level of the processing of polymeric and composite materials; to choose the optimal variant of the processing method of polymeric and composite materials using legislative and regulatory acts, management and marketing technologies, in the conditions of production, in order to provide optimal technical and economic indicators of production. Management professional activity: to plan the components of technological and organizational activity; to monitor the components of technological and organizational activities; to improve the components of technological and organizational activities.

**Employment competences:** Master of specialty 161 "Chemical technologies and engineering" in specialization: "Chemical technologies of processing polymeric and composite materials" may hold positions in companies, enterprises and institutes: engineer, engineer - technologist (chemical technologies), researcher engineer, researcher.

**Further study perspective:** Master of specialty 161 "Chemical technologies and

engineering", specialization "Chemical technology of processing polymeric and composite materials" can continue to study at the educational qualification level of the master's degree in other branches; at the third educational-scientific level - Philosophy Doctor of specialty 161 "Chemical technologies and engineering", 162 "Biotechnologies and bioengineering", 181 "Food technologies", 182 "Light industry technologies", 183 "Environmental protection technologies".

**Department graduating a student with degree:** department of chemical engineering and ecology.

**Institute / Faculty:** faculty of engineering.

**Educational program supervisor:** associate professor, PhD, Rimar T. E., rymartatyana1975@gmail.com.