

**Degree Programme: Transport Machinery and Technology**  
**ECTS code: TMT**

**Qualification awarded:** BEng

**Education forms:** Full-time

**Term of education:** 4 years – for BEng

**Final examination:** development and public defense of a diploma project

**Admission requirements:** according to the university regulations

**Access to further studies:** Successfully graduated BEng qualification awarded students are able to continue education in MEng qualification awarded by specialty in universities according to the university regulations.

**Programme importance:** Graduates of this specialty are among the most preferable mechanical engineers, as the knowledge and skills they acquire enable them to be very well received and successfully employed in state and private companies, enterprises, and institutions in the fields of production, repair, and service maintenance of transportation equipment, automobile transport, energy, the mechanization of agriculture, construction, mining, education, etc., as well as in companies engaged in the organization, management, and operation of transport machinery and technology.

**General characteristics of the education:** In the specialty “Transport Machinery and Technology” mechanical engineers are trained in the design, construction, production, testing, repair, operation, and maintenance of automotive machinery and their internal combustion engines. The first four semesters of the program provide students with a foundation in general engineering knowledge, laying the groundwork for successful professional development and serving as a prerequisite for further specialization. Courses include higher mathematics, physics, chemistry, information and communication technologies, mechanics, strength of materials, material science, engineering graphics, machine elements, thermodynamics and heat transfer, fluid mechanics, electrical engineering and electronics, etc.

In the subsequent semesters, students study subjects such as the finite element method, hydraulic and pneumatic machines and fluid power systems, manufacturing technology, as well as the theory, construction of automobile; railway transport (railroad cars and railway tractive rolling stock, technologies and equipment for train controlling etc.); oscillations and measurements in transport equipment; maintenance and repair of transport machinery; and the technology and organization of road transport. A range of elective courses allows students to expand their knowledge and skills in areas of their choice. Students are also trained to apply modern computer-aided design methods in mechanical engineering and transportation using various specialized software products.

**Educational and professional goals:** Students who have been trained in and graduated from the specialty acquire fundamental general engineering knowledge about the processes of designing, manufacturing, operating, and repairing transport machinery and internal combustion engines, as well as in developing technologies. They gain the skills to lead and manage the production, repair, service maintenance, and technical operation of transport machinery, to design the technological aspects and facilities of production, repair, and service enterprises for automotive transport equipment, and to conduct scientific research in the field of transport machinery and technology.

**Employment of the graduates:** The broad knowledge of graduates from the “Transport Machinery and Technology” specialty are recognized by businesses in Bulgaria, which facilitates the seamless employment of graduates. The combination of in-depth expertise in transport machinery and comprehensive general engineering training is a prerequisite for career advancement in qualified engineering positions - such as designers, technologists, managers, consultants, and others.

Graduates of the “Transport Machinery and Technology” specialty who have chosen a path in scientific and research experience success in numerous scientific organizations and universities both in the country and abroad.