

УДК 656.13

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TRAFFIC SIGNS DURATION

Introduction. Under the agreement with the European Education and Culture Executive Agency (EACEA) ('EU executive agency' or 'granting authority'), under the powers delegated by the European Commission ('European Commission'), the task has been set to develop and implement the discipline "Application of modern intelligent technologies in transport". Educational materials developed within the project can be used to implement these modules into various educational programs.

Objective of the Discipline. The discipline's task is to utilize technologies for Sustainable Development of Cities and Communities Goal 11 aimed at improving approaches to urban planning, management, and development of cities and communities, considering principles of inclusivity, safety, and sustainability, as well as preventing potential risks of deteriorating the quality of life of the population.

Need for Sustainable Development in Transport. The rapidly growing economy accelerates urbanization processes in countries with far-reaching consequences. Therefore, one of the development priorities is the implementation of sustainable development principles in cities and settlements, which requires their integration into educational trajectories for training future professionals. Update of educational-laboratory infrastructure for training bachelors in transport systems. When creating educational-laboratory infrastructure for training bachelors in transport systems - Sustainable Urban Transport Laboratory (SUTLab) special attention will be given to in-depth knowledge in the field of information and communication technologies considering the integration of CSR into the core disciplines of bachelor training. To master key skills and competencies, students will have appropriate equipment in the SUTLab laboratory.

The laboratory can provide students with unique opportunities to acquire skills in various aspects of intelligent transport systems and virtual reality. Here are some of the key skills that can be developed: Modeling and analysis of transport and pedestrian flows, studying the dynamics of movement, congestion, and traffic optimization, evaluating the state of transport solutions. Application of virtual reality in transport studies for immersive virtual environments, allowing the study of the impact of road design and urban conditions on the behavior of traffic participants. Students will be able to collect and analyze data on transport flows to understand traffic patterns and develop enhanced traffic management strategies. This experience will be adopted from project partners such as University of Rome

Tor Vergata, and Maritime University of Szczecin as well as from global leaders. The structure of the discipline includes studying topics on the foundations of intelligent transport systems ITS, Core components and architecture of ITS, Data collection technologies in transport, Communication technologies in ITS, Autonomous vehicles, Traffic management systems, Big data analysis and artificial intelligence in ITS, Smart cities and mobility, Public transport systems. Gaining practical skills and consolidating theoretical knowledge in the laboratory. Students' practical skills will be consolidated in the laboratory with Traffic modeling using PTV Vissim where students can create models of various transport scenarios, analyze the impact of new road configurations, signaling systems, or changes in traffic patterns. Data analysis from IoT devices and analysis of data from sensors installed on vehicles or in the urban environment to study traffic and pedestrian behavior. Using VR technologies to simulate road conditions and create virtual scenarios to analyze the behavior of drivers and pedestrians in various road conditions. Developing and testing models for optimizing routes and schedules of public transport to improve efficiency and reduce waiting time. Developing smart parking systems that analyze data on the availability of parking spaces and provide recommendations to drivers. Practical testing of management algorithms for autonomous vehicles, their reactions to standard and unforeseen road situations. This will allow transportation students to acquire modern European knowledge and practical skills in the discipline "Application of modern intelligent technologies in transport."

Conclusion. In conclusion, the Erasmus + KA2 project "Implementation of Sustainable Urban Development Goals in Transport Bachelor Degree – ISDEGO" has significantly contributed to the advancement of educational and practical methodologies in the field of transportation. By developing the discipline "Application of modern intelligent technologies in transport," the project aligns with the Sustainable Development of Cities and Communities Goal 11, aiming to enhance urban planning, management, and sustainable development. Through the creation of the Sustainable Urban Transport Laboratory (SUTLab), the project not only facilitates the integration of cutting-edge information and communication technologies into transport systems education but also equips students with the necessary skills and competencies to address modern urban challenges. This initiative ensures that future professionals are well-prepared to implement sustainable development principles effectively in urban environments, leveraging intelligent transport systems and virtual reality to optimize transportation solutions, enhance safety, and improve the quality of urban life. The collaboration with renowned institutions and the use of advanced technologies like computer modeling traffic and IoT devices further empower students to develop, test, and refine innovative transport strategies that are critical for the evolution of smart cities and the mobility sector.