

## IMPROVING QUALITY OF TEACHING THROUGH NORDPLUS

Nadežd Kunicina used the NORDTEK, Norplus grant for teachers for a 15days exchange to Kaunas Technical University.

The aim of this academic mobility was sharing of expertise and knowledge as well as achievements in information and communication technologies, and security of cyber-physical systems in order to improve quality of teaching, abilities of students and improve content of lectures in field of Cyber-physical systems. KTU Department of Computer Sciences provides a study program, called “Information and Information Technology Security”, which was aimed at preparation of Masters study programme of cyber security theory, methods and technologies, knowledge of information security management and cyber space legal regulation. Moreover, the experts and academic staff of this department are working in study programme, related with Cybersecurity topic.



My visit was dedicated to the testing and future development of course of lectures in Cybersecurity Engineering. The tree main subjects in engineering part of programme are Industrial Safety 6.0 ECTS credits, Control Fundamentals of Critical Infrastructures 6.0 ECTS credits, and Design of Adaptive Systems 6.0 ECTS credits the first part of visit was mostly dedicated to dissection and planning of development of lectures and laboratory content of those courses. The development of content for those courses was based on exchange of experience and also to gaining knowledge, and good practice by sharing of expertise and knowledge as well as achievements between RTU and KTU teams, in communication network resilience, security factors, external and internal system security, as well as infrastructure system security and appropriate communication protocols.

Modern manufacturing transformations, along with related industries and value creation processes, are shaping a new approach to the role of digitization in the manufacturing industry. Current trend of electrical technologies, automation and data exchange in manufacturing leads

to more automation in autonomous decision-making processes, monitor assets and processes in real-time. Moreover, the bridging of the physical and digital world through cyber-physical systems, including Internet of Things, cloud computing and cognitive computing, allows to create a shift from a central control system to one computer-based control. KTU already has academic

experience and laboratory where they model resilience of telecommunication network, against external degradation actions, based on existing laboratory works, RT will improve content of exiting study subjects.

The main achievements of this academic mobility was sharing of expertise and knowledge as well as new methods in resilience, operability and security of cyber-physical systems in order to improve quality of teaching, abilities of students and new lectures in field of Cyber-physical systems. RTU and KTU have agreed to apply for NordPlus academic mobility project, to increase academic cooperation.