

### 12.03.01 Instrumentation

#### «Software engineering for cyber-physical systems and installations»

##### **Academic Supervisor:**

Ivan G. Kullo, associate professor, acting deputy head of the department N.2 *Automation*.

##### **Program description:**

This program aims to provide Bachelor's students with advanced technologies and interdisciplinary knowledge that would enable them to design, develop and implement cyber-physical devices, control and management systems for nuclear physical installations as well as develop and support complex software solutions for cyber-physical systems and installations. It also provides a solid background for prospective Master's studies in the field.

##### **Key features of the program:**

The main unique feature of the program is its curriculum that comprises of fundamental engineering disciplines as well as a number of disciplines for deep training in IT and special focus on nuclear power engineering.

The program is also characterized by the significant amount of time dedicated of practicums at the labs with advanced equipment and internships at nuclear power enterprises.

##### **Key disciplines of the program:**

Fundamentals of the Development of Cyber-physical Devices and Systems

Automation for Design and Development of Cyber-physical Devices and Systems

Sensory and Operating Devices in Cyber-Physical Systems

Theoretical Fundamentals of Information Equipment,

Programming Languages and Technologies,

Computer Systems and Networks,

Practical Programming Technology,

Nuclear Power Plants: Types, Equipment, Technologies, Operation.