

## **15.03.06 Mechatronics and Robotics**

### **Mechatronics of Cyber-physical and Robotic Systems**

#### **Program objectives**

- training specialists in research, development and maintenance of mechatronic and robotic intelligent products, systems and processes with qualitatively new functions, properties and capabilities in high-tech industries
- obtaining and developing universal and subject-specific specialized competencies that contribute to implementing research tasks.

#### **Key research and professional areas:**

- information-sensory, executive and control modules of mechatronic and robotic systems;
- mathematical, algorithmic and software support of mechatronic and robotic systems;
- methods and tools for design, modeling, experimental research of mechatronic and robotic systems;
- research and production testing of mechatronic and robotic systems.

#### **Key curriculum features:**

- profound fundamental training in physics, mathematics and engineering;
- deepening of professional competencies in research laboratories and educational centers.

#### **Curriculum contents:**

- Theory of automatic control
- Microprocessor technology in mechatronics and robotics
- Software for mechatronic and robotic systems
- Information and measurement systems in mechatronics and robotics
- Computer control of mechatronic systems
- Modeling and research of mechatronic systems