

## **10.03.01 Information Security**

### **Innovative Computer Security Technologies**

#### **Program objective**

to develop competencies necessary for working in the field of computer security.

The continuous expansion of IT technologies inevitably creates new threats to information security. New ways of committing crimes related to computer security violations are constantly emerging and require the development of new information protection technologies. The need to develop human resources in innovative areas of computer security determines the relevance of the program.

The program's *competitive advantage* is the combination of:

- unique disciplines on new computer security technologies
- disciplines on modern IT technologies
- classical engineering discipline
- practical research training.

While training, students will learn and practice:

- modern methods of data storage, transmission and processing;
- existing methods and means of information protection;
- risks and difficulties that can be encountered in ensuring computer security.

#### **Research and professional activities**

- automated systems functioning in the conditions of existence of threats in the information sphere and has the information technology resources being protected;
- information technologies shaping the information infrastructure, in the conditions of existence of threats in the information sphere and involve information technology resources are subject to protection;
- information system, which is necessary to ensure data confidentiality, integrity, availability, authenticity, non-repudiation of authorship through the use of cryptographic primitives;
- technology of information security based on cryptography; means of cryptographic protection of information.

#### **Practical training and employment opportunities**

- the Bank of Russia
- Rosatom State Corporation companies
- Sberbank of Russia
- Centers for information technologies and systems of federal and regional executive authorities
- Large IT and technological companies (Kaspersky Lab, Mail.Ru Group)