10.03.01 Information security "Critical information infrastructure facilities"

The emphasis in the program is on fundamental mathematical training, on the study of the theoretical foundations of cybersecurity and on the in-depth development of modern information technologies necessary to solve the problems of protecting critical information infrastructure objects. Graduates of the program are in demand in high-tech companies where they develop mathematical models of cybersecurity, ensure security and data protection in the field of operation of software and hardware-software complexes. Particular attention is paid to the protection of information and computing networks and systems, cryptographic methods, security architecture of local area networks and the Internet, computer forensics, penetration testing and security analysis of information technology systems.

Unique disciplines:

- Algebraic coding theory
- Discrete functions in cryptography
- Password encryption and authentication systems
- Software Testing Fundamentals
- Software Development
- Internet architecture
- Fundamentals of coding theory in information security
- Security of telecommunication systems
- Introduction to the Public Key Infrastructure Theory and Practice
- Practical information security
- Introduction to the elliptic curves theory
- Additional chapters in discrete mathematics
- Automaton-theoretic methods for protecting information
- Information and computing networks
- Information-theoretic aspects of cryptography
- Mobile network security

Professional opportunities:

- Rosatom
- Yandex
- Sber
- KriptoPro
- Kaspersky