Don State Technical University HIGHER EDUCATION SYLLABUS IN	
1.1Name of the study programme (in the original language)	Математические методы защиты информации
1.2.Name of the study programme in English	Mathematical methods of information protection
1.3.Qualification (degree)	Information protection specialist
1.4.Mode of education	full-time
1.5.Educational department	Faculty "Computer Science and Computer Engineering" Department "Cybersecurity of Information Systems"
1.6.Workload (ECTS)	330
1.7.Duration of education	5,5 years
1.8.Field	Computer security
1.9.Profile	Mathematical methods of information protection
1.10.Code of the field	10.05.01
1.11.Teaching languages	Russian
1.12.Other necessary languages	
1.13.Approved by the educational department (date)	
1.14.Admission requirements	• Certificate of Secondary (full) or Secondary Vocational Education of nationally recognized standard; • Unified State Exams in: 1) Mathematics, 2) Russian language; 3) Physics, Chemistry or Informatics; • Enrollment is made in accordance with Don State Technical University admission rules
2.Aim of the programme	
The main goal is the training of specialists to solve professional tasks in the field of complex protection of information objects that can determine the goals, strategies and policies of corporate security that are necessary to ensure information security in sufficient volume to implement the project management function for the creation, operation and development of modern information and telecommunications systems.	
3.Characteristics of the programme	
3.1.Main disciplines/modules	- Discrete mathematics - Mathematical logic and theory of algorithms - Mathematical analysis - Probability theory - Information theory - Computer networks - Operating systems - Cryptographic protocols

	- Databases - Protecting programs and data - Mathematical methods of concealment and masking of information - WEB-technologies - Fundamentals of Information Security - Design and identification of viruses - Algorithms - Software Engineering
4.Employment and further education opportunities	
4.1 Job opportunities	Graduates can develop the following professional activities: - Research activities; - Project activities; - Production and technological activities.
4.2 Further studies	Graduates of the direction can enter the master programme 10.04.01 "Information security of automated systems" or continue their education in the doctoral programme 09.06.01 "Informatics and computer technology".

5. Programme learning outcomes

Graduates will be able to:
- develop computational algorithms implementing modern mathematical methods of information security;
- develop, analyze and justify the adequacy of mathematical models of the processes arising from the operation of software and hardware information security, as well as mathematical models for assessing the security of computer systems;
- evaluate the effectiveness of information security tools and methods in computer systems, comparative analysis and reasonable choice of hardware and software protection of information;
- design components of a software product.
- apply computer-aided design, development and testing of software.
- research software products, projects and processes

6.Education style (Teaching, learning, assessment)

6.1.Learning and teaching approaches

Educational technologies and methods used during training are aimed at improving the quality of training by developing the abilities of the students to self-education and are aimed at activation and realization of the personal potential:
- Part of the lecture classes are conducted using a multimedia projector, modern software tools in an interactive mode.
- Each practical lesson is conducted using a computer in a computer classroom. All laboratory works involve application software packages that allow the student to conduct a comprehensive study of the assigned task.

6.2. Assessment methods Tests, coursework and projects

7.Contact information (responsible chair, head of the programme)

**Department of "Cybersecurity of Information Systems", Head of the department Ph.D.,
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