**Mathematical disciplines:**

1. Algebraic structures

2. Algorithms and data structures

3. Computational geometry

4. Discrete mathematics

5. Combinatorics

6. Constructive cryptography

7. Mathematical logic

8. Machine learning

9. Complex cryptography

10. Structural complexity theory

11. Graph theory

12. Theory of formal languages

**Applied disciplines:**

1. Databases

2. Introduction to Unix

3. Virtualization and virtual machines

4. High performance and parallel computing

5. Computer graphics

6. Computer vision

7. Methods for formal verification of programs

8. Generalized and generative programming

9. Operating systems

10. Basics of Software Engineering

11. Processing a large amount of data

12. Software design

13. Development of interactive interfaces

14. Development of language processors

15. Network technologies

16. Software testing

17. Functional programming

**Programming languages:**

1. Programming in C ++

2. Programming in Java

3. Scripting languages

4. JVM-based languages