

# Short Course Spring Exchange Semester ICT and Programming

National Research ITMO University

Degree or qualification is awarded: **The certificate showing the number of earned ECTS credits (up to 30)**

Language of study: **English**

Mode of study: **full-time**

Duration: **4 months**

Availability of free education: **yes**

Price: **1100 euro (for students from non-partner universities)**

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A unique opportunity to study ICT & Programming from the leading international and Russian experts in the area. At ITMO University you will receive world-class academic and research experience in eScience, Big Data, Mathematical and Probabilistic Modelling through lectures, seminars, hands-on workshops and creative and collaborative projects. Once you join us, you'll get a comfortable English speaking environment, modern research and education facilities and all you need to achieve your career goals world-wide.

Key modules of the program are the following:

- Academic English for Computational Science
- Introduction to eScience Infrastructure
- Academic English
- Introduction to Big Data Technologies
- Analysis and Design of Algorithms
- Introduction to eScience and eEngineering
- Introduction to Big Data
- Probabilistic Modelling (Master's Program: Computational Biomedicine)
- Introduction to Visualization
- Probabilistic Modelling
- Urban Informatics
- Discrete Mathematical Modeling
- Internet and Web Technologies
- Internet Technologies and Big Data
- Concurrent and Multithreading Programming
- Mathematical Models of Complex Software
- HPC Computational Methods
- Methods and Models for Multivariate Data Analysis (Master's Program: Big Data)
- Urban Modelling & Simulation
- Complex System Simulation
- Continuous Mathematical Models
- Discrete Decision Making
- System Analysis of Urban Areas
- Advances in Applied Mathematics and Computer Science
- Visualization and Virtual Reality Technology
- Technologies and Infrastructure for Big Data
- Machine Learning Technologies
- Parallel Programming
- Human-Computer Interaction

## **Specializations within this programme**