

TENTATIVE LIST OF EXCHANGE COURSES*

MODULE 1: SOFT SKILLS

Location: [9 Lomonosova St.](#)

COURSE TITLE	SEMESTER	ECTS CREDITS
Intercultural Communication	Fall/Spring	3
Russian as a Foreign Language	Fall/Spring	3
Academic Writing	Spring	3
English for Specific Purposes	Fall	3
Negotiation, Influence and Conflict Management	Fall	4
Internationalization of Research	Fall	4
Emotional Intelligence	Fall	4

MODULE 2: ECONOMICS AND INNOVATIONS

Location: [9 Lomonosova St.](#)

COURSE TITLE	SEMESTER	ECTS CREDITS
Innovative Economy or Knowledge Economy	Fall	3
Innovations Management	Spring	3
Innovation Systems: Russian Federation Development	Spring	3
Technology Entrepreneurship	Spring	3
Digital Marketing	Fall/Spring	3
Russian and International Financial Systems	Spring	3
Human Capital in Innovative Economy	Fall/Spring	3
Project Management	Fall/Spring	3
Sustainable Cities Development	Fall/Spring	3
Intellectual Management of Creative Projects	Spring	3
Contemporary Art	Spring	3
Art and Natural Sciences: Theory, Aesthetics, Discourses	Spring	3
History of Science Art	Spring	3
Organizational Behavior: Change Management	Fall/Spring	3

MODULE 3: ICT & PROGRAMMING/TECHNOLOGY

COURSE TITLE	SEMESTER	ECTS CREDITS
TRACK: HIGH-PERFORMANCE COMPUTING (available only for Master's students upon meeting the requirements)		
Location: 14-16 Birzhevaya Liniya		
Evolutionary Computing	Fall	6
Advanced technologies for Big Data	Fall	6
Discrete Modeling	Fall	6
Continuous Mathematical Models	Fall	6
Architecture of Neural Networks for Deep Learning	Fall	6
Methods and Models for Multivariate Data Analysis	Spring	4
Technologies and Infrastructure for Big Data	Spring	6
Introduction to Visualization	Spring	3
Quantum Cognitive Technologies of AI Systems	Spring	3
TRACK: COMPUTER TECHNOLOGIES (basic programming skills are required)		
Location: 49 Kronverksiy Pr.		
Data Warehousing	Fall	3
Machine Learning	Fall	4
Speech Recognition	Fall	3
Social Media Data Analysis	Fall	5
Recommender Systems	Fall	3
Informational Retrieval	Fall	3

Image Processing	Fall	5
Database Design and Development	Spring	3
Ethics in Science and Technology	Spring	3
Information Design	Spring	3
Big Data and Humanities	Spring	4
Quantitative and Qualitative Methods	Spring	4
Programming Languages	Spring	4
Natural language Processing	Spring	4
TRACK: MECHATRONICS AND ROBOTICS (basic knowledge in mechanics, mathematics and physics is required)		
Location: 14-16 Pereulok Grivtsova		
Modern Control Theory	Fall	3
Microprocessor Systems	Fall	3
Control Instrumentation	Fall	3
Object Oriented Programming	Fall	6
Control of Mechatronic Machines	Fall	6
Simulation of a Mechatronic Machine	Fall	3
Materials in Mechatronics Systems	Fall	3
Theory of Inventive Problem Solving	Fall	3
Human Machine Interface (Applied Data Communication)	Fall	3
Cyber Physical Systems and Technologies	Spring	3
Modeling and Control of Robotic Systems	Spring	3
Robotic Systems Hardware	Spring	3
Control Systems Programming	Spring	3
Biomechatronic Systems Development	Spring	3
Automated Construction Systems	Spring	3
Smart Materials in Mechatronics	Spring	3
Construction of Mechatronic Modules	Spring	6
Adaptive and Robust Control	Spring	3
Robot Sensing Systems	Spring	3
Modeling and Control of Mechatronic Machines	Spring	3
Dynamics of Robotic Systems	Spring	3
CAD Systems	Spring	3
TRACK: INFORMATION SECURITY		
Location: 9 Lomonosova St.		
Information Security Laws and Regulations	Spring	3
Information Security Risk Management	Spring	3
Operating Systems	Spring	3
Web Software Development	Spring	3
Database Security	Spring	3
Side-Channel Attacks and Modern Cryptanalysis	Spring	3
Scalable Cloud Computing	Fall	3
Network Security	Fall	3
Computer Networks II – Advanced Features	Fall	3
Cryptography And Data Security	Fall	3
Mobile Systems Security	Fall	3
TRACK: ENVIRONMENTAL MANAGEMENT		
Location: 9 Lomonosova St.		
Corporate Environmental Management	Fall/Spring	4
Environmental Auditing	Fall/Spring	3
Organization of Cleaner Manufacturing	Spring	3
TRACK: BIOCHEMISTRY (basic knowledge in chemistry, biotechnology, chemical engineering is required)		
Location: 9 Lomonosova St.		
Molecularly Organized Systems	Spring	3

Advanced Materials	Spring	6
Advanced Methods in Chemical Nanoengineering	Spring	6
Computational Methods and Modeling in Materials Chemistry	Spring	3
Smart Materials	Spring	3
Modern Technologies for Manufacturing Nanoscale Objects and Materials	Spring	3

- **Please be informed that the lists of courses may undergo minor changes at the beginning of each semester**
- **The average number of required ECTS credits is 20-30 credits per one semester (depending on your home university's requirements)**
- **The courses are divided into three modules as below. Module 3 comprises different tracks. Please be informed that courses of different modules may overlap each other. Your final lists of courses will be confirmed at the beginning of your studies.**