TENTATIVE LIST OF EXCHANGE COURSES

THE COURSES ARE DIVIDED INTO THREE MODULES AS BELOW:
MODULE 1: SOFT SKILLS
MODULE 2: ECONOMICS AND INNOVATIONS
MODULE 3: ICT & PROGRAMMING/TECHNOLOGY (comprises different tracks)

PLEASE BE INFORMED THAT COURSES OF DIFFERENT TRACKS/MODULES MAY OVERLAP WITH EACH OTHER.

You are recommended to select most of the courses within one track and fewer courses from the rest of the tracks/modules.

The average number of required ECTS credits is 20-30 credits per one semester (depending on your home university's requirements).

The lists of courses may undergo minor changes at the beginning of each semester. **Your final lists of courses will be confirmed at the beginning of your studies.**

Please be informed that some courses have a capacity limit, and you may be redirected to other subjects.

MODULE 1: SOFT SKILLS

Course title	ECTS Credits
Negotiations, Influence and Conflict Management	3
Emotional Intelligence	3
Empathy and non-violent communication	1
Art & math of decision making	1
Pitches and speeches	1
Evidence-based approach to career management	1
Launching and relaunching your career	1
Reputation management	1
Mediation and dispute resolution	1
Stress management	1

MODULE 2: ECONOMICS AND INNOVATIONS

Course title	ECTS Credits
History of art & science	3
Contemporary Art	3

MODULE 3: ICT & PROGRAMMING/TECHNOLOGY

Course title	ECTS Credits
TRACK:HPC (HIGH-PERFORMANCE COMPUTING) **(available only for Master's students of relevant majors and comprehensive CV is required)**	

Analysis and Development of Algorithms	3
Parallel Algorithms for the Analysis & Synthesis of Data	3
Data Visualisation	3
Machine Learning	3
Methods and Models for Multivariate Data Analysis	3
Advanced Machine Learning Technologies	3
Advanced Natural Language Processing	5
Continuous Mathematical Models	3
Reinforcement Learning	6
Machine Learning for Industrial Data	4
TRACK: CT&BioInf (COMPUTER TECHNOLOGIES& BIOINFORMATICS) **(basic CT skills are required; for some courses a short interview with the track's coordinator is required)**	
Programming in Python (for beginners)	3
Discrete Mathematics	3
Algorithms and Data Structures	3
Biotechnology	4
Microbial Omics	4
Advanced Machine Learning	3
TRACK: M&R (MECHATRONICS AND ROBOTICS) (basic knowledge in mechanics, mathematics and physics is required)	
Microcontroller Systems	6
Actuators Control	3
Control Systems Programming	3
Modern Control Theory	3
Technical Systems Modeling	3
Machine Learning in Robotics	3
Design and Optimization of Mechatronic Systems	3
Modern Control Systems	3
Robot Programming	3
Robots Modeling and Identification	3
Simulation of Robotic Systems	3
Programming in Python	3
Basics of Digital Manufacturing	3
Automation of Technological Preproduction Activities	3
Future Things Design	3
Industrial Internet of Things and Services	3
Electrical Machines	3
Pulse Width Modulation in Control Systems	3
Microprocessor Control Systems	3
Hardware and Software in Electrical Engineering	3
Converters Circuits	3
Artificial Intelligence in Electrical Engineering	3
Modeling of Technical Systems	3
TRACK: EM (ENVIRONMENTAL MANAGEMENT)	
New Energy and Resource-saving Processes in a Circular Economy	3

Global Environmental Problems and Urbanization	3
TRACK: ISec (INFORMATION SECURITY) (**basic CT skills are required**)	
Cloud Computing	3
Network Security	6
Seminar on Software Systems, Technologies and Security	3
Mobile Systems Security	3
Foundations of Information Security	3
Logic and Methodology of Science	3
Basic course of Mathematics for Cryptography	3
TRACK: BioCh (BIOCHEMISTRY) (**basic knowledge in chemistry, biotechnology, chemical engineering is required**)	
Computational Chemistry and Modeling of Chemical Systems	6
Advanced Neural Networks in Chemistry	3
Machine Learning Algorithms in Chemistry	3
Programming for Chemists	6
Comprehensive Approach to Materials Synthesis	6
Advanced Methods of Materials Characterization	6
TRACK: PH&MS (PHYSICS AND MATERIAL SCIENCE) (**available for students majoring in Physics, Engineering or Material Science;a short interview with thetrack'scoordinator can be required for admission**)	
Photonics	6
Quantum Mechanics	6
Experimental Methods of Nanophotonics	6
Mathematical Methods in Physics	6
Semiconductor Device Modeling	3
Special Sections of Organic Chemistry	3
Modern Methods of Optical Micro- and Spectroscopy	6
Methods of Machine Learning	6
Applied Hybrid Materials	6
Analytical and Numerical Methods in Optics and Photonics	6
Basics of Laser Micro- and Nanofabrication	3