

TENTATIVE LIST OF EXCHANGE COURSES FOR THE SPRING EXCHANGE SEMESTER 2025

THE COURSES ARE DIVIDED INTO THREE MODULES AS BELOW:

MODULE 1: SOFT SKILLS

MODULE 2: ART, 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
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: ART, ECONOMICS AND INNOVATIONS

Course title	ECTS Credits
Business Model Innovation	3
Strategic Management	3
Data-driven decision making	2
Modern Patent Analytics	3
IP Security on New Markets (basic)	3
Theory of Digital Art	3
Basics of Game Design	3
AI in Art	3
Use of Unity in Artistic Practice	3
Bioart: Fundamentals	3
Hybrid Ecologies	3
Human-Machine Interaction: History, Philosophy, Theory	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)	
Translation Research Methodology	3
Architecture of Neural Networks for Deep Learning	3
Technologies and Infrastructure for Big Data	4
Discrete modeling	3
Optimization Methods	3
TRACK: CT&BioInf (COMPUTER TECHNOLOGIES& BIOINFORMATICS) (basic CT skills are required; for some courses a short interview with the track's coordinator is required)	
Medical Genetics	6
Applied Statistics	3
Scientific Python	3
TRACK: M&R (MECHATRONICSAND ROBOTICS) (basic knowledge in mechanics, mathematics and physics is required)	
Modern Control Systems I	3
Design and Optimization of Mechatronic Systems I	3
Machine Learning in Robotics I	3
Biomechatronics and Biomimetics	6
Robot Perception	3
Computer-Aided Design	3
Robotic Systems Hardware	3
Computer Vision	3
Deep Learning	3
Robot Programming II	3
Digital Control Systems	3
Optimal Control	3
Control Systems Programming	3
Sensorless Control	3
Modern Control Theory II	3
Adaptive and Robust Control	4
TRACK: EM (ENVIRONMENTAL MANAGEMENT)	
Environmental law	3
Corporate Environmental Management	3
Organization of Cleaner Production	6
Life Cycle Assessment	3
TRACK: ISec (INFORMATION SECURITY) (basic CT skills are required)	
Web Software Development	3

Cryptography and Data Security	3
Operating systems	3
Information Security Risk Management	6
Information security laws and regulations	3
TRACK: BioCh (BIOCHEMISTRY) (basic knowledge in chemistry, biotechnology, chemical engineering is required)	
Molecular Oncology	3
Basics of Genetic Engineering	3
Advanced Materials for Industrial Applications	6
Catalysts and Green Chemistry	6
Nanoengineering and Nanofabrication	3
Energy Storage	3
Alternative Energy Fundamentals	3
Additive Technologies	3
TRACK: PH&MS (PHYSICS AND MATERIAL SCIENCE) (available for students majoring in Physics, Engineering or Material Science;a short interview with the track's coordinator can be required for admission)	
Nanoplasmonics	6
Experimental Methods of Nanophotonics	6
Introduction to Materials Science. Part 1	3
Special Sections of Inorganic Chemistry	6
Microfluidics	6
Methods of Computer Simulation	4
Many Body Quantum Theory	3
Quantum Optics	6
Electrodynamics of Metamaterials	6