

EXCHANGE PROGRAM 2024-25: SPRING SEMESTER "S8"

This document presents 4 pre-defined tracks: Computer Science, Electrical Engineering, Mechanical Engineering, and Industrial Engineering.

The courses offered in these tracks are similar to those in the main list/catalog. They are organized by engineering field. This structure can be helpful if you're unsure about which courses to choose.

📎 You can download the relevant syllabus by clicking on each course.

COMPUTER SCIENCE TRACK (SPRING SEMESTER)			
PERIOD	CODE	COURSE TITLE	ECTS
February to March	2CC3000	Optimization	2.5
	ST 76	Engineering Challenge Term - High Performance Simulation for Footprint Reduction:	
	2SC7600	Context and Issues module	0
	2SC7610	Parallel Computing Methods and Algorithms, and Optimization Methods	2.5
	2SC7692	Project: Shape Optimization and Drag Reduction in Aeronautics	4.5
April to May	2EL1580	Artificial Intelligence	2.5
	2EL1120	Interactive Robotics Systems	2.5
	2EL1520	Object Oriented Software Engineering	2.5
June (one week)	2IN23XX	Humanities & Social Sciences Course: Individuals, Work, Organizations / Perspective on Key Social Issues Science, Technology, Society / Innovation, Arts and Creativity	1.5
	OR 2IN5060	OR Audio Signal Processing	OR 2.5
During the whole semester	2SL8100	Project and Soft skills development workshops: Team project (1 d/wk throughout semester)	8.5
	+	+	+
	2SL5007	Engineering Skills Workshops	1
	+	+	+
	2SL7007	Professional Practice Workshops	0.5
	LC0200	French as a Foreign Language + another foreign language class (optional)	1.5 + (1.5)

Total: 30 to 32.5 ECTS depending on choices.

ELECTRICAL ENGINEERING TRACK (SPRING SEMESTER)			
PERIOD	CODE	COURSE TITLE	ECTS
February to March	2CC3000	Optimization	2.5
	ST 72	Engineering Challenge Term - Smart Cities:	
	2SC7200	Context & Issues module	0
	2SC7210	Game Theory for Smart Cities	2.5
	2SC7290	Project: Smart Cities: Connected Cities	4.5
April to May	2EL1315	Electrical Energy Conversion for Renewable Energy Sources and Electromobility	2.5
	OR	OR	
	2EL2240	Economics of Decarbonised Transport Systems	
	OR	OR	2.5
	2EL1580	Artificial Intelligence	
	2EL1120	Interactive Robotics Systems	
	OR	OR	2.5
	2EL2520	Electronics for Biomedical and Communication Applications	
	2EL1520	Object Oriented Software Engineering	2.5
	OR	OR	
	2EL1430	Nuclear Engineering (check that you have the prerequisites)	
June (one week)	2IN23XX	Humanities & Social Sciences Course Individuals, Work, Organizations / Perspective on Key Social Issues Science, Technology, Society / Innovation, Arts and Creativity	1.5
During the whole semester	2SL8100	Project and Soft skills development workshops: Team project (1 d/wk throughout semester)	8.5
	+	+	+
	2SL5007	Engineering Skills Workshops	1
	+	+	+
	2SL7007	Professional Practice Workshops	0.5
	LC0200	French as a Foreign Language	1.5
		+ another foreign language class (optional)	+ (1.5)

Total: 30 to 31.5 ECTS depending on choices.

MECHANICAL ENGINEERING TRACK (SPRING SEMESTER)			
PERIOD	CODE	COURSE TITLE	ECTS
February to March	2CC3000	Optimization	2.5
	ST 81	<u>Engineering Challenge Term - Additive Manufacturing Design:</u>	
	2SC8100	Context & Issues module	0
	2SC8110	Multiphysical Couplings	2.5
	2SC8190	Project: Structure Optimization in Additive Manufacturing	4.5
April to May	2EL1850	Multiphysics Coupling Simulation with Finite Element Method	2.5
	2EL1120	Interactive Robotics Systems	2.5
	2EL1315	Electrical Energy Conversion for renewable energy sources and electromobility	2.5
June (one week)	2IN23XX	Humanities and Social Sciences Course Individuals, Work, Organizations / Perspective on Key Social Issues Science, Technology, Society / Innovation, Arts and Creativity	1.5
During the whole semester	2SL8100	<u>Project and Soft skills development workshops:</u>	
	+	Team project (1 d/wk throughout semester)	8.5
	2SL5007	+	+
	+	Engineering Skills Workshops	1
	2SL7007	+	+
		Professional Practice Workshops	0.5
	LC0200	French as a Foreign Language	1.5
		+ another foreign language class (optional)	+ (1.5)

Total: 30 to 31.5 ECTS depending on choices.

INDUSTRIAL ENGINEERING TRACK (SPRING SEMESTER)			
PERIOD	CODE	COURSE TITLE	ECTS
February to March	2CC3000	Optimization	2.5
	ST 81	Engineering Challenge Term - Additive Manufacturing Design:	
	2SC8100	Context and Issues module	0
	2SC8110	Multiphysical Couplings	2.5
	2SC8190	Project: Structure Optimization in Additive Manufacturing	4.5
April to May	2EL2230	Maintenance and Industry 4.0	2.5
	2EL2210	Supply Chain Operations Management	
	OR	OR	2.5
	2EL2240	Economics of Decarbonised Transport Systems	
	2EL1850	Multiphysics Coupling Simulation with Finite Element Method	
	OR	OR	2.5
	2EL1430	Nuclear Engineering (check the prerequisites)	
June (one week)	2IN23XX	Humanities and Social Sciences Course: Individuals, Work, Organizations / Perspective on Key Social Issues Science, Technology, Society / Innovation, Arts and Creativity	1.5
During the whole semester	2SL8100	Project and Soft skills development workshops: Team project (1 d/wk throughout semester)	8.5
	+	+	+
	2SL5007	Engineering Skills Workshops	1
	+	+	+
	2SL7007	Professional Practice Workshops	0.5
	LC0200	French as a Foreign Language	1.5
		+ another foreign language class (optional)	+ (1.5)

Total: 30 to 31.5 ECTS depending on choices.