Study Plan EPFL and Transfer to ETH Zurich

Cyber Security 2024-25

Master project

Code	Course	Semester	CP	Exam	Category ETHZ	Core/Core Elective	Overlap / cannot be combined	
CS-597	Master project in Cybersecurity		30		no transfer			

Group 1

Code	Course	Semester	CP	Exam	Category ETHZ	Core/Core Elective	Overlap / cannot be combined	
CS-470	Advanced computer architecture	spring	8	written	DMS	Core Elective		
CS-523	Advanced topics on privacy enhancing technologies	spring	8	written	CybSec	Core Elective		
CS-450	Algorithms II	autumn	8	written	TI	Core	263-4500	Advanced Algorithms
COM-401	Cryptography and security	autumn	8	written	CybSec	Core Elective		
CS-438	Decentralized systems engineering	autumn	8	written	DMS	Core Elective		
CS-451	Distributed algorithms	autumn	8	written	DMS	Core		
CS-451	Distributed algorithms	autumn	8	written	TI	Core Elective		
CS-452	Foundations of software	spring	8	written	CybSec	Core Elective		
COM-402	Information security and privacy	autumn	8	written	CybSec	Core Elective		
CS-433	Machine learning	autumn	8	written	TI	Core	252-0535	Advanced Machine Learning
CS-433	Machine learning	autumn	8	written	DMS	Core Elective	252-0535	Advanced Machine Learning
CS-433	Machine learning	autumn	8	written	MI	Core	252-0535	Advanced Machine Learning
CS-460	Systems for data management and data science	spring	8	written	DMS	Core Elective		
COM-407	TCP/IP networking	autumn	8	written	no transfer			

Group 2

Code	Course	Semester	CP	Exam	Category ETHZ	Core/Core Elective	Overlap / cannot be combined	
CS-420	Advanced compiler construction	spring	6	during the semester	Free Elective			
CS-440	*Advanced computer graphics (not offered in 2024/25)*	*spring*	*6*	*during the semester*	*VC*	*Core*	*252-0543-01*	*Computer Graphics*
COM-501	Advanced cryptography	spring	6	written	CybSec	Core Elective		
CS-471	Advanced multiprocessor architecture	autumn	8	during the semester	DMS	Core Elective		
CS-477	Advanced operating systems	autumn	6	written	Free Elective			
COM-417	Advanced probability and applications	autumn	8	written	TI	Core Elective		
CS-500	AI product management	autumn	6	during the semester	no transfer			

Code	Course	Semester	CP	Exam	Category ETHZ	Core/Core Elective	Overlap / cannot be combined	
EE-512	Applied biomedical signal processing	autumn	4	written	MI	Core Elective		
MATH-493	Applied biostatistics	spring	5	during the semester	MI	Core Elective		
CS-401	Applied data analysis	autumn	8	written	MI	Core Elective		
EE-554	Automatic speech processing	autumn	4	written	MI	Core Elective		
MICRO-452	Basics of mobile robotics	autumn	4	written	VC	Core Elective		
MGT-416	Causal inference	spring	4	during the semester	no transfer			
MATH-352	Causal thinking	autumn	5	written	Free Elective			
BIO-105	Cellular biology and biochemistry for engineers	autumn	4	written	Free Elective			
CS-524	Computational complexity	autumn	6	during the semester	TI	Core Elective	252-0851	Algorithmen und Komplexität
NX-465	Computational neuroscience: neuronal dynamics	spring	5	written	Free Elective			
CS-413	Computational photography	spring	6	during the semester	VC	Core Elective		
CS-442	Computer vision	spring	6	written	VC	Core	263-5902	Computer Vision
CS-453	Concurrent computing	autumn	6	written	Free Elective			
COM-480	Data visualization	spring	6	during the semester	VC	Core Elective		
COM-480	Data visualization	spring	6	during the semester	MI	Core Elective		
EE-559	Deep learning	spring	4	during the semester	MI	Core Elective		
CS-456	Deep reinforcement learning	spring	6	written	MI	Core Elective		
CS-472	Design technologies for integrated systems	autumn	6	during the semester	DMS	Core Elective		
CS-411	Digital education	spring	6	written	Free Elective			

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CS-423	Distributed information systems	autumn	6	written	DMS	Core Elective	
ENG-466	Distributed intelligent systems	autumn	5	oral	DMS	Core Elective	
COM-502	Dynamical system theory for engineers	spring	6	written	no transfer		
CS-476	Embedded system design	spring	6	during the semester	DMS	Core Elective	
DH-415	Ethics and law of AI	autumn	4	during the semester	Free Elective		
CS-489	Experience design (not offered in 2024/25)	autumn	6	during the semester	Free Elective		
CS-550	Formal verification	autumn	6	during the semester	CybSec	Core	
COM-406	Foundations of Data Science	autumn	8	written	DMS	Core Elective	
COM-406	Foundations of Data Science	autumn	8	written	MI	Core	

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CS-459	Foundations of probabilistic proofs	autumn	6	during the semester	TI	Core Elective		
MATH-483	Gödel and recursivity	autumn	5	written	TI	Core Elective	401-3033	Die Gödel'schen Sätze
MICRO-511	Image processing I	autumn	3	written	VC	Core Elective		
MICRO-512	Image processing II	spring	3	written	VC	Core Elective		
CS-487	Industrial automation	spring	3	oral		Free Elective		
COM-404	Information theory and coding	autumn	8	written	CybSec	Core Elective		
CS-430	Intelligent agents	autumn	6	during the semester	MI	Core Elective		
CS-486	Interaction design	spring	6	during the semester		Free Elective		
CS-428	Interactive theorem proving	spring	6	during the semester		Free Elective	263-2520	Formal Foundations of Programming Languages
CS-491	Introduction to IT consulting	spring	6	oral		Free Elective		
CS-431	Introduction to natural language processing	autumn	6	written	MI	Core Elective		
CS-479	Learning in neural networks	spring	6	oral		Free Elective		
CS-526	Learning theory	spring	6	written	MI	Core Elective		
CS-421	Machine learning for behavioral data	spring	6	written	MI	Core Elective		
MGT-427	Management de projet et analyse du risque (in French)	autumn	4	during the semester		Free Elective		
COM-516	*Markov chains and algorithmic applications (not offered in 2024/25)*	*autumn*	6	*written*	*TI*	*Core Elective*	*252-0417*	*Randomized Algorithms and Probabilistic Methods*

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COM-405	Mobile networks	autumn	8	written	DMS	Core Elective		
COM-430	Modern digital communications: a hands-on approach	autumn	8	during the semester	DMS	Core Elective		
EE-452	Network machine learning	spring	4	during the semester	MI	Core Elective		
COM-512	*Networks out of control (not offered 2024/25)*	*spring*	6	*written*	*MI*	*Core Elective*		
MATH-489	Number theory II.c - Cryptography	spring	5	written	CybSec	Core Elective		
CS-439	Optimization for machine learning	spring	8	written	MI	Core Elective		
CS-439	Optimization for machine learning	spring	8	written	TI	Core Elective		
CS-596	Optional research project in computer science II	autumn/spring	8	during the semester		Free Elective		
CS-522	Principles of computer systems	autumn	8	during the semester / written	DMS	Core Elective	263-3800	Advanced Operating Systems
CS-412	Software security	spring	8	during the semester	CybSec	Core		

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PHYS-512	Statistical physics of computation	autumn	4	written	TI	Core Elective		
COM-500	Statistical signal and data processing through applications	spring	8	written	DMS	Core Elective		
COM-506	Student seminar: security protocols and applications	spring	3	during the semester	CybSec	Seminar		
CS-448	Sublinear algorithms for big data analyis	spring	6	during the semester	MI	Core Elective		
CS-473	System programming for Systems-on-Chip	autumn	6	during the semester	Free Elective			
CS-510	Topics in software security	autumn	3	during the semester	CybSec	Seminar		
CS-455	*Topics in theoretical computer science (not offered in 2024/25)*	*autumn*	*6*	*during the semester*	*TI*	*Core Elective*		
CS-444	Virtual reality	spring	6	during the semester	VC	Core Elective		

Projects / Social and Human Sciences (SHS) Program

Code	Course	Semester	CP	Exam	Category ETHZ	Core/Core Elective	Overlap / cannot be combined	
HUM-nnn	SHS: Introduction to project	autumn	3	during the semester	SiP			
HUM-nnn	SHS: Project	spring	3	during the semester	SiP			
CS-496	Research project in Cyber Security	autumn/ spring	12	during the semester	CybSec	Semester Project	260-0100	Semester project

07.08.2024