

Curriculum 2023 - First year (as implemented in academic year 2023-2024)			
Quarter 1	Quarter 2	Quarter 3	Quarter 4
NWI-IPC020 Mathematical Structures (3 EC)	NWI-IPC017 Matrix Calculation (3 EC)	NWI-IPC006 Processors (3 EC)	NWI-IBC017 Calculus and Probability Theory (3 EC)
NWI-IPC034 Data Analysis (3 EC)	NWI-IBC016 Combinatorics (3 EC)	NWI-IPC002 Languages and Automata (3 EC)	NWI-IPC035 Artificial Intelligence (3 EC)
NWI-IPC021 Security (6 EC)		NWI-IPC023 Requirements Engineering (3 EC)	NWI-IPC030 Research & Development: Project (3 EC)
NWI-IPC031 Imperative Programming (6 EC)		NWI-IP1004 Logic and Applications (6 EC)	
NWI-IPC033 Information Modeling and Databases (6)		NWI-IP1005 Object Oriented Programming (6 EC)	
Total: 15 EC	Total: 15 EC	Total: 15 EC	Total: 15 EC

Curriculum 2023- Second year (as foreseen in academic year 2024-2025, subject to any changes)			
Quarter 1	Quarter 2	Quarter 3	Quarter 4
Placeholder course:* NWI-IPC025 Hacking in C / NWI-IBC019 Operating System Concepts (3 EC)	NWI-IBC020 Information Systems (3 EC)	NWI-IO036 IT and Society (3 EC)	NWI-IBI007 Research Methods (3 EC)
NWI-IBC003 Computability (3 EC)**		NWI-IBC026 Semantics and Correctness (3 EC)	NWI-IBC028 Complexity (3 EC)
	NWI-IBC040 Functional Programming (6 EC)**		NWI-IBC042 Parallel Computing (3 EC)
NWI-IBC027 Algorithms and Datastructures (6 EC)		NWI-IBC048 NWI-Networks and Security (6 EC)	
Specialisation: Choose 2 out of 3 tracks Data Science / Cybersecurity / Software Science in Q1-2 and for one of these, also the corresponding course(s) in Q3-4. The remaining spring course(s) of the second specialisation will be taken in the third year.			
NWI-IBI008 Data Mining (6 EC) (DSc)		NWI-IBC036 Big Data (6 EC) (DSc)	
NWI-IBC023 Introduction to Cryptography (6 EC) (Cyb)		NWI-IPC026 Web Security (3 EC) (Cyb)	NWI-IBC034 Operating Systems Security (3 EC) (Cyb)
NWI-IBC041 New Devices Lab (SwS)		NWI-IBC024 Software Verification (3 EC) (SwS)	NWI-IBC025 Semantics and Rewriting (3 EC) (SwS)
Total: 15 EC	Total: 15 EC	Total: 15 EC	Total: 15 EC

Curriculum 2023 - Third year (as foreseen in academic year 2025-2026, subject to any changes)			
Quarter 1	Quarter 2	Quarter 3	Quarter 4
Placeholder course:* NWI-IPC025 Hacking in C / NWI-IBC019 Operating System Concepts (3 EC)		NWI-IBI010 Reflection and Vocational Orientation (3 EC)	NWI-IBC047 Law, Privacy and Identity (3 EC)
Free electives (12 EC)		NWI-IBI001 Software Engineering (6 EC)	
Minor Programme (15 EC)		NWI-IBC033 Bachelor Thesis (12 EC)	
<i>The autumn semester is the so-called "mobility window", enabling students to take a semester abroad.</i> <i>Students can also use this space to create more flexibility by shifting some second year courses to year 3 and taking some elective or minor courses in year 2. Courses that have no prior knowledge relations with spring semester courses in year 2 can be moved to year 3. Please check the course guide for more details and discuss options with your study advisor if needed.</i>		Room for spring course(s) of the second specialisation (6 EC): (choose courses of the same specialisation if there are 2):	
		NWI-IBC036 Big Data (DSc) (6 EC) - or -	
		NWI-IPC026 Web Security (3 EC) (Cyb) -or-	NWI-IBC034 Operating Systems Security (3 EC) (Cyb) - or -
		NWI-IBC024 Software Verification (3 EC) (SwS)	NWI-IBC025 Semantics and Rewriting (3 EC) (SwS)
Total: 30 EC in the first semester		Total: 15 EC	Total: 15 EC

*Placeholder course: students take one of the two courses in the second year and the other one in the third year.

Other courses marked yellow can also be taken in year 3, to make room for electives or minor courses in year 2.

**Currently, it is foreseen that NWI-IBC003 will move to Q1 and NWI-IBC040 will move to Q2-Q3. However, this change is still to be finalized.