

Cours	Enseignant-e-s	🌟 Automne	🌱 Printemps	Examen	Crédits	
Master of Science in Computer Science						TOTAL 90
Teaching Units						TOTAL 60
General						TOTAL
Modeling and Scaling of Generative AI Systems	Y. CHEN	2ph+2ph		oral	5	
User Centered Design (University of Fribourg)	D. Lalanne	2ph+1ph		écrit	5	
Multimodal User Interfaces	D. Lalanne		2ph+1ph	écrit	5	
Fabrication and Prototyping in the LearningLab	J. Nembrini S. Ruffieux	2ph+1ph		oral	5	
Entrepreneurship for Computer Scientists: From Startup Idea to Working Prototype	P. Cudré-Mauroux	1pg		contrôle continu	5	
Distributed Software Systems						TOTAL
Advanced Networking and Future Internet	T. Braun		2ph+1ph	écrit	5	
Distributed Algorithms	C. Cachin	2ph+1ph		oral	5	
Network Security	T. Braun	2ph+1ph		écrit	5	
Software Product Lines	T. Kehrer	2ph+1ph		écrit	5	
Compiler Construction	T. Kehrer		2ph+1ph	écrit	5	
Concurrency: Multi-core Programming and Data Processing	P. FELBER		2ph+2ph	écrit	5	
Advanced Software Engineering (University of Fribourg)	A. Fischer	2ph+1ph		écrit	5	
Scientific Reading in Computer Networks	T. Braun	1pg		contrôle continu	5	
Scientific Writing in Computer Networks	T. Braun	1pg		contrôle continu	5	
Seminar Communication and Distributed Systems	T. Braun	2ph		contrôle continu	5	
Seminar Software Engineering	T. Kehrer	2ph		contrôle continu	5	
Scientific Reading in Computer Networks	T. Braun		1pg	contrôle continu	5	
Scientific Writing in Computer Networks	T. Braun		1pg	contrôle continu	5	
Seminar Communication and Distributed Systems	T. Braun		2ph	contrôle continu	5	
Seminar Software Engineering	T. Kehrer		2ph	contrôle continu	5	
Seminar Hot Topics in Applied Security	P. FELBER V. Schiavoni	2ph		contrôle continu	5	
Seminar Foundations of Dependable Systems I	U. Ultes-Nitsche	1pg		contrôle continu	5	
Security						TOTAL
Cryptography	C. Cachin		2ph+1ph	oral	5	
Security: Advanced Topics	H. SANGIARD	2ph+2ph		oral	5	
Cryptographic Algorithms	G. DILL	2ph+2ph		oral	5	
Seminar Cryptography and Data Security	C. Cachin	2ph		contrôle continu	5	
Seminar Cryptography and Data Security	C. Cachin		2ph	contrôle continu	5	
Visual Computing						TOTAL
Computer Vision	P. Favaro	2ph+1ph		écrit	5	
Deep Learning	P. Favaro		2ph+1ph	écrit	5	
3D Geometry Processing	D. Bommes		2ph+1ph	écrit	5	
Applied Optimization	D. Bommes	2ph+1ph		écrit	5	
Graph Based Pattern Recognition	K. Riesen		2ph+1ph	écrit	5	
Design and Graphics Programming for Game Development (University of Fribourg)	M. Rigamonti		2ph+1ph	écrit	5	
Seminar Computer Graphics and Geometry Processing	D. Bommes	2ph		contrôle continu	5	
Seminar Machine Learning and Artificial Intelligence	P. Favaro	2ph		contrôle continu	5	
Seminar Pattern Recognition	K. Riesen	2ph		contrôle continu	5	
Seminar Applied Optimization	D. Bommes		2ph	contrôle continu	5	
Seminar Machine Learning and Artificial Intelligence	P. Favaro		2ph	contrôle continu	5	
Seminar Pattern Recognition	K. Riesen		2ph	contrôle continu	5	
Seminar Generative AI	O. Abou Khaled P. Cudré-Mauroux E. Mugellini	1pg		contrôle continu	5	
Seminar Human-Computer Interaction I	D. Lalanne J. Nembrini	1pg		contrôle continu	5	
Seminar Human-Centered AI - Human-Computer Interaction meets Artificial Intelligence	O. Abou Khaled E. Mugellini		1pg	contrôle continu	5	
Seminar Human-Computer Interaction II	D. Lalanne J. Nembrini		1pg	contrôle continu	5	
Theory and Logic						TOTAL
Machine learning and data mining	C. DIMITRAKAKIS	2ph+2ph		écrit	5	
Reinforcement Learning and Decision Making Under Uncertainty	C. DIMITRAKAKIS		2ph+2ph	écrit	5	
Automata on Infinite Structures	U. Ultes-Nitsche	2ph+1ph		oral	5	
Graph Theory	C. Dallard	2ph+1ph		écrit	5	
Algorithm Design	C. Dallard		2ph+1ph	écrit	5	
Seminar Logic and Theoretical Computer Science	G. Metcalfe T. Studer	2ph		contrôle continu	5	
Seminar Logic and Theoretical Computer Science	G. Metcalfe T. Studer		2ph	contrôle continu	5	
Seminar Advanced Topics in Reinforcement Learning and Decision Making	Y. CHEN C. DIMITRAKAKIS		1pg	contrôle continu	5	
Information Systems and Decision Support						TOTAL
Design of Governance in Socio-technical Information Systems	A. SANDOZ		2ph+2ph	oral	5	
Mathematical Modeling and Linear Optimization	M. Pacheco	2ph+1ph		écrit	5	
Recommender Systems	L. Terán		2ph+1ph	écrit	5	
Fuzzy Sets and Systems II	E. Portmann		2ph+1ph	écrit	5	
Fuzzy Sets and Systems I	E. Portmann	2ph+1ph		écrit	5	
Computing with Words	E. Portmann	2ph+1ph	2ph+1ph	écrit	5	
Seminar Life Engineering	E. Portmann	1pg		contrôle continu	5	
Seminar Urban Computing	E. Portmann	1pg		contrôle continu	5	

Seminar Life Engineering	E. Portmann	1pg	controle continu	5	
Seminar Social Computing	E. Portmann	1pg	controle continu	5	
Data Science					TOTAL
Agentic Systems	Y. CHEN	2ph+2ph	oral	5	
Big Data Infrastructures	P. Cudré-Mauroux	2ph+1ph	écrit	5	
Social Media Analytics	M. Khayati	2ph+1ph	écrit	5	
Geometry and Topology in Machine Learning	I. García-Redondo B. Grossenbacher-Rieck	2ph+1ph	2ph+1	5	
Topological Data Analysis	B. Grossenbacher-Rieck E. Xinyi Wang	2ph+1ph	2ph+1ph	5	
Seminar Trustworthy AI Models and Systems	Y. CHEN C. DIMITRAKAKIS	2ph	controle continu	5	
Seminar Data Science	M. Khayati	1pg	controle continu	5	
Rattrapage					TOTAL 30
Structure de données et algorithmique	A. SANDOZ	2ph+2ph	controle continu	6	
Mathématiques discrètes et applications	G. DILL	2ph+2ph	écrit	6	
Informatique générale : programmation I	P. FELBER	2ph+2ph	controle continu	6	
Systèmes concurrents et distribués	P. FELBER	2ph+2ph	écrit	6	
Informatique générale : programmation II	P. FELBER	2ph+2ph	controle continu	6	
Systèmes d'exploitation	V. Schiavoni	2ph+2ph	écrit	6	
Intelligence artificielle	C. DIMITRAKAKIS	2ph+2ph	écrit	6	
Langages et compilation	P. FELBER	2ph+2ph	écrit	6	
Software Skills Lab	V. Schiavoni	4dj	controle continu	5	
JMCS Prérequis	C. DIMITRAKAKIS P. FELBER	1pg	1pg	controle continu	5