

Master's programme in Machine Learning, Systems and Control

Study Year 1 (Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	21/22	21/22	21/22	21/22
								sp1	sp2	sp3	sp4
EMAN20	7.5	A	X	E1	Image Analysis		KS KE U W T	1			
ERTE25	7.5	G2	-	E	Introduction to Machine Learning, Systems and Control		KS KE U W T	1	2		
FRTN65	7.5	A	X	E	Modelling and Learning from Data		KS KE U W T	1	2		
EXTQ40	7.5	A	-	E1	Introduction to Artificial Neural Networks and Deep Learning		KS KE U W T		2		

Study Year 1 (Elective Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links						
							21/22 sp1	21/22 sp2	21/22 sp3	21/22 sp4			
EDAP01	7.5	A	X	E	Artificial Intelligence		KS	KE	U	W	T	3	
EMSN50	7.5	A	X	E	Monte Carlo and Empirical Methods for Stochastic Inference	X	KS	KE	U	W	T	3	
ERTN60	7.5	A	-	E	Real-Time Systems		KS	KE	U	W	T	3	
EMAN45	7.5	A	-	E1	Machine Learning		KS	KE	U	W	T		4
ERTN70	7.5	A	X	E	Project in Systems, Control and Learning		KS	KE	U	W	T		4

[EMSN50](#) Monte Carlo and Empirical Methods for Stochastic Inference: *The course is to be studied together with MASM11.*

Study Year 2 (Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links				
							21/22 sp1	21/22 sp2	21/22 sp3	21/22 sp4	
ERTN55	7.5	A	X	E	Automatic Control, Advanced Course		KS KE U W T	1			

Elective Courses - MMSR

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
EDAN70	7.5	A	1	1	X	E1	Project in Computer Science		KS KE U W T	1			
EDAN70											2		
EMAN95	7.5	A	1	1	X	E1	Computer Vision		KS KE U W T			3	
ERTN75	7.5	A	1	1	X	E	Learning-Based Control	X	KS KE U W T			3	
BMEN20	7.5	A	1	1	X	E1	Project Course in Signal Processing – from Idea to App		KS KE U W T			3	
EDAN70	7.5	A	1	1	X	E1	Project in Computer Science		KS KE U W T			3	
EDAN15	7.5	A	1	1	X	E	Design of Embedded Systems		KS KE U W T				4

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
									sp1	sp2	sp3	sp4
EDAN40	7.5	A	1	1	X	E	Functional Programming	KS KE U W T				4
EITN45	7.5	A	1	1	X	E	Information Theory	KS KE U W T				4
EMSN30	7.5	A	1	1	X	E	Linear and Logistic Regression	KS KE U W T				4
ERTN30	7.5	A	1	1	X	E	Network Dynamics	KS KE U W T				4
EDAN70	7.5	A	1	1	X	E1	Project in Computer Science	KS KE U W T				4
EMNN25	7.5	A	2	2	X	E1	Advanced Course in Numerical Algorithms with Python/SciPy	KS KE U W T		1		
ERTE20	7.5	G2	2	2	X	E	Applied Robotics	KS KE U W T		1		

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
EDAF80	7.5	G2	2	2	X	E	Computer Graphics		KS KE U W T	1			
EITG05	7.5	G2	2	2	X	E	Digital Communications		KS KE U W T	1			
INTN01	7.5	A	2	2	X	E	Innovation Engineering		KS KE U W T	1			
EDAP20	7.5	A	2	2	X	E	Intelligent Autonomous Systems		KS KE U W T	1			
EDAN20	7.5	A	2	2	X	E	Language Technology		KS KE U W T	1			
EMSF15	7.5	G2	2	2	X	E	Markov Processes	X	KS KE U W T	1			
EMNN01	7.5	A	2	2	X	E	Numerical Linear Algebra		KS KE U W T	1			

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	Links			
										sp1	sp2	sp3	sp4
ERTN50	7.5	A	2	2	X	E	Optimization for Learning		KS KE U W T	1			
EMSF10	7.5	G2	2	2	X	E	Stationary Stochastic Processes	X	KS KE U W T	1			
EMAN80	7.5	A	2	2	X	E1	Functional Analysis and Harmonic Analysis		KS KE U W T	1	2		
EMAN15	7.5	A	2	2	X	E	Nonlinear Dynamical Systems		KS KE U W T	1	2		
EDAN95	7.5	A	2	2	-	E	Applied Machine Learning		KS KE U W T		2		
EITN70	7.5	A	2	2	X	E	Channel Coding for Reliable Communication		KS KE U W T		2		
EDAN01	7.5	A	2	2	X	E1	Constraint Programming		KS KE U W T		2		

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links							
									sp1	sp2	sp3	sp4				
EDIN01	7.5	A	2	2	X	E1	Cryptography		KS	KE	U	W	T	2		
EMSN45	7.5	A	2	2	X	E	Mathematical Statistics, Time Series Analysis	X	KS	KE	U	W	T	2		
EMAN30	7.5	A	2	2	X	E1	Medical Image Analysis		KS	KE	U	W	T	2		
ERTN05	7.5	A	2	2	X	E	Non-Linear Control and Servo Systems		KS	KE	U	W	T	2		
ERTN40	7.5	A	2	2	X	E	Project in Automatic Control		KS	KE	U	W	T	2		
BMEN15	7.5	A	2	2	X	E	Signal Separation - Independent Components		KS	KE	U	W	T	2		
EMSN20	7.5	A	2	2	X	E	Spatial Statistics with Image Analysis	X	KS	KE	U	W	T	2		

[ERTN75](#) Learning-Based Control: *Replaces [ERTN15](#) Predictive Control.*

[EMSF15](#) Markov Processes: *The course is to be studied together with MASC03.*

[EMSF10](#) Stationary Stochastic Processes: *The course is to be studied together with MASC04*

[EMSN45](#) Mathematical Statistics, Time Series Analysis: *The course is to be studied together with MASM17.*

[EMSN20](#) Spatial Statistics with Image Analysis: *The course is to be studied together with MASM25*

Degree Projects - MMSR

The list contains the degree project courses that are included in the MMSR programme.

Links

Course Code	Credits	Course Name	Links
FRTM05	30	Degree Project in Automatic Control	KS KE U
EDAM01	30	Degree Project in Computer Sciences	KS KE U
EITM02	30	Degree Project in Electrical and Information Technology	KS KE U W
FMSM05	30	Degree Project in Mathematical Statistics	KS KE U
FMAM02	30	Degree Project in Mathematics	KS KE U W