

Master's programme in Machine Learning, Systems and Control

Study Year 1, Academic Year 2020/21 (Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	20/21	20/21	20/21	20/21
								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	-	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, Academic Year 2020/21 (Elective Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links			
							20/21 sp1	20/21 sp2	20/21 sp3	20/21 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	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

Study Year 2, Academic Year 2021/22 (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 - 20/21	1	X	E1	Project in Computer Science		KS KE U W T	1			
EDAN70											2		
EMAN95	7.5	A	1 - 20/21	1	X	E1	Computer Vision		KS KE U W T			3	
BMEN20	7.5	A	1 - 20/21	1	X	E1	Project Course in Signal Processing – from Idea to App		KS KE U W T			3	
EDAN70	7.5	A	1 - 20/21	1	X	E1	Project in Computer Science		KS KE U W T			3	
EDAN15	7.5	A	1 - 20/21	1	X	E	Design of Embedded Systems		KS KE U W T				4
EDAN40	7.5	A	1 - 20/21	1	X	E	Functional Programming		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			
										sp1	sp2	sp3	sp4
EITN45	7.5	A	1 - 20/21	1	X	E	Information Theory		KS KE U W T				4
EMSN30	7.5	A	1 - 20/21	1	X	E	Linear and Logistic Regression		KS KE U W T				4
ERTN30	7.5	A	1 - 20/21	1	X	E	Network Dynamics		KS KE U W T				4
EDAN70	7.5	A	1 - 20/21	1	X	E1	Project in Computer Science		KS KE U W T				4
ERTN15	7.5	A	1 - 20/21	1	X	E	Predictive Control	X	KS KE U W T	Course on hold			
EMNN25	7.5	A	2 - 21/22	2	X	E1	Advanced Course in Numerical Algorithms with Python/SciPy		KS KE U W T	1			
ERTE20	7.5	G2	2 - 21/22	2	X	E	Applied Robotics		KS KE U W T	1			
EDAF80	7.5	G2	2 - 21/22	2	X	E	Computer Graphics		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
EITG05	7.5	G2	2 - 21/22	2	X	E	Digital Communications		KS KE U W T	1			
INTN01	7.5	A	2 - 21/22	2	X	E	Innovation Engineering		KS KE U W T	1			
EDAP20	7.5	A	2 - 21/22	2	X	E	Intelligent Autonomous Systems		KS KE U W T	1			
EDAN20	7.5	A	2 - 21/22	2	X	E	Language Technology		KS KE U W T	1			
FMSE15	7.5	G2	2 - 21/22	2	X	E	Markov Processes	X	KS KE U W T	1			
FMNN01	7.5	A	2 - 21/22	2	X	E	Numerical Linear Algebra		KS KE U W T	1			
FRTN50	7.5	A	2 - 21/22	2	X	E	Optimization for Learning		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
EMSF10	7.5	G2	2 - 21/22	2	X	E	Stationary Stochastic Processes	X	KS KE U W T	1			
EMAN80	7.5	A	2 - 21/22	2	X	E1	Functional Analysis and Harmonic Analysis		KS KE U W T	1	2		
EMAN15	7.5	A	2 - 21/22	2	X	E	Nonlinear Dynamical Systems		KS KE U W T	1	2		
EDAN95	7.5	A	2 - 21/22	2	-	E	Applied Machine Learning		KS KE U W T		2		
EITN70	7.5	A	2 - 21/22	2	X	E	Channel Coding for Reliable Communication		KS KE U W T		2		
EDAN01	7.5	A	2 - 21/22	2	X	E1	Constraint Programming		KS KE U W T		2		
EDIN01	7.5	A	2 - 21/22	2	X	E1	Cryptography		KS KE U W T		2		

Course Code	Credits	Cycle	Language				Course Name	Footnote	Links	sp1 sp2 sp3 sp4			
			Year	From year	S.Ex. stud.								
EMSN45	7.5	A	2 - 21/22	2	X	E	Mathematical Statistics, Time Series Analysis	X	KS KE U W T		2		
EMAN30	7.5	A	2 - 21/22	2	X	E1	Medical Image Analysis		KS KE U W T		2		
ERTN05	7.5	A	2 - 21/22	2	X	E	Non-Linear Control and Servo Systems		KS KE U W T		2		
ERTN40	7.5	A	2 - 21/22	2	X	E	Project in Automatic Control		KS KE U W T		2		
BMEN15	7.5	A	2 - 21/22	2	X	E	Signal Separation - Independent Components		KS KE U W T		2		
EMSN20	7.5	A	2 - 21/22	2	X	E	Spatial Statistics with Image Analysis	X	KS KE U W T		2		

[ERTN15](#) Predictive Control: *The course is cancelled in the academic year 2020/21 but is planned to be given in 2021/22.*

[EMSE15](#) Markov Processes: *The course is to be studied together with MASC03.*

[EMSE10](#) 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