

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 sp1					20/21 sp2					20/21 sp3					20/21 sp4									
								F	O	L	H	S	F	O	L	H	S	F	O	L	H	S	F	O	L	H	S					
EMAN20	7.5	A	X	E1	Image Analysis		KS KE U W T	32	0	0	2	166																				
FRTF25	7.5	G2	-	E	Introduction to Machine Learning, Systems and Control		KS KE U W T	16	0	12	0	72	14	0	6	0	80															
FRTN65	7.5	A	-	E	Modelling and Learning from Data		KS KE U W T	16	10	4	0	70	14	10	8	0	68															
EXTQ40	7.5	A	-	E1	Introduction to Artificial Neural Networks and Deep Learning		KS KE U W T						34	10	30	0	126															

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									
								F	O	L	H	S	F	O	L	H	S	F	O	L	H	S	F	O	L	H	S					
EDAP01	7.5	A	X	E	Artificial Intelligence		KS KE U W T											28	0	0	0	170										
EMSN50	7.5	A	X	E	Monte Carlo and Empirical Methods for Stochastic Inference		KS KE U W T											28	0	12	5	140										
FRTN60	7.5	A	-	E	Real-Time Systems		KS KE U W T											34	22	12	0	132										
EMAN45	7.5	A	-	E1	Machine Learning		KS KE U W T																28	0	0	2	170					
FRTN70	7.5	A	X	E	Project in Systems, Control and Learning		KS KE U W T																0	0	0	40	160					

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	F	O	L	H	S	F	O	L	H	S	F	O	L	H	S	F	O	L	H	S
							30	28	12	0	130															

Elective Courses - MMSR

Course Code	Credits	Cycle	Year	Language			Course Name	Footnote	Links	sp1				sp2				sp3				sp4							
				From year	S.Ex. stud.					F	O	L	H	S	F	O	L	H	S	F	O	L	H	S	F	O	L	H	S
EDAN70	7.5	A	1 - 20/21	1	X	E1	Project in Computer Science		KS KE U W T	2	4	0	12	182															
EDAN70															2	4	0	12	182										
EMAN95	7.5	A	1 - 20/21	1	X	E1	Computer Vision		KS KE U W T											32	0	0	2	166					
BMEN20	7.5	A	1 - 20/21	1	X	E1	Project Course in Signal Processing – from Idea to App		KS KE U W T											8	0	12	8	172					
EDAN70	7.5	A	1 - 20/21	1	X	E1	Project in Computer Science		KS KE U W T											2	4	0	12	182					
EDAN15	7.5	A	1 - 20/21	1	X	E	Design of Embedded Systems		KS KE U W T																24	4	14	0	150
EDAN40	7.5	A	1 - 20/21	1	X	E	Functional Programming		KS KE U W T																28	6	0	0	166
EITN45	7.5	A	1 - 20/21	1	X	E	Information Theory		KS KE U W T																26	14	0	0	160
FMSN30	7.5	A	1 - 20/21	1	X	E	Linear and Logistic Regression		KS KE U W T																24	0	26	2	120
FRTN30	7.5	A	1 - 20/21	1	X	E	Network Dynamics		KS KE U W T																28	28	16	0	130
EDAN70	7.5	A	1 - 20/21	1	X	E1	Project in Computer Science		KS KE U W T																2	4	0	12	182
FRTN15	7.5	A	1 - 20/21	1	X	E	Predictive Control	X	KS KE U W T	Course on hold																			
FMNN25	7.5	A	2 - 21/22	2	X	E1	Advanced Course in Numerical Algorithms with Python/SciPy		KS KE U W T	28	0	0	3	169															
FRTE20	7.5	G2	2 - 21/22	2	X	E	Applied Robotics		KS KE U W T	28	22	8	20	100															
EDAF80	7.5	G2	2 - 21/22	2	X	E	Computer Graphics		KS KE U W T	26	0	10	0	160															
EITG05	7.5	G2	2 - 21/22	2	X	E	Digital Communications		KS KE U W T	24	28	4	0	144															
INTN01	7.5	A	2 - 21/22	2	X	E	Innovation Engineering		KS KE U W T	80	4	0	15	100															

Course Code	Credits	Cycle	Year	Language			Course Name	Footnote	Links	sp1				sp2				sp3				sp4							
				From year	S.Ex. stud.					F	O	L	H	S	F	O	L	H	S	F	O	L	H	S	F	O	L	H	S
EDAP20	7.5	A	2 - 21/22	2	X	E	Intelligent Autonomous Systems		KS KE U W T	24	0	30	0	144															
EDAN20	7.5	A	2 - 21/22	2	X	E	Language Technology		KS KE U W T	20	0	14	0	160															
FMSE15	7.5	G2	2 - 21/22	2	X	E	Markov Processes	X	KS KE U W T	26	16	6	0	140															
FMNN01	7.5	A	2 - 21/22	2	X	E	Numerical Linear Algebra		KS KE U W T	36	0	0	6	160															
FRTN50	7.5	A	2 - 21/22	2	X	E	Optimization for Learning		KS KE U W T	28	28	0	10	130															
FMSE10	7.5	G2	2 - 21/22	2	X	E	Stationary Stochastic Processes	X	KS KE U W T	22	16	6	0	145															
FMAN80	7.5	A	2 - 21/22	2	X	E1	Functional Analysis and Harmonic Analysis		KS KE U W T	20	10	0	0	108	8	4	0	0	50										
FMAN15	7.5	A	2 - 21/22	2	X	E	Nonlinear Dynamical Systems		KS KE U W T	16	6	0	0	78	14	8	0	0	78										
EDAN95	7.5	A	2 - 21/22	2	-	E	Applied Machine Learning		KS KE U W T						28	0	14	0	156										
EITN70	7.5	A	2 - 21/22	2	X	E	Channel Coding for Reliable Communication		KS KE U W T						28	14	0	2	156										
EDAN01	7.5	A	2 - 21/22	2	X	E1	Constraint Programming		KS KE U W T						20	0	12	0	160										
EDIN01	7.5	A	2 - 21/22	2	X	E1	Cryptography		KS KE U W T						36	14	0	2	148										
FMSN45	7.5	A	2 - 21/22	2	X	E	Mathematical Statistics, Time Series Analysis	X	KS KE U W T						24	12	12	5	120										
FMAN30	7.5	A	2 - 21/22	2	X	E1	Medical Image Analysis		KS KE U W T						32	0	0	3	165										
FRTN05	7.5	A	2 - 21/22	2	X	E	Non-Linear Control and Servo Systems		KS KE U W T						28	28	12	0	130										
FRTN40	7.5	A	2 - 21/22	2	X	E	Project in Automatic Control		KS KE U W T						0	0	0	40	160										
BMEN15	7.5	A	2 - 21/22	2	X	E	Signal Separation - Independent Components		KS KE U W T						14	28	8	0	150										

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1				sp2				sp3				sp4								
										F	O	L	H	S	F	O	L	H	S	F	O	L	H	S	F	O	L	H	S	
FMSN20	7.5	A	2 - 21/22	2	X	E	Spatial Statistics with Image Analysis	X	KS KE U W T					26	0	18	5	150												

[FRTN15](#) Predictive Control: *The course is cancelled in the academic year 2020/21 but is planned to be given in 2021/22.*

[FMSF15](#) Markov Processes: *The course is to be studied together with MASC03.*

[FMSF10](#) Stationary Stochastic Processes: *The course is to be studied together with MASC04*

[FMSN45](#) Mathematical Statistics, Time Series Analysis: *The course is to be studied together with MASM17.*

[FMSN20](#) 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