

Industrial Engineering and Management

Study Year 1 (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
FMAB65	7.5	G1	-	S	Calculus in One Variable B1		KS KE U W T	1			
MIOA01	9	G1	-	S	Managerial Economics, Basic Course		KS KE U W T	1	2		
FMAB70	7.5	G1	-	S	Calculus in One Variable B2		KS KE U W T		2		
FMAB20	6	G1	-	S	Linear Algebra		KS KE U W T		2		
FMAB30	6	G1	-	S	Calculus in Several Variables		KS KE U W T			3	
FMEA10	9	G1	-	S	Engineering Mechanics, Basic Course		KS KE U W T			3	
FAFA75	9	G1	-	S	Energy and Environmental Physics	X	KS KE U W T				4

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links								
							20/21 sp1	20/21 sp2	20/21 sp3	20/21 sp4					
MIOF20	6	G2	-	S	Management Organization		KS	KE	U	W	T				4

[FAFA75](#) Energy and Environmental Physics: *Anmälan till laborationsgrupp vid introduktionsföreläsningen är obligatorisk*

Study Year 1 (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					
MIOA05	3	G1	-	S	Entrepreneurship		KS	KE	U	W	T	1	2		

Study Year 2 (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
EXTA40	6	G1	-	S	Introduction to Microeconomic Theory		KS KE U W T	1			
MTTF01	5	G2	-	S	Logistics		KS KE U W T	1			
EMSE80	9	G2	-	S	Mathematical Statistics, Basic Course	X	KS KE U W T	1	2		
MIOF01	9	G2	-	S	Marketing and Globalization		KS KE U W T		2	3	
EDAA55	9	G1	-	S	Programming, First Course		KS KE U W T		2	3	
EMAF01	7	G2	-	E1	Mathematics - Analytic Functions		KS KE U W T			3	
MIOF25	6	G2	-	S	Managerial Economics, Advanced Course		KS KE U W T				4

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links					
							20/21 sp1	20/21 sp2	20/21 sp3	20/21 sp4		
EMAF05	7	G2	-	E1	Mathematics - Systems and Transforms		KS	KE	U	W	T	4
MIOF05	2	G2	-	S	Project in Managerial Economics, Advanced Course		KS	KE	U	W	T	4

[EMSF80](#) Mathematical Statistics, Basic Course: *Replaces* [EMSF45](#)

Study Year 3 (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
MIOE30	6	G2	-	S	Operations Research - Basic Course		KS KE U W T	1			
MMTA05	6	G1	-	S	Production Systems		KS KE U W T	1			
EMIF01	6	G2	-	S	Environmental System Studies: Management for Sustainable Development		KS KE U W T	1	2		
EXTF45	6	G2	-	S	Financial Management		KS KE U W T		2		
ERTF05	7.5	G2	-	S	Automatic Control, Basic Course	X	KS KE U W T			3	

[ERTF05](#) Automatic Control, Basic Course: *I3 who will study the elective block Product Innovation, should take [ERT010](#) in study period 2.*

Study Year 3 (Elective 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
EITF45	7.5	G2	-	S	Computer Communication	X	KS KE U W T		2		
MVKN35	6	A	-	S	Energy Markets	X	KS KE U W T		2		
EMAN60	6	A	X	E1	Optimization	X	KS KE U W T		2		
FKMA01	7.5	G1	X	E	Materials Engineering, Basic Course	X	KS KE U W T			3	
EDAA01	7.5	G1	-	S	Programming - Second Course	X	KS KE U W T			3	
EMIN20	7.5	A	-	S	Energy Systems Analysis: Renewable Sources of Energy	X	KS KE U W T			3	4
EMIN05	7.5	A	X	E	Environmental System Studies: Climate, Science and Politics	X	KS KE U W T			3	4

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links						
							20/21 sp1	20/21 sp2	20/21 sp3	20/21 sp4			
MMKF35	7.5	G2	X	E	Industrial Design	X	KS	KE	U	W	T	3	4
MMKF05	7.5	G2	X	E	Product Development and Design Methodology	X	KS	KE	U	W	T	3	4
EITF12	9	G2	-	S	Digital Systems, Project Laboratory	X	KS	KE	U	W	T		4
FHLE10	7.5	G2	-	E1	Finite Element Method and Introduction to Strength of Materials	X	KS	KE	U	W	T		4
FBRF01	7.5	G2	X	E	Fundamental Combustion	X	KS	KE	U	W	T		4
FMSN40	9	A	X	E	Linear and Logistic Regression with Data Gathering	X	KS	KE	U	W	T		4
FMNF10	6	G2	X	E1	Numerical Analysis	X	KS	KE	U	W	T		4

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links								
							20/21 sp1	20/21 sp2	20/21 sp3	20/21 sp4					
ETSA03	6	G1	-	S	Software Engineering - Methodology	X	KS	KE	U	W	T				4

[EITF45](#) Computer Communication: *Compulsory course in the elective blocks 'Systems and Software Development'. The course is also an optional programme course.*

[MVKN35](#) Energy Markets: *Compulsory course in the elective block 'Energy and Environmental Engineering' for students admitted autumn 2015. The course is also an optional programme course.*

[FMAN60](#) Optimization: *Compulsory course in the elective block 'Mathematical Modelling' for students admitted autumn 2015. The course is also an optional programme course.*

[FKMA01](#) Materials Engineering, Basic Course: *Compulsory course in the elective block 'Product Innovation' for students admitted autumn 2015. The course is also an optional programme course.*

[EDAA01](#) Programming - Second Course: *Compulsory course in the elective blocks 'Mathematical Modelling' and 'Systems and Software Development' for students admitted autumn 2015. The course is also an optional programme course.*

[FMIN20](#) Energy Systems Analysis: Renewable Sources of Energy: *Compulsory course in the elective block 'Energy and Environmental Engineering' for students admitted autumn 2015. The course is also an optional programme course.*

[FMIN05](#) Environmental System Studies: Climate, Science and Politics: *Compulsory course in the elective block 'Energy and Environmental Engineering' for students admitted autumn 2015. The course is also an optional programme course.*

[MMKF35](#) Industrial Design: *Compulsory course in the elective block 'Product Innovation' for students admitted autumn 2015. The course is also an optional programme course.*

[MMKF05](#) Product Development and Design Methodology: *Compulsory course in the elective block 'Product innovation' for students admitted autumn 2015. The course is also an optional programme course. The date and time of the exam is announced by the lecturing staff.*

[EITF12](#) Digital Systems, Project Laboratory: *Compulsory course in the elective blocks 'Systems and Software Development'. The course is also an optional programme course.*

[FHLE10](#) Finite Element Method and Introduction to Strength of Materials: *Compulsory course in the elective block 'Product Innovation' for students admitted autumn 2015. The course is also an optional programme course.*

[FBRF01](#) Fundamental Combustion: *Compulsory course in the elective block 'Energy and Environmental Engineering' for students admitted autumn 2015. The course is also an optional programme course.*

[FMSN40](#) Linear and Logistic Regression with Data Gathering: *Compulsory course in the elective block 'Mathematical Modelling' for students admitted autumn 2016. The course is also an optional programme course. Only one of the courses [FMSN30](#) and [FMSN40](#) may be included in a degree.*

[FMNF10](#) Numerical Analysis: *Compulsory course in the elective block 'Mathematical Modelling' for students admitted autumn 2015. The course is also an optional programme course.*

[ETSA03](#) Software Engineering - Methodology: *Compulsory course in the elective blocks 'Systems and Software Development'. The course is also an optional programme course.*

Specialisation ai - Business and Innovation

Course Code	Credits	Cycle	Mand./ Elect.		Language			Course Name	Footnote	Links			
			Year	From year	S.Ex. stud.	sp1	sp2			sp3	sp4		
INTN01	7.5	A	V	4	4	X	E	Innovation Engineering	KS KE U W T	1			
MION25	7.5	A	V	4	4	-	S	Technology Strategy	KS KE U W T	1			
MION05	7.5	A	V	4	4	-	S	Business Marketing	KS KE U W T		2		
MTTN75	7.5	A	V	4	4	X	E	Industrial Purchasing	KS KE U W T		2		
MION20	7.5	A	V	4	4	-	S	Applied Business Analysis	KS KE U W T			3	
INNN15	7.5	A	V	4	4	X	E	Innovation Management	KS KE U W T			3	
MTTN60	7.5	A	V	4	4	X	E	Business Process Management	KS KE U W T				4

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
										sp1	sp2	sp3	sp4
INNN10	7.5	A	V	4	4	X	E	Globalization and Innovation	KS KE U T				4
MAMN30	7.5	A	V	4	3	-	S	Management, Work Organisation and Project Management	KS KE U W T				4
MION30	7.5	A	V	5	4	-	S	Industrial Management	KS KE U W T	1			

Specialisation fir - Financial Engineering and Risk Management

Course Code	Credits	Cycle	Mand./ Elect.		Language			Course Name	Footnote	Links				
			Year	From year	S.Ex.	stud.	sp1				sp2	sp3	sp4	
EXTQ25	7.5	A	V	4	4	X	E	Financial Economics, Advanced Course	X	KS KE U W T	1			
EMSE10	7.5	G2	V	4	3	X	E	Stationary Stochastic Processes	X	KS KE U W T	1			
EXTQ30	7.5	A	V	4	4	X	E	Economics, Empirical Finance	X	KS KE U W T		2		
FMSN45	7.5	A	V	4	4	X	E	Mathematical Statistics, Time Series Analysis	X	KS KE U W T		2		
EXTQ35	7.5	A	V	4	4	X	E	Financial Valuation and Risk Management	X	KS KE U W T			3	
FMSN50	7.5	A	V	4	4	X	E	Monte Carlo and Empirical Methods for Stochastic Inference	X	KS KE U W T			3	
FRTN30	7.5	A	V	4	4	X	E	Network Dynamics		KS KE U W T				4

Course Code	Credits	Cycle	Mand./ Elect.		Language			Course Name	Footnote	Links					
			Year	From year	S.Ex.	stud.	sp1			sp2	sp3	sp4			
EMSN55	7.5	A	V	4	4	X	E	Statistical Modelling of Extreme Values		KS	KE	U	W	T	4
EMSN25	7.5	A	V	5	4	X	E	Valuation of Derivative Assets	X	KS	KE	U	W	T	1
EXTN80	7.5	A	V	5	4	X	E	Economic and Financial Decision-making	X	KS	KE	U	W	T	2
EMSN60	7.5	A	V	5	4	X	E	Financial Statistics	X	KS	KE	U	W	T	2
EMSN15	7.5	A	V	5	5	X	E	Statistical Modelling of Multivariate Extreme Values	X	KS	KE	U	W	T	2

[EXTQ25](#) Financial Economics, Advanced Course: *The course is to be studied together with NEKN81, which is given by the Department of Economics. Does not follow the study period structure.*

[FMSE10](#) Stationary Stochastic Processes: *The course is to be studied together with MASC04*

[EXTQ30](#) Economics, Empirical Finance: *The course is to be studied together with NEKN82, which is given by the Department of Economics. Does not follow the study period structure.*

[FMASN45](#) Mathematical Statistics, Time Series Analysis: *The course is to be studied together with MASM17.*

[EXTQ35](#) Financial Valuation and Risk Management: *The course is to be studied together with NEKN83, which is given by the Department of Economics. Does not follow the study period structure.*

[FMASN50](#) Monte Carlo and Empirical Methods for Stochastic Inference: *The course is to be studied together with MASM11.*

[FMASN25](#) Valuation of Derivative Assets: *The course is to be studied together with MASM24*

[EXTN80](#) Economic and Financial Decision-making: *The course is to be studied together with NEKN22, which is given by the Department of Economics. Does not follow the study period structure.*

[EMS60](#) Financial Statistics: *The course is to be studied together with MASM18*

[EMS15](#) Statistical Modelling of Multivariate Extreme Values: *The course is offered every other academic year and will be given in 2020/21, 2022/23.*

Specialisation If - Supply Chain Management

Course Code	Credits	Cycle	Mand./ Elect.		Language			Course Name	Footnote	Links				
			Year	From year	S.Ex.	stud.	sp1				sp2	sp3	sp4	
MTTN40	7.5	A	V	4	4	X	E	Packaging Technology and Development	KS KE U W T	1				
MTTN25	7.5	A	V	4	4	X	E	Warehousing and Materials Handling	KS KE U W T	1				
MTTN75	7.5	A	V	4	4	X	E	Industrial Purchasing	KS KE U W T		2			
MIOF10	7.5	G2	V	4	4	X	E	Production and Inventory Control	KS KE U W T		2			
MTTN70	7.5	A	V	4	4	X	E	International Physical Distribution	KS KE U W T			3		
MION01	7.5	A	V	4	4	X	E	Management of Production and Inventory Systems	KS KE U W T			3		
MTTN60	7.5	A	V	4	4	X	E	Business Process Management	KS KE U W T				4	

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
										sp1	sp2	sp3	sp4		
MION45	7.5	A	V	4	4	X	E	Operations Strategy		KS	KE	U	W	T	4
MTTN80	7.5	A	V	4	4	X	E	Supply Chain Management		KS	KE	U	W	T	4
MION40	7.5	A	V	5	4	X	E1	Simulation of Industrial Processes and Logistic Systems		KS	KE	U	W	T	1
MTTN20	7.5	A	V	5	4	X	E	Supply Chain Information Systems		KS	KE	U	W	T	1
MTTN35	7.5	A	V	5	4	X	E	Packaging Logistics		KS	KE	U	W	T	2
MION50	7.5	A	V	5	5	X	E	Quality Management		KS	KE	U	W	T	2

Specialisation pr - Production Engineering

Course Code	Credits	Cycle	Mand./ Elect.		Language			Course Name	Footnote	Links			
			Year	From year	S.Ex.	stud.	sp1			sp2	sp3	sp4	
MMTN30	7.5	A	V	4	4	X	E	Flexible Manufacturing Systems	KS KE U W T	1			
MMTN25	7.5	A	V	4	4	X	E	Production Technology	KS KE U W T	1			
MTTN25	7.5	A	V	4	4	X	E	Warehousing and Materials Handling	KS KE U W T	1			
MIOF10	7.5	G2	V	4	4	X	E	Production and Inventory Control	KS KE U W T		2		
EIEN50	7.5	A	V	4	3	X	E1	Automation	KS KE U W T			3	
MION01	7.5	A	V	4	4	X	E	Management of Production and Inventory Systems	KS KE U W T			3	
MMTF25	7.5	G2	V	4	4	X	E1	Computer Aided Design/Computer Aided Manufacturing	KS KE U W T				4

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4
MMTN05	7.5	A	V	4	4	X	E	Flexible Manufacturing Systems, Advanced Course		KS KE U W T				4
MION40	7.5	A	V	5	4	X	E1	Simulation of Industrial Processes and Logistic Systems		KS KE U W T	1			
MTTN75	7.5	A	V	5	5	X	E	Industrial Purchasing		KS KE U W T		2		
MMTN10	7.5	A	V	5	4	X	E1	International Product Realisation		KS KE U T		2		
MION50	7.5	A	V	5	4	X	E	Quality Management		KS KE U W T		2		

Specialisation pvs - Software Intensive Systems

Course Code	Credits	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
		Cycle									sp1	sp2	sp3	sp4
ERTN55	7.5	A	V	4	4	X	E	Automatic Control, Advanced Course	X	KS KE U W T	1			
EDAF60	4.5	G2	V	4	4	-	S	Object-oriented Modelling and Design		KS KE U W T	1			
ETSN05	7.5	A	V	4	4	-	S	Software Development for Large Systems		KS KE U W T	1			
EDAN10	7.5	A	V	4	4	X	E	Configuration Management		KS KE U W T		2		
ETSN20	7.5	A	V	4	4	X	E	Software Testing		KS KE U W T		2		
ETSN10	7.5	A	V	4	4	X	E	Network Architecture and Performance		KS KE U W T			3	
ETSN15	7.5	A	V	4	4	-	S	Requirements Engineering		KS KE U W T			3	

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
												sp1	sp2	sp3	sp4
EDAF75	7.5	G2	V		4	4	X	S	Database Technology		KS KE U W T			3	4
ERTN01	10	A	V		4	4	X	E	Real-Time Systems		KS KE U W T			3	4
EITN35	7.5	A	V		5	4	X	E1	Advanced Course in Electrical and Information Technology	X	KS KE U W T	1			
EDAN70	7.5	A	V		5	4	X	E1	Project in Computer Science	X	KS KE U W T	1			
MION25	7.5	A	V		5	4	-	S	Technology Strategy		KS KE U W T	1			
EITN35	7.5	A	V		5	4	X	E1	Advanced Course in Electrical and Information Technology	X	KS KE U W T		2		
EDAN70	7.5	A	V		5	4	X	E1	Project in Computer Science	X	KS KE U W T		2		

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
											sp1	sp2	sp3	sp4		
EITN35	7.5	A	V		5	4	X	E1	Advanced Course in Electrical and Information Technology	X	KS	KE	U	W	T	3
EDAN70	7.5	A	V		5	4	X	E1	Project in Computer Science	X	KS	KE	U	W	T	3
EITN35	7.5	A	V		5	4	X	E1	Advanced Course in Electrical and Information Technology	X	KS	KE	U	W	T	4
EDAN70	7.5	A	V		5	4	X	E1	Project in Computer Science	X	KS	KE	U	W	T	4

[ERTN55](#) Automatic Control, Advanced Course: *Replaces [ERTN10](#) Multivariable Control*

[EITN35](#) Advanced Course in Electrical and Information Technology: *The course starts only after agreement with the department. The course is not linked to any specific study period. The information on hours depends on the course running over a study period. Individual study plans are to be set up and approved.*

[EDAN70](#) Project in Computer Science: *The course is given once per study period and is open for zero or more project areas each course instance. The prerequisites depend on the project area.*

Elective Courses - I

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
EMAA60	7.5	G1	1	1	-	S	Introduction to Real Analysis		KS KE U W T	1			
EXTP50	7.5	A	4	4	-	E	Advanced Microeconomic Analysis		KS KE U W T	1			
ERTE20	7.5	G2	4	4	X	E	Applied Robotics		KS KE U W T	1			
ERTN55	7.5	A	4	4	X	E	Automatic Control, Advanced Course	X	KS KE U W T	1			
FMEN21	7.5	A	4	4	X	E	Continuum Mechanics		KS KE U W T	1			
MVKP01	7.5	A	4	4	-	S	District Heating and Cooling		KS KE U W T	1			
IYT000	15	G2	4	3	-	S	Engineering Training Course		KS KE U W	1			

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	Links			
										sp1	sp2	sp3	sp4
EMSE15	7.5	G2	4	4	X	E	Markov Processes	X	KS KE U W T	1			
ERTN50	7.5	A	4	3	X	E	Optimization for Learning		KS KE U W T	1			
EXTF40	7.5	G2	4	4	-	S	Option Theory	X	KS KE U W T	1			
EXTF35	7.5	G2	4	4	-	E	Portfolio Selection	X	KS KE U W T	1			
MMKN35	7.5	A	4	4	X	E1	Product Innovation		KS KE U W T	1			
MMVA01	5	G1	4	4	-	S	Thermodynamics and Fluid Mechanics, Basic Course		KS KE U W T	1			
EMIN25	7.5	A	4	4	-	S	Energy Systems Analysis: Energy, Environment and Natural Resources		KS KE U W T	1	2		

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	Links			
										sp1	sp2	sp3	sp4
EMAN70	6	A	4	4	X	E1	Matrix Theory		KS KE U W T	1	2		
MVKP05	7.5	A	4	4	X	E1	Project - Formula Student		KS KE U W T	1	2		
EXTG65	7.5	G2	4	3	-	S	Econometrics	X	KS KE U W T		2		
EXTN05	7.5	A	4	3	X	E	Econometrics, Advanced Course	X	KS KE U W T		2		
EDAG01	7.5	G2	4	4	X	S	Efficient C	X	KS KE U W T		2		
IYT000	15	G2	4	3	-	S	Engineering Training Course		KS KE U W		2		
EXTE30	7.5	G2	4	3	-	S	Fixed Income Securities	X	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	
MTTN45	7.5	A	4	4	X	E	Humanitarian Logistics - disaster relief and logistics in developing countries	KS KE U W T			2		
EXTQ40	7.5	A	4	4	-	E1	Introduction to Artificial Neural Networks and Deep Learning	KS KE U W T			2		
EMEN11	7.5	A	4	4	X	E	Mechanical Vibrations	KS KE U W T			2		
FMNN10	8	A	4	4	X	E1	Numerical Methods for Differential Equations	KS KE U W T			2		
EITF70	6	G2	4	3	-	S	Computer Organization	KS KE U W T				3	
EITA25	7.5	G1	4	4	X	S	Computer Security	KS KE U W T				3	
EXTG60	7.5	G2	4	3	X	E	Economics, Industrial Organization	X KS KE U W T				3	

Course Code	Credits	Cycle	Language				Course Name	Footnote	Links					
			Year	From year	S.Ex. stud.				sp1	sp2	sp3	sp4		
MVKN20	7.5	A	4	4	-	S	Energy Utilization		KS	KE	U	W	T	3
IYT000	15	G2	4	3	-	S	Engineering Training Course		KS	KE	U	W	T	3
ERTN45	4.5	A	4	3	-	S	Mathematical Modelling, Advanced Course		KS	KE	U	W	T	3
ETIA10	7.5	G1	4	3	X	E	Patent and Intellectual Property Rights		KS	KE	U	W	T	3
FMSF05	7.5	G2	4	4	X	E	Probability Theory	X	KS	KE	U	W	T	3
MMTN45	7.5	A	4	4	X	E	Production Technology 2		KS	KE	U	W	T	3
ETSN15	7.5	A	4	4	-	S	Requirements Engineering		KS	KE	U	W	T	3

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links						
									sp1	sp2	sp3	sp4			
EDAF90	7.5	G2	4	4	X	S	Web Programming		KS	KE	U	T	3		
MMKN11	7.5	A	4	4	X	E	Design for X		KS	KE	U	W	T	3	4
EITA05	4.5	G1	4	4	-	S	History of Technology		KS	KE	U	W	T	3	4
MVKP05	7.5	A	4	4	X	E1	Project - Formula Student		KS	KE	U	W	T	3	4
MAMF21	7.5	G2	4	4	-	S	Working Environment, Occupational Health and Safety		KS	KE	U	W	T	3	4
EIEN35	7.5	A	4	4	X	E1	Automation for Complex Systems		KS	KE	U	W	T		4
EXTG65	7.5	G2	4	3	-	S	Econometrics	X	KS	KE	U	W	T		4

Course Code	Credits	Cycle	Language				Course Name	Footnote	Links								
			Year	From year	S.Ex. stud.					sp1	sp2	sp3	sp4				
MVKN15	7.5	A	4	4	-	S	Energy Supply Systems		KS	KE	U	W	T				4
IYT000	15	G2	4	3	-	S	Engineering Training Course		KS	KE	U	W					4
EXTE30	7.5	G2	4	3	-	S	Fixed Income Securities	X	KS	KE	U	W	T				4
KIIF01	7.5	G2	4	4	X	E1	Industrial Environmental Management		KS	KE	U	W	T				4
FMSN30	7.5	A	4	4	X	E	Linear and Logistic Regression	X	KS	KE	U	W	T				4
EMAN45	7.5	A	4	4	-	E1	Machine Learning		KS	KE	U	W	T				4
EITN95	7.5	A	4	4	X	E1	Simulation		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
MMTN15	7.5	A	5	4	X	E1	Project - Production and Materials Engineering	X	KS KE U W T	1			
MVKN30	7.5	A	5	5	-	S	Advanced Efficient Energy Systems		KS KE U W T	1	2		
EMIN15	7.5	A	5	4	-	S	Environmental Management Systems		KS KE U W T	1	2		
MTTN85	7.5	A	5	5	X	E	Project Management and Research Methodologies in Supply Chain Management		KS KE U T	1	2		
INNA01	7.5	G1	5	4	X	E	Entrepreneurship - how to Build a Scalable Start-up		KS KE U W T		2		
MTTN56	7.5	A	5	4	X	E	Packaging Material Science		KS KE U W T		2		
MMTN15	7.5	A	5	4	X	E1	Project - Production and Materials Engineering	X	KS KE U W T		2		

Course Code	Credits	Cycle		Language			Course Name	Footnote	Links				
		Year	From year	S.Ex.	stud.	sp1			sp2	sp3	sp4		
MMTN15								X				3	
MMTN15								X					4
EDAP05	7.5	A	4	4	X	E	Concepts of Programming Languages	X	KS KE U W T	Course on hold			
FMSN35	7.5	A	4	4	X	E	Stationary and Non-stationary Spectral Analysis	X	KS KE U W T	Course on hold			

[FRTN55](#) Automatic Control, Advanced Course: *Replaces [FRTN10](#) Multivariable Control*

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

[EXTF40](#) Option Theory: *The course is to be studied together with NEKH82, which is given by the Department of Economics. Does not follow the study period structure.*

[EXTF35](#) Portfolio Selection: *The course is to be studied together with NEKH81, which is given by the Department of Economics. Does not follow the study period structure.*

[EXTG65](#) Econometrics: *The course is to be studied together with NEKG31, which is given by the Department of Economics. Does not follow the study period structure.*

[EXTN05](#) Econometrics, Advanced Course: *The course is to be studied together with NEKN31, which is given by the Department of Economics. Does not follow the study period structure.*

[EDAG01](#) Efficient C: *[EDAA25](#) and [EDAF15](#) can not be included in the degree at the same time as [EDAG01](#).*

[EXTF30](#) Fixed Income Securities: *The course is to be studied together with NEKG81, which is given by the Department of Economics. Does not follow the study period structure.*

[EXTG60](#) Economics, Industrial Organization: *The course is to be studied together with NEKH21, which is given by the Department of Economics. Does not follow the study period structure.*

[FMSF05](#) Probability Theory: *The course is to be studied together with MASC01*

[FMSN30](#) Linear and Logistic Regression: *Only one of the courses [FMSN30](#) and [FMSN40](#) may be included in a degree.*

[MMTN15](#) Project - Production and Materials Engineering: *The course start is decided by the department.*

[EDAP05](#) Concepts of Programming Languages: *The course is offered every other academic year and will next be offered in 2021/22.*

[FMSN35](#) Stationary and Non-stationary Spectral Analysis: *The course is offered every other academic year and will next be offered in 2021/22.*

Externally Elective Courses - I

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			
									sp1	sp2	sp3	sp4
GEMA20	7.5	G1	4	1	-	E	English for Engineers	KS KE U W T	1	2		
GEMA25	7.5	G1	4	1	-	S	German for Engineers	KS KE U W T	1	2		
GEMA65	7.5	G1	4	1	-	S	Chinese for Engineers	KS KE U W T			3	4
GEMA20	7.5	G1	4	1	-	E	English for Engineers	KS KE U W T			3	4
GEMA01	7.5	G1	4	1	-	S	French for Engineers: Language, Culture and Society, First Course	KS KE U W T			3	4
GEMA70	15	G1	4	1	-	S	Japanese for Engineers	KS KE U W T			3	4

Bachelor's Projects - I

The list contains the bachelor's projects that are included in the I programme.

Links

Course Code	Credits	Course Name	Links
FMSL01	15	Bachelor Project in Mathematical Statistics	KS KE U W
FMEL01	15	Bachelor Project in Mechanics	KS KE U
MIOL01	15	Bachelor Project in Production Management	KS KE U

Degree Projects - I

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

Links

Course Code	Credits	Course Name	Links
FRTM01	30	Degree Project in Automatic Control	KS KE U W
EDAM05	30	Degree Project in Computer Sciences for Engineers	KS KE U W
EITM01	30	Degree Project in Electrical and Information Technology	KS KE U W
MVKM01	30	Degree Project in Energy Sciences	KS KE U W
MTTM05	30	Degree Project in Engineering Logistics	KS KE U W
FKMM01	30	Degree Project in Engineering Materials	KS KE U W
FMIM01	30	Degree Project in Environmental Studies	KS KE U W
MAMM10	30	Degree Project in Ergonomics	KS KE U W
EXTM10	30	Degree Project in Financial Economics	KS KE U W
EIEM01	30	Degree Project in Industrial Electrical Engineering and Automation	KS KE U W
INN01	30	Degree Project in Innovation	KS KE U
INTM01	30	Degree Project in Innovation Engineering	KS KE U W
FMSM01	30	Degree Project in Mathematical Statistics for Engineers	KS KE U W
FMAM05	30	Degree Project in Mathematics for Engineers	KS KE U
FMEM01	30	Degree Project in Mechanics for Engineers	KS KE U W
FMNM01	30	Degree Project in Numerical Analysis	KS KE U W
MTTM10	30	Degree Project in Packaging Logistics	KS KE U W
PHYM01	30	Degree Project in Physics	KS KE U W
MMKM05	30	Degree Project in Product Development	KS KE U W
MMTM01	30	Degree Project in Production and Materials Engineering	KS KE U W
MIOM05	30	Degree Project in Production Management	KS KE U W
FHLM01	30	Degree Project in Solid Mechanics for Engineers	KS KE U W