

# Computer Science and Engineering

## 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
<a href="#">FMAB65</a>	7.5	G1	-	S	Calculus in One Variable B1		<a href="#">KS KE U W T</a>	1			
<a href="#">EDAA60</a>	3	G1	-	S	Computer Introduction		<a href="#">KS KE U W T</a>	1			
<a href="#">EDAA45</a>	7.5	G1	-	S	Introduction to Programming		<a href="#">KS KE U W T</a>	1	2		
<a href="#">FMAB70</a>	7.5	G1	-	S	Calculus in One Variable B2		<a href="#">KS KE U W T</a>		2		
<a href="#">EXTA65</a>	4.5	G1	-	S	Cognition		<a href="#">KS KE U W T</a>		2		
<a href="#">FAFA60</a>	5	G1	-	S	Photonics		<a href="#">KS KE U W T</a>			3	
<a href="#">EDAA01</a>	7.5	G1	-	S	Programming - Second Course		<a href="#">KS KE U W T</a>			3	

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	21/22			
								sp1	sp2	sp3	sp4
<a href="#">EDAA35</a>	7	G1	-	S	Evaluation of Software Systems		<a href="#">KS KE U T</a>			3	4
<a href="#">EDAA40</a>	5	G1	X	E	Discrete Structures in Computer Science	X	<a href="#">KS KE U W T</a>				4
<a href="#">EMAB20</a>	6	G1	-	S	Linear Algebra		<a href="#">KS KE U W T</a>				4

[EDAA40](#) Discrete Structures in Computer Science: *Can be replaced by [EDAA75](#) Discrete Structures.*

### Study Year 1 (Elective Mandatory Courses)

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links	21/22			
								sp1	sp2	sp3	sp4
<a href="#">EDAA75</a>	7.5	G1	X	E	Discrete Structures	X	<a href="#">KS KE U W T</a>				4

[EDAA75](#) Discrete Structures: *Can replace [EDAA40](#) Discrete Structures in Computer Science.*

## Study Year 2 (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
<a href="#">EMAB30</a>	6	G1	-	S	Calculus in Several Variables		<a href="#">KS KE U W T</a>	1			
<a href="#">EDAF60</a>	4.5	G2	-	S	Object-oriented Modelling and Design		<a href="#">KS KE U W T</a>	1			
<a href="#">EITF65</a>	9	G2	-	S	Design of Digital Circuits - A Systems Approach		<a href="#">KS KE U W T</a>	1	2		
<a href="#">EITF45</a>	7.5	G2	-	S	Computer Communication		<a href="#">KS KE U W T</a>		2		
<a href="#">EDAF45</a>	7.5	G2	-	S	Software Development in Teams - Project		<a href="#">KS KE U W T</a>		2	3	
<a href="#">EMAF10</a>	5	G2	-	S	Applied Mathematics - Linear systems	X	<a href="#">KS KE U W T</a>			3	
<a href="#">EITF70</a>	6	G2	-	S	Computer Organization		<a href="#">KS KE U W T</a>			3	

Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links					
							21/22 sp1	21/22 sp2	21/22 sp3	21/22 sp4		
<a href="#">EDAF05</a>	5	G2	X	S	Algorithms, Data Structures and Complexity		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EDAF95</a>	5	G2	-	E	Basics of Functional Programming	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EITA10</a>	5	G1	-	S	Electronics		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4

[EMAF10](#) Applied Mathematics - Linear systems: *Can be replaced by [EMAF01](#) and [EMAF05](#) together. Only one of the courses [EMAF10](#) and [EMAF05](#) may be included in a degree.*

[EDAF95](#) Basics of Functional Programming: *Can be replaced by [EDAN40](#) Functional Programming.*

## Study Year 2 (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			
<a href="#">EMAF01</a>	7	G2	-	E1	Mathematics - Analytic Functions	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3	
<a href="#">EDAN40</a>	7.5	A	X	E	Functional Programming	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>		4
<a href="#">EMAF05</a>	7	G2	-	E1	Mathematics - Systems and Transforms	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>		4

[EMAF01](#) Mathematics - Analytic Functions: *Can together with [EMAF05](#) replace [EMAF10](#). Can also be taken as an elective course in the 4th or 5th year.*

[EDAN40](#) Functional Programming: *Can replace [EDAF95](#) Basics of Functional Programming.*

[EMAF05](#) Mathematics - Systems and Transforms: *Can together with [EMAF01](#) replace [EMAF10](#). Only one of the courses [EMAF05](#) and [EMAF10](#) may be included in a degree.*

### Study Year 3 (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
<a href="#">ERTF05</a>	7.5	G2	-	S	Automatic Control, Basic Course		<a href="#">KS KE U W T</a>	1			
<a href="#">EDAP10</a>	7.5	A	-	S	Concurrent Programming		<a href="#">KS KE U W T</a>	1			
<a href="#">EMSE20</a>	7.5	G2	-	S	Mathematical Statistics, Basic Course		<a href="#">KS KE U W T</a>		2		
<a href="#">ETSE25</a>	7.5	G2	-	S	The Business of Software		<a href="#">KS KE U W T</a>		2		
<a href="#">EITA25</a>	7.5	G1	X	S	Computer Security		<a href="#">KS KE U W T</a>			3	
<a href="#">EMNF05</a>	6	G2	X	E1	Numerical Analysis		<a href="#">KS KE U W T</a>			3	
<a href="#">EMIF45</a>	4	G2	-	S	Sustainability and Resource Use with Perspectives on Information and Communication Technology		<a href="#">KS KE U W T</a>			3	4



Course Code	Credits	Cycle	S.Ex. stud.	Language	Course Name	Footnote	Links					
							21/22 sp1	21/22 sp2	21/22 sp3	21/22 sp4		
<a href="#">EITF95</a>	4.5	G2	X	S	Queuing System		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EITA50</a>	7.5	G1	-	E1	Signal Processing in Multimedia	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4

[EITA50](#) Signal Processing in Multimedia: *Students admitted to the China specialisation takes this course in the autumn of year three, in China.*

## Specialisation bg - Images and Computer Graphics

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
												sp1	sp2	sp3	sp4	
<a href="#">EDAF80</a>	7.5	G2	V		4	4	X	E	Computer Graphics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EMAN20</a>	7.5	A	V		4	4	X	E1	Image Analysis		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EMSE10</a>	7.5	G2	V		4	4	X	E	Stationary Stochastic Processes	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EMAN71</a>	7.5	A	V		4	4	X	E1	Matrix Theory		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2			
<a href="#">EDAN95</a>	7.5	A	V		4	4	-	E	Applied Machine Learning		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2			
<a href="#">EDAN35</a>	7.5	A	V		4	4	X	E	High Performance Computer Graphics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2			
<a href="#">MAMN25</a>	7.5	A	V		4	4	X	E1	Interaction Design		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2			

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1 sp2 sp3 sp4			
<a href="#">EXTQ40</a>	7.5	A	V		4	4	-	E1	Introduction to Artificial Neural Networks and Deep Learning		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMAN40</a>	3	A	V		4	4	X	E1	Project in Applied Mathematics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMAN95</a>	7.5	A	V		4	4	X	E1	Computer Vision		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">MAMF45</a>	7.5	G2	V		4	4	-	E	Virtual Reality in Theory and Practice		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">MAMN01</a>	7.5	A	V		4	4	-	S	Advanced Interaction Design		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">T</a>				4
<a href="#">EMAN45</a>	7.5	A	V		4	4	-	E1	Machine Learning		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EMAN40</a>	3	A	V		4	4	X	E1	Project in Applied Mathematics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
										sp1	sp2	sp3	sp4		
<a href="#">ETIF10</a>	7.5	G2	V	4	4	X	E1	Signal Processing - Design and Implementation		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EMSN20</a>	7.5	A	V	5	4	X	E	Spatial Statistics with Image Analysis	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	2

[EMSE10](#) Stationary Stochastic Processes: *The course is to be studied together with MASC04*

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

## Specialisation hs - Hardware-Centric System Development

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4
<a href="#">EITF50</a>	7.5	G2	V	4	4	X	E	An Introduction to Wireless Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EITF35</a>	7.5	G2	V	4	4	X	E	Introduction to Structured VLSI Design		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EIEN45</a>	10	A	V	4	4	X	E1	Applied Mechatronics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EITF20</a>	7.5	G2	V	4	4	X	E	Computer Architecture		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EDAG01</a>	7.5	G2	V	4	4	X	S	Efficient C	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EDAP25</a>	7.5	A	V	4	4	X	E	Distributed Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">T</a>			3	
<a href="#">ETIN45</a>	7.5	A	V	4	4	X	E	DSP-design		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
												sp1	sp2	sp3	sp4
<a href="#">ESSE10</a>	5	G2	V		4	4	-	S	Electrical Measurements		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EITN30</a>	7.5	A	V		4	4	X	E1	Internet Inside		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">BMEN20</a>	7.5	A	V		4	4	X	E1	Project Course in Signal Processing – from Idea to App		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">FRTN01</a>	10	A	V		4	4	X	E	Real-Time Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">EDAN15</a>	7.5	A	V		4	4	X	E	Design of Embedded Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">BMEF10</a>	7.5	G2	V		5	4	-	S	Transducer Technology		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EEMN10</a>	7.5	A	V		5	4	X	E1	Computerised Measurement Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		

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

## Specialisation is - Embedded Systems

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4
<a href="#">EDAN65</a>	7.5	A	V	4	4	X	E1	Compilers		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EITF35</a>	7.5	G2	V	4	4	X	E	Introduction to Structured VLSI Design		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EIEN45</a>	10	A	V	4	4	X	E1	Applied Mechatronics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EITF20</a>	7.5	G2	V	4	4	X	E	Computer Architecture		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EDAG01</a>	7.5	G2	V	4	4	X	S	Efficient C	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">ERTN40</a>	7.5	A	V	4	4	X	E	Project in Automatic Control		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EITN30</a>	7.5	A	V	4	4	X	E1	Internet Inside		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	



Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
												sp1	sp2	sp3	sp4
<a href="#">BMEN20</a>	7.5	A	V		4	4	X	E1	Project Course in Signal Processing – from Idea to App		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">FRTN01</a>	10	A	V		4	4	X	E	Real-Time Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">EDAN15</a>	7.5	A	V		4	4	X	E	Design of Embedded Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EDAF35</a>	7.5	G2	V		4	4	X	E1	Operating Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EDAN26</a>	7.5	A	V		5	4	-	S	Multicore Programming	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EDAN75</a>	7.5	A	V		5	4	X	S	Optimising Compilers	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				Course on hold

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

[FRTN40](#) Project in Automatic Control:

[EDAN26](#) Multicore Programming: The course is offered every other academic year and will be given in 2021/22, 2023/24.

[EDAN75](#) Optimising Compilers: The course is offered every other academic year and will next be offered in 2022/23.

## Specialisation mai - Machine Intelligence

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
												sp1	sp2	sp3	sp4	
<a href="#">ERTE20</a>	7.5	G2	V		4	4	X	E	Applied Robotics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EDAP20</a>	7.5	A	V		4	4	X	E	Intelligent Autonomous Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EDAN20</a>	7.5	A	V		4	4	X	E	Language Technology		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">FMSF10</a>	7.5	G2	V		4	4	X	E	Stationary Stochastic Processes	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">ERTN65</a>	7.5	A	V		4	4	X	E	Modelling and Learning from Data	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2			
<a href="#">EDAN95</a>	7.5	A	V		4	4	-	E	Applied Machine Learning		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			2		
<a href="#">EXTQ40</a>	7.5	A	V		4	4	-	E1	Introduction to Artificial Neural Networks and Deep Learning		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			2		

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
												sp1	sp2	sp3	sp4	
<a href="#">EMAN61</a>	7.5	A	V		4	4	X	E1	Optimization		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			2		
<a href="#">EDAP01</a>	7.5	A	V		4	4	X	E	Artificial Intelligence		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	
<a href="#">EMAN95</a>	7.5	A	V		4	4	X	E1	Computer Vision		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	
<a href="#">FRTN75</a>	7.5	A	V		4	4	X	E	Learning-Based Control	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	
<a href="#">EMAN45</a>	7.5	A	V		4	4	-	E1	Machine Learning		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>					4
<a href="#">FRTN50</a>	7.5	A	V		5	4	X	E	Optimization for Learning		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		1			
<a href="#">VFNT75</a>	7.5	A	V		5	4	X	E	Smart City Governance: AI Ethics in a Spatial Context		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			2		

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

[ERTN65](#) Modelling and Learning from Data: *Replaces [ERTN35](#) System Identification.*

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

## **Specialisations - Networks and Security**

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
												sp1	sp2	sp3	sp4	
<a href="#">EITN50</a>	7.5	A	V		4	4	X	E	Advanced Computer Security		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EITG05</a>	7.5	G2	V		4	4	X	E	Digital Communications		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EMSE15</a>	7.5	G2	V		4	4	X	E	Markov Processes	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EITF05</a>	4	G2	V		4	4	-	S	Web Security		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EITN41</a>	7.5	A	V		4	4	X	E	Advanced Web Security		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2			
<a href="#">ETTNO1</a>	7.5	A	V		4	4	X	E	Digital Communications, Advanced Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2			
<a href="#">EITP10</a>	7.5	A	V		4	4	X	E	High Performance Fiber Networks		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">T</a>		2			

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1 sp2 sp3 sp4				
<a href="#">ETSF10</a>	7.5	G2	V		4	4	X	E	Internet Protocols		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2			
<a href="#">EITN30</a>	7.5	A	V		4	4	X	E1	Internet Inside		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	
<a href="#">ETSN10</a>	7.5	A	V		4	4	X	E	Network Architecture and Performance		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	
<a href="#">EITP20</a>	7.5	A	V		4	4	X	E	Secure Systems Engineering		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">T</a>				3	
<a href="#">ETIN85</a>	7.5	A	V		4	4	X	E	Advanced Cryptography		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">T</a>					4
<a href="#">EITN45</a>	7.5	A	V		4	4	X	E	Information Theory		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>					4
<a href="#">EITN95</a>	7.5	A	V		4	4	X	E1	Simulation		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>					4

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4	
<a href="#">EDIN01</a>	7.5	A	V	5	4	X	E1	Cryptography		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>

[FMSE15](#) Markov Processes: *The course is to be studied together with MASC03.*

## Specialisation pv - Software



Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
<a href="#">EDAN65</a>	7.5	A	V		4	4	X	E1	Compilers		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EDAN20</a>	7.5	A	V		4	4	X	E	Language Technology		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EDAN70</a>	7.5	A	V		4	4	X	E1	Project in Computer Science	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EDAP05</a>	7.5	A	V		4	4	X	E	Concepts of Programming Languages	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EDAN01</a>	7.5	A	V		4	4	X	E1	Constraint Programming		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMAB75</a>	7.5	G1	V		4	4	X	E1	Discrete Mathematics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EDAG01</a>	7.5	G2	V		4	4	X	S	Efficient C	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		

Course Code	Credits	Cycle	Mand./ Elect.		Language			Links						
			Year	From year	S.Ex. stud.	Course Name	Footnote	sp1	sp2	sp3	sp4			
<a href="#">EDAN70</a>	7.5	A	V	4	4	X	E1	Project in Computer Science	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EDAP01</a>	7.5	A	V	4	4	X	E	Artificial Intelligence		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EMAE35</a>	6	G2	V	4	4	X	E1	Linear and Combinatorial Optimization		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EDAN70</a>	7.5	A	V	4	4	X	E1	Project in Computer Science	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EDAE50</a>	7.5	G2	V	4	4	X	S	C++ Programming		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">EDAE75</a>	7.5	G2	V	4	4	X	S	Database Technology		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">EMAB75</a>	7.5	G1	V	4	4	X	E1	Discrete Mathematics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4

Course Code	Credits	Cycle	Mand./ Elect.	Language			Links							
			Year	From year	S.Ex. stud.	Course Name	Footnote	sp1	sp2	sp3	sp4			
<a href="#">EDAN70</a>	7.5	A	V	4	4	X	E1	Project in Computer Science	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">EDAN26</a>	7.5	A	V	5	4	-	S	Multicore Programming	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EDAP15</a>	7.5	A	V	4	4	X	E	Program Analysis	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	Course on hold			
<a href="#">EDAN75</a>	7.5	A	V	5	4	X	S	Optimising Compilers	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	Course on hold			

[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.*

[EDAP05](#) Concepts of Programming Languages: *The course is offered every other academic year and will be given in 2021/22, 2023/24.*

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

[EDAN26](#) Multicore Programming: *The course is offered every other academic year and will be given in 2021/22, 2023/24.*

[EDAP15](#) Program Analysis: *The course is offered every other academic year and will next be given in 2022/23.*

[EDAN75](#) Optimising Compilers: *The course is offered every other academic year and will next be offered in 2022/23.*

## Specialisation se - Software Engineering

Course Code	Credits	Cycle	Mand./ Elect.		Language			Course Name	Footnote	Links				
			Year	From year	S.Ex.	stud.	sp1			sp2	sp3	sp4		
<a href="#">MIOA12</a>	6	G1	V	4	4	-	S	Managerial Economics, Basic Course	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">ETSN05</a>	7.5	A	V	4	4	-	S	Software Development for Large Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EITF05</a>	4	G2	V	4	4	-	S	Web Security		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EDAN10</a>	7.5	A	V	4	4	X	E	Configuration Management		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EDAN01</a>	7.5	A	V	4	4	X	E1	Constraint Programming		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">MAMN25</a>	7.5	A	V	4	4	X	E1	Interaction Design		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">MIOA12</a>	6	G1	V	4	4	-	S	Managerial Economics, Basic Course	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
												sp1	sp2	sp3	sp4	
<a href="#">ETSN20</a>	7.5	A	V		4	4	X	E	Software Testing		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2			
<a href="#">EDAN80</a>	9	A	V		4	4	-	S	Coaching of Programming Teams		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2	3		
<a href="#">ETSN15</a>	7.5	A	V		4	4	-	S	Requirements Engineering		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3		
<a href="#">EITP20</a>	7.5	A	V		4	4	X	E	Secure Systems Engineering		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">T</a>			3		
<a href="#">EDAF75</a>	7.5	G2	V		4	4	X	S	Database Technology		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4	
<a href="#">MIOF21</a>	7.5	G2	V		4	4	-	S	Management Organization		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>					4
<a href="#">MAMF50</a>	7.5	G2	V		5	4	-	S	Usability Evaluation		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
											sp1	sp2	sp3	sp4	
<a href="#">MAMN50</a>	7.5	A	V		5	4	X	E	Theoretical Perspectives in Interaction Design	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4

[MIOA12](#) Managerial Economics, Basic Course: *Only one of the courses [MIO012](#), [MIOA12](#) and [MIOA01](#) may be included in a degree.*

### Specialisation ssr - Systems, Signals and Control

Course Code	Credits	Cycle	Mand./ Elect.		Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
												sp1	sp2	sp3	sp4	
<a href="#">ERTN55</a>	7.5	A	V		4	4	X	E	Automatic Control, Advanced Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EITG05</a>	7.5	G2	V		4	4	X	E	Digital Communications		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EITN60</a>	7.5	A	V		4	4	X	E	Optimum and Adaptive Signal Processing		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">FMSF10</a>	7.5	G2	V		4	4	X	E	Stationary Stochastic Processes	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1				
<a href="#">EMAN71</a>	7.5	A	V		4	4	X	E1	Matrix Theory		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2			
<a href="#">ERTN65</a>	7.5	A	V		4	4	X	E	Modelling and Learning from Data	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2			
<a href="#">ETTN01</a>	7.5	A	V		4	4	X	E	Digital Communications, Advanced Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			2		

Course Code	Credits	Cycle	Mand./ Elect.		Language			Course Name	Footnote	Links				
			Year	From year	S.Ex.	stud.	sp1			sp2	sp3	sp4		
<a href="#">EMSN45</a>	7.5	A	V	4	4	X	E	Mathematical Statistics, Time Series Analysis	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">ERTN40</a>	7.5	A	V	4	4	X	E	Project in Automatic Control		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">BMEN15</a>	7.5	A	V	4	4	X	E	Signal Separation - Independent Components		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">ERTN75</a>	7.5	A	V	4	4	X	E	Learning-Based Control	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">BMEN20</a>	7.5	A	V	4	4	X	E1	Project Course in Signal Processing – from Idea to App		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">ERTN01</a>	10	A	V	4	4	X	E	Real-Time Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	4
<a href="#">ETIF10</a>	7.5	G2	V	4	4	X	E1	Signal Processing - Design and Implementation		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4



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

[ERTN65](#) Modelling and Learning from Data: *Replaces [ERTN35](#) System Identification.*

[FMSEN45](#) Mathematical Statistics, Time Series Analysis: *The course is to be studied together with MASM17.*

[ERTN40](#) Project in Automatic Control:

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

## **Elective Courses - D**

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">EMAA60</a>	7.5	G1	1	1	-	S	Introduction to Real Analysis		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EMNN25</a>	7.5	A	4	4	X	E1	Advanced Course in Numerical Algorithms with Python/SciPy		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">EDAN90</a>	7.5	A	4	4	X	E1	Advanced Project in Computer Science	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">ETIN20</a>	7.5	A	4	4	X	E	Digital IC-design		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1			
<a href="#">IYT000</a>	15	G2	4	3	-	S	Engineering Training Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>	1			
<a href="#">EITF80</a>	9	G2	4	4	X	E	Electromagnetic Fields		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EMIN25</a>	7.5	A	4	4	-	S	Energy Systems Analysis: Energy, Environment and Natural Resources		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">EMAN15</a>	7.5	A	4	4	X	E	Nonlinear Dynamical Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">MVKP05</a>	7.5	A	4	4	X	E1	Project - Formula Student		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EIEN30</a>	7.5	A	4	4	X	E1	Project in Industrial Electrical Engineering and Automation		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">TNSF05</a>	7.5	G2	4	4	-	S	Rehabilitation Engineering		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">MAMN40</a>	7.5	A	4	4	-	S	Working Environment, Project		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>	1	2		
<a href="#">EDAN90</a>	7.5	A	4	4	X	E1	Advanced Project in Computer Science	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			2	
<a href="#">IYT000</a>	15	G2	4	3	-	S	Engineering Training Course		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>			2	

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1 sp2 sp3 sp4			
										sp1	sp2	sp3	sp4
<a href="#">EMAN30</a>	7.5	A	4	4	X	E1	Medical Image Analysis		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">ERTN05</a>	7.5	A	4	4	X	E	Non-Linear Control and Servo Systems		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EITP15</a>	7.5	A	4	4	X	E1	Printed Circuit Board and Prototyping		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EMAN35</a>	3	A	4	4	X	E1	Project in Mathematics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">TNSN01</a>	7.5	A	4	4	X	E1	Service Robotics		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EDAN90</a>	7.5	A	4	4	X	E1	Advanced Project in Computer Science	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EMAN10</a>	7.5	A	4	4	X	E1	Algebraic Structures		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
									sp1	sp2	sp3	sp4		
<a href="#">EIEN50</a>	7.5	A	4	4	X	E1	Automation		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">ERTF15</a>	3	G2	4	4	-	S	Control Theory		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">IYT000</a>	15	G2	4	3	-	S	Engineering Training Course		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">MIOA01</a>	9	G1	4	4	-	S	Managerial Economics, Basic Course	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">EMAN65</a>	6	A	4	4	-	S	Mathematical Structures		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">EMSN50</a>	7.5	A	4	4	X	E	Monte Carlo and Empirical Methods for Stochastic Inference	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3
<a href="#">ETIA10</a>	7.5	G1	4	4	X	E	Patent and Intellectual Property Rights		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links						
									sp1	sp2	sp3	sp4			
<a href="#">EMNN05</a>	7.5	A	4	4	X	E1	Simulation Tools		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3	
<a href="#">EMSN35</a>	7.5	A	4	4	X	E	Stationary and Non-stationary Spectral Analysis	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3	
<a href="#">EXTG45</a>	7.5	G2	4	4	-	S	Technology Supported Communication		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3	
<a href="#">EDAF90</a>	7.5	G2	4	4	-	S	Web Programming		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">T</a>		3	
<a href="#">EITN85</a>	7.5	A	4	4	X	E	Wireless Communication Channels		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3	
<a href="#">EMAN55</a>	7.5	A	4	4	-	S	Applied Mathematics		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3	4
<a href="#">EMAN25</a>	7.5	A	4	4	X	E1	Calculus of Variations		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3	4

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
									sp1	sp2	sp3	sp4	
<a href="#">EMIN20</a>	7.5	A	4	4	-	S	Energy Systems Analysis: Renewable Sources of Energy	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4
<a href="#">EITA05</a>	4.5	G1	4	4	-	S	History of Technology	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4
<a href="#">ETIN35</a>	7.5	A	4	4	X	E	IC-project 1	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4
<a href="#">EIEN01</a>	10	A	4	4	X	E1	Mechatronics, Industrial Product Design	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4
<a href="#">MVKP05</a>	7.5	A	4	4	X	E1	Project - Formula Student	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4
<a href="#">EIEN30</a>	7.5	A	4	4	X	E1	Project in Industrial Electrical Engineering and Automation	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4
<a href="#">TNSF10</a>	7.5	G2	4	4	X	E1	Universal Design, Theory and Project	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links						
									sp1	sp2	sp3	sp4			
<a href="#">MAMF21</a>	7.5	G2	4	4	-	S	Working Environment, Occupational Health and Safety		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3	4
<a href="#">MAMN40</a>	7.5	A	4	4	-	S	Working Environment, Project		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	3	4
<a href="#">EMAN90</a>	7.5	A	4	4	X	E1	Advanced Course in a Selected Area of Mathematics		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>		4
<a href="#">EDAN90</a>	7.5	A	4	4	X	E1	Advanced Project in Computer Science	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>		4
<a href="#">EIEN35</a>	7.5	A	4	4	X	E1	Automation for Complex Systems		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>		4
<a href="#">BMEN01</a>	7.5	A	4	4	X	E1	Biomedical Signal Processing		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>		4
<a href="#">FMSF65</a>	7.5	G2	4	4	X	E	Design of Experiments		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>		4



Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
									sp1	sp2	sp3	sp4		
<a href="#">IYT000</a>	15	G2	4	3	-	S	Engineering Training Course		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>		4
<a href="#">KIIF01</a>	7.5	G2	4	4	X	E1	Industrial Environmental Management		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EMSN30</a>	7.5	A	4	4	X	E	Linear and Logistic Regression		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">MAMN30</a>	7.5	A	4	4	-	S	Management, Work Organisation and Project Management		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">MIOF25</a>	6	G2	4	4	-	S	Managerial Economics, Advanced Course		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EEMN01</a>	7.5	A	4	4	X	E1	Micro Sensors	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">FRTN30</a>	7.5	A	4	4	X	E	Network Dynamics		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links					
									sp1	sp2	sp3	sp4		
<a href="#">ESSE20</a>	4.5	G2	4	4	-	S	Physics of Devices		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EMAN35</a>	3	A	4	4	X	E1	Project in Mathematics		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">ERTN70</a>	7.5	A	4	4	X	E	Project in Systems, Control and Learning		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EMSN55</a>	7.5	A	4	4	X	E	Statistical Modelling of Extreme Values		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EITN75</a>	7.5	A	4	4	X	E	Wireless System Design Principles		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	4
<a href="#">EITN35</a>	7.5	A	5	4	-	E1	Advanced Course in Electrical and Information Technology	X	<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	1
<a href="#">EITP30</a>	7.5	A	5	4	X	E	Modern Wireless Systems - 5G and Beyond		<a href="#">KS</a>	<a href="#">KE</a>	<a href="#">U</a>	<a href="#">W</a>	<a href="#">T</a>	1

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">EITN10</a>	7.5	A	5	4	X	E	Multiple Antenna Systems		<a href="#">KS KE U W T</a>	1			
<a href="#">MION25</a>	7.5	A	5	4	-	S	Technology Strategy		<a href="#">KS KE U W T</a>	1			
<a href="#">EITN40</a>	7.5	A	5	4	X	E	IC-project 2		<a href="#">KS KE U W T</a>	1	2		
<a href="#">EITN21</a>	7.5	A	5	4	X	E	Project in Wireless Communication		<a href="#">KS KE U W T</a>	1	2		
<a href="#">EITN35</a>	7.5	A	5	4	-	E1	Advanced Course in Electrical and Information Technology	X	<a href="#">KS KE U W T</a>		2		
<a href="#">EEMF05</a>	7.5	G2	5	4	X	E1	Biomedical Measurements	X	<a href="#">KS KE U W T</a>		2		
<a href="#">EITN70</a>	7.5	A	5	4	X	E	Channel Coding for Reliable Communication		<a href="#">KS KE U W T</a>		2		

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1 sp2 sp3 sp4			
<a href="#">EEMN05</a>	7.5	A	5	4	X	E1	EMC, Noise and Noise Reduction		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">INNA01</a>	7.5	G1	5	5	X	E	Entrepreneurship - how to Build a Scalable Start-up		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">MIOF15</a>	7.5	G2	5	4	-	S	Marketing		<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		2		
<a href="#">EITN35</a>	7.5	A	5	4	-	E1	Advanced Course in Electrical and Information Technology	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EEMN15</a>	7.5	A	5	4	X	E1	Ultrasound Physics and Technology	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>			3	
<a href="#">EITN35</a>	7.5	A	5	4	-	E1	Advanced Course in Electrical and Information Technology	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				4
<a href="#">MAMN10</a>	7.5	A	5	4	-	S	Interaction 1: Neuro Modelling, Cognitive Robotics and Agents	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		Course on hold		
<a href="#">MAMN15</a>	7.5	A	5	4	-	S	Interaction 2: Virtuality and Cognitive Modelling	X	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		Course on hold		

[EDAN90](#) Advanced 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.*

[MIOA01](#) Managerial Economics, Basic Course: *Only one of the courses [MIO012](#), [MIOA12](#) and [MIOA01](#) may be included in a degree.*

[FMSN50](#) Monte Carlo and Empirical Methods for Stochastic Inference: *The course is to be studied together with MASM11.*

[FMSN35](#) Stationary and Non-stationary Spectral Analysis: *The course is offered every other academic year and will be given in 2021/22, 2023/24.*

[EEMN01](#) Micro Sensors: *Re-examination set by agreement*

[FRTN70](#) Project in Systems, Control and Learning:

[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.*

[EEMF05](#) Biomedical Measurements: *Reexam date to be set by agreement.*

[EEMN15](#) Ultrasound Physics and Technology: *Re-examination set by agreement.*

[MAMN10](#) Interaction 1: Neuro Modelling, Cognitive Robotics and Agents: *The course is offered every other academic year and will next be offered in 2022/23.*

[MAMN15](#) Interaction 2: Virtuality and Cognitive Modelling: *The course is offered every other academic year and will next be offered in 2022/23.*

## Externally Elective Courses - D

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links				
										sp1	sp2	sp3	sp4
<a href="#">EXTF60</a>	15	G2	3	3	-	E	Introductory Course in Chinese for Engineers, Part 2	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		1	2		
<a href="#">GEMA20</a>	7.5	G1	4	1	-	E	English for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		1	2		
<a href="#">GEMA25</a>	7.5	G1	4	1	-	S	German for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>		1	2		
<a href="#">GEMA65</a>	7.5	G1	4	1	-	S	Chinese for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4
<a href="#">GEMA20</a>	7.5	G1	4	1	-	E	English for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4
<a href="#">GEMA01</a>	7.5	G1	4	1	-	S	French for Engineers: Language, Culture and Society, First Course	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4
<a href="#">GEMA70</a>	15	G1	4	1	-	S	Japanese for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a> <a href="#">T</a>				3	4

## Bachelor's Projects - D

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

### Links

Course Code	Credits	Course Name	Links
FRTL01	15	Bachelor Project in Automatic Control	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a>
EDAL01	15	Bachelor Project in Computer Science	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
EITL01	15	Bachelor Project in Electrical and Information Technology	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
MAML15	15	Bachelor Project in Interaction Design	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a>
FMSL01	15	Bachelor Project in Mathematical Statistics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
FMAL01	15	Bachelor Project in Mathematics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a>
FMNL01	15	Bachelor Project in Numerical Analysis	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>



## Degree Projects - D

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

### Links

Course Code	Credits	Course Name	Links
FRTM01	30	Degree Project in Automatic Control	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
EDAM05	30	Degree Project in Computer Sciences for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
EITM01	30	Degree Project in Electrical and Information Technology	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
BMEM05	30	Degree Project in Electrical Measurements	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
EIEM01	30	Degree Project in Industrial Electrical Engineering and Automation	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
MAMM01	30	Degree Project in Interaction Design	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
FMSM01	30	Degree Project in Mathematical Statistics for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
FMAM05	30	Degree Project in Mathematics for Engineers	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
FMNM01	30	Degree Project in Numerical Analysis	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
PHYM01	30	Degree Project in Physics	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
MIOM05	30	Degree Project in Production Management	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>
TNSM01	30	Degree Project in Rehabilitation Engineering	<a href="#">KS</a> <a href="#">KE</a> <a href="#">U</a> <a href="#">W</a>