Electrical Engineering

Study Year 1, Academic Year 2013/14 (Mandatory Courses)

Course Code	Credits	Cycle	Language S.Ex. stud.	Language	Course Name	Footnote	Links	13/14 sp1	13/14 sp2	13/14 sp3	13/14 sp4
FMAA05	15	G1	-	S	Calculus in One Variable		KS KE U W T	1	2		
ESS010	15	G1	-	S	Electronics		KS KE U W T	1	2	3	
EDA017	9	G1	-	S	Programming, First Course		KS KE U W T		2	3	
FMA420	6	G1	-	S	Linear Algebra		KS KE U W T			3	
FMA430	6	G1	-	S	Calculus in Several Variables		KS KE U W T				4
FAFA01	9	G1	-	S	Physics - Mechanics and Waves		KS KE U W T				4

Study Year 2, Academic Year 2014/15 (Mandatory Courses)

Course Code	Credits	Cycle	Language S.Ex. stud.	Language	Course Name	Footnote	Links	14/15 sp1	14/15 sp2	14/15 sp3	14/15 sp4
FAFA35	6	G1	-	S	Physics - Thermodynamics and Atomic Physics		KS KE U W T	1			
EIT020	9	G2	-	S	Design of Digital Circuits – A Systems Approach		KS KE U W T	1	2		
EDAA01	7.5	G1	-	S	Programming - Second Course		KS KE U W T	1	2		
MIO012	6	G1	-	S	Managerial Economics, Basic Course	X	KS KE U W T		2		
ESSF01	8	G2	-	S	Analogue Circuits		KS KE U W T		2	3	4
EIT070	6	G2	-	S	Computer Organization		KS KE U W T			3	
FMAF01	7	G2	-	S	Mathematics - Analytic Functions		KS KE U W T			3	

Course Code	Credits	Cycle	Language S.Ex. stud.		Course Name	Footnote	Links	14/15 sp1	14/15 sp2	14/15 sp3	14/15 sp4
FMAF05	7	G2	-	S	Mathematics - Systems and Transforms		KS KE U W T				4
ESS030	4.5	G2	-	S	Physics of Devices		KS KE U W T				4

MIO012 Managerial Economics, Basic Course: *Only one of the courses MIO012 and MIOA01 may be included in a degree.*

Study Year 3, Academic Year 2015/16 (Mandatory Courses)

Course Code	Credits	Cycle	Language S.Ex. stud.	Language	Course Name	Footnote	Links	15/16 sp1	15/16 sp2	15/16 sp3	15/16 sp4
FRT010	7.5	G2	-	S	Automatic Control, Basic Course		KS KE U W T	1			
ESS040	6	G2	X	S	Systems and Signals		KS KE U W T	1			
ESS050	9	G2	X	E	Electromagnetic Fields		KS KE U W T	1	2		
FMSF20	7.5	G2	-	S	Mathematical Statistics, Basic Course		KS KE U W T		2		
ETSF15	5	G2	-	S	Communication Systems and Networks		KS KE U W T			3	
ESSF15	5	G2	-	S	Electrical Engineering		KS KE U W T			3	
ESSF10	5	G2	-	S	Electrical Measurements		KS KE U W T			3	

Course Code	Credits	Cycle	Language S.Ex. stud.	Language	Course Name	Footnote	Links	15/16 sp1	15/16 sp2	15/16 sp3	15/16 sp4
BMEF01	5	G2	-	S	Project in Electronics		KS KE U W T			3	4
FMN050	6	G2	X	E1	Numerical Analysis		KS KE U W T				4
FMIF35	4	G2	-	S	Sustainable Development from an Electro-technological Perspective		KS KE U W T				4

Study Year 3, Academic Year 2015/16 (Elective Mandatory Courses)

Course Code	Credits	Cycle	Language S.Ex. stud.	Language	Course Name	Footnote	Links	15/16 sp1	15/16 sp2	15/16 sp3	15/16 sp4
ETI265	7.5	G1	X	S	Signal Processing in Multimedia	X	KS KE U W T				4

ETI265 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
EDA221	7.5	G2	V	4 - 16/17	4	X	E	Computer Graphics		KS KE U W T	1			
FMAN20	7.5	A	V	4 - 16/17	4	X	E1	Image Analysis		KS KE U W T	1			
EITN55	7.5	A	V	4 - 16/17	4	X	E1	Signal Separation - Independent Components		KS KE U W T	1			
FMSF10	7.5	G2	V	4 - 16/17	4	X	E1	Stationary Stochastic Processes	X	KS KE U W T	1			
FMA120	6	A	V	4 - 16/17	4	X	E1	Matrix Theory		KS KE U W T	1	2		
EDAN35	7.5	A	V	4 - 16/17	4	X	E	High Performance Computer Graphics		KS KE U W T		2		
FAFF20	7.5	G2	V	4 - 16/17	4	X	E	Multi-spectral Imaging		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
EITN60	7.5	A	V	4 - 16/17	4	X	E	Optimum and Adaptive Signal Processing		KS KE U W T			2		
FMSN20	7.5	A	V	4 - 16/17	4	X	E1	Spatial Statistics with Image Analysis		KS KE U W T			2		
FMA270	6	A	V	4 - 16/17	4	X	E1	Computer Vision		KS KE U W T				3	
ETIF10	7.5	G2	V	4 - 16/17	4	X	E1	Signal Processing - Design and Implementation		KS KE U W T					4
FMNN35	6	A	V	5 - 17/18	4	X	E1	Numerical Methods in CAGD	X	KS KE U W T		1			

FMSF10 Stationary Stochastic Processes: *Only one of the courses FMS045 and FMSF10 may be included in a degree.*
FMNN35 Numerical Methods in CAGD: *Please note that the contents of the course are partly (3 credits) the same as in FMA135 Geometry.*

Specialisation em - Energy and Environment

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
EIEN15	7.5	A	V	4 - 16/17	4	X	E1	Electric Power Systems		KS KE U W T	1			
MIE100	7.5	A	V	4 - 16/17	4	X	E1	Hybrid Vehicle Drive Systems		KS KE U W T	1			
FMI050	7.5	A	V	4 - 16/17	4	-	S	Energy Systems Analysis: Energy, Environment and Natural Resources		KS KE U W T	1	2		
FMI055	7.5	A	V	4 - 16/17	4	-	S	Environmental Systems Studies: Life Cycle Analysis		KS KE U W T	1	2		
EIEN10	7.5	A	V	4 - 16/17	4	X	E1	Wind Power Systems		KS KE U W T		2		
AEB020	7.5	G2	V	4 - 16/17	4	X	E	Photovoltaic Systems, Basic Course		KS KE U W T			3	
FMI040	7.5	A	V	4 - 16/17	4	-	S	Energy Systems Analysis: Renewable Sources of Energy		KS KE U W T			3	4

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
EIEN25	15	A	V	4 - 16/17	4	X	E1	Power Electronics - Devices, Converters, Control and Applications	X	KS KE U W T			3	4
MVKN15	7.5	A	V	4 - 16/17	4	-	S	Energy Supply Systems		KS KE U W T				4
MVKN30	7.5	A	V	5 - 17/18	4	-	S	Advanced Efficient Energy Systems		KS KE U W T	1	2		
EIEN30	7.5	A	V	5 - 17/18	4	X	E1	Project in Industrial Electrical Engineering and Automation		KS KE U W T	1	2		
EIEN20	7.5	A	V	5 - 17/18	4	X	E1	Design of Electrical Machines	X	KS KE U W T			3	4
EIEN30	7.5	A	V	5 - 17/18	4	X	E1	Project in Industrial Electrical Engineering and Automation		KS KE U W T			3	4

EIEN25 Power Electronics - Devices, Converters, Control and Applications: *may not be included in a degree together with either EIE015, EIE023 or EIE042*
EIEN20 Design of Electrical Machines: *The course is offered every other academic year and will be offered in 2017/18, 2019/20.*

Specialisation fh - Photonics and High-Frequency Electronics

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
ETIF05	7.5	G2	V	4 - 16/17	4	X	E	Basic Wireless Communication Technique		KS KE U W T	1			
ETIN20	7.5	A	V	4 - 16/17	4	X	E	Digital IC-design		KS KE U W T	1			
FAFF01	7.5	G2	V	4 - 16/17	4	X	E	Optics and Optical Design		KS KE U W T	1			
FFF110	7.5	G2	V	4 - 16/17	4	X	E	Processing and Device Technology		KS KE U W T	1			
ETIN25	7.5	A	V	4 - 16/17	4	X	E	Analogue IC-design		KS KE U W T		2		
ETEN10	7.5	A	V	4 - 16/17	4	X	E	Antenna Technology		KS KE U W T		2		
FAFN01	7.5	A	V	4 - 16/17	4	X	E	Lasers		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
ETIN50	7.5	A	V	4 - 16/17	4	X	E	RF Amplifier Design		KS KE U W T			2		
ETIN30	7.5	A	V	4 - 16/17	4	X	E	Integrated Radio Electronics	X	KS KE U W T				3	
FFFN25	7.5	A	V	4 - 16/17	4	X	E	Optoelectronics and Optical Communication		KS KE U W T				3	
FAFN10	7.5	A	V	4 - 16/17	4	X	E	Advanced Optics and Lasers		KS KE U W T					4
ETEN01	7.5	A	V	4 - 16/17	4	X	E1	Microwave Theory		KS KE U W T					4
FFF160	7.5	A	V	4 - 16/17	4	X	E1	Nanoelectronics		KS KE U W T					4
FFF115	7.5	A	V	4 - 16/17	4	X	E1	High Speed Devices	X	KS KE U W T		Course on hold			

ETIN30 Integrated Radio Electronics: *The course is offered every other academic year and will be given in 2016/17, 2018/19.*
FFF115 High Speed Devices: *The course is offered every other academic year and will next be offered in 2017/18.*

Specialisation is - Integrated Systems

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
ETIN20	7.5	A	V	4 - 16/17	4	X	E	Digital IC-design		KS KE U W T	1			
EITF35	7.5	G2	V	4 - 16/17	4	X	E	Introduction to Structured VLSI Design		KS KE U W T	1			
FFF110	7.5	G2	V	4 - 16/17	4	X	E	Processing and Device Technology		KS KE U W T	1			
FFF021	7.5	A	V	4 - 16/17	4	X	E1	Semiconductor Physics		KS KE U W T	1			
ETIN40	7.5	A	V	4 - 16/17	4	X	E	IC-project 2		KS KE U W T	1	2		
ETIN25	7.5	A	V	4 - 16/17	4	X	E	Analogue IC-design		KS KE U W T		2		
EEMN05	7.5	A	V	4 - 16/17	4	X	E1	EMC, Noise and Noise Reduction		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
ETIN55	7.5	A	V	4 - 16/17	4	X	E	Integrated A/D and D/A Converters		KS KE U W T			2		
EITF40	7.5	G2	V	4 - 16/17	4	X	E1	Digital and Analogue Projects		KS KE U W T				3	
ETIN45	7.5	A	V	4 - 16/17	4	X	E	DSP-design		KS KE U W T				3	
ETIN30	7.5	A	V	4 - 16/17	4	X	E	Integrated Radio Electronics	X	KS KE U W T				3	
ETIN35	7.5	A	V	4 - 16/17	4	X	E	IC-project 1		KS KE U W T				3	4
EDAN15	7.5	A	V	4 - 16/17	4	X	E	Design of Embedded Systems		KS KE U W T					4
EDAN85	7.5	A	V	5 - 17/18	4	X	E	Design of Embedded Systems, Advanced Course	X	KS KE U W T		1			

ETIN30 Integrated Radio Electronics: *The course is offered every other academic year and will be given in 2016/17, 2018/19.*
EDAN85 Design of Embedded Systems, Advanced Course: *The course is offered every other academic year and will be given in 2017/18, 2019/20.*

Specialisation ks - Communication Systems

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
ETT051	7.5	G2	V	4 - 16/17	4	X	E	Digital Communications		KS KE U W T	1			
ETTN15	7.5	A	V	4 - 16/17	4	X	E	Modern Wireless Systems - LTE and Beyond		KS KE U W T	1			
ETSF05	9	G2	V	4 - 16/17	4	-	E1	Internet Protocols		KS KE U W T	1	2		
EDIN01	7.5	A	V	4 - 16/17	4	X	E1	Cryptography		KS KE U W T		2		
ETTN01	7.5	A	V	4 - 16/17	4	X	E	Digital Communications, Advanced Course		KS KE U W T		2		
EDI042	7.5	A	V	4 - 16/17	4	X	E	Error Control Coding		KS KE U W T		2		
ETSN01	7.5	A	V	4 - 16/17	4	X	E	Advanced Telecommunication		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
ETIN10	7.5	A	V	4 - 16/17	4	X	E	Channel Modelling for Wireless Communication		KS KE U W T				3	
EITN30	7.5	A	V	4 - 16/17	4	-	S	Internet Inside		KS KE U W T				3	
EITN45	7.5	A	V	4 - 16/17	4	X	E	Information Theory		KS KE U W T					4
ETS075	4.5	G2	V	4 - 16/17	4	X	S	Queuing System		KS KE U W T					4
ETIN15	7.5	A	V	4 - 16/17	4	X	E	Radio Systems		KS KE U W T					4
ETS061	7.5	A	V	4 - 16/17	4	X	E1	Simulation		KS KE U W T					4
EITN21	7.5	A	V	5 - 17/18	5	X	E	Project in Wireless Communications		KS KE U W T		1	2		

Specialisation mt - Biomedical Engineering

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
BMEN05	7.5	A	V	4 - 16/17	4	X	E	Biomechanics	X	KS KE U W T	1			
FMAN20	7.5	A	V	4 - 16/17	4	X	E1	Image Analysis		KS KE U W T	1			
EEMN21	7.5	A	V	4 - 16/17	4	X	E1	Introduction to Microfluidics and Lab-on-a-chip Systems	X	KS KE U W T	1			
EITN55	7.5	A	V	4 - 16/17	4	X	E1	Signal Separation - Independent Components		KS KE U W T	1			
EEM031	7.5	G2	V	4 - 16/17	4	-	S	Transducer Technology	X	KS KE U W T	1			
TNX097	7.5	G2	V	4 - 16/17	4	-	S	Rehabilitation Engineering		KS KE U W T	1	2		
EEMF05	7.5	G2	V	4 - 16/17	4	X	E1	Biomedical Measurements	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
EEMN05	7.5	A	V	4 - 16/17	4	X	E1	EMC, Noise and Noise Reduction		KS KE U W T		2		
FMAN30	7.5	A	V	4 - 16/17	4	X	E1	Medical Image Analysis		KS KE U W T		2		
EEMN15	7.5	A	V	4 - 16/17	4	X	E1	Ultrasound Physics and Technology	X	KS KE U W T			3	
BMEN01	7.5	A	V	4 - 16/17	4	X	E1	Biomedical Signal Processing		KS KE U W T				4
FAF150	7.5	A	V	4 - 16/17	4	X	E	Medical Optics	X	KS KE U W T				4
FMAN01	7.5	A	V	4 - 16/17	4	X	E1	Biomathematics	X	KS KE U W T	Course on hold			

BMEN05 Biomechanics: *Replaces the course FHLF05.*
EEMN21 Introduction to Microfluidics and Lab-on-a-chip Systems: *Replaces EEM055 Microfluidics*
EEM031 Transducer Technology: *Re-examination set by agreement.*
EEMF05 Biomedical Measurements: *Reexam date to be set by agreement.*
EEMN15 Ultrasound Physics and Technology: *Re-examination set by agreement.*
FAF150 Medical Optics: *Examination for higher grade after agreement with the course coordinator.*
FMAN01 Biomathematics: *The course is offered every other academic year and will next be offered in 2017/18.*

Specialisation pla - Production, Logistics and Business

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
MTTF01	5	G2	V	4 - 16/17	4	-	S	Logistics		KS KE U W T	1			
MION25	7.5	A	V	4 - 16/17	4	-	S	Technology Strategy		KS KE U W T	1			
MIOF15	7.5	G2	V	4 - 16/17	4	-	S	Marketing		KS KE U W T		2		
MIOF10	7.5	G2	V	4 - 16/17	4	X	E	Production and Inventory Control		KS KE U W T		2		
MION20	7.5	A	V	4 - 16/17	4	-	S	Applied Business Analysis		KS KE U W T			3	
MTT045	7.5	A	V	4 - 16/17	4	X	E	International Physical Distribution		KS KE U W T			3	
MION01	7.5	A	V	4 - 16/17	4	X	E	Management of Production and Inventory Systems		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
MIO040	6	G2	V	4 - 16/17	4	-	S	Managerial Economics, Advanced Course		KS KE U W T				3	
MIO040															4
MION45	7.5	A	V	4 - 16/17	4	X	E	Operations Strategy		KS KE U W T					4
MTT240	7.5	A	V	4 - 16/17	4	X	E	Supply Chain Management		KS KE U W T					4
MION30	7.5	A	V	5 - 17/18	4	-	S	Industrial Management		KS KE U W T		1			
MTTN20	7.5	A	V	5 - 17/18	5	X	E	Supply Chain Information Systems		KS KE U W T		1			
MION05	7.5	A	V	5 - 17/18	4	-	S	Business Marketing		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
MTTN75	7.5	A	V	5 - 17/18	4	X	E	Industrial Purchasing		KS KE U W T		2		

Specialisation pv - Software

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
EDAN55	7.5	A	V	4 - 16/17	4	X	E	Advanced Algorithms		KS KE U W T	1			
FMNN25	7.5	A	V	4 - 16/17	4	X	E1	Advanced Course in Numerical Algorithms with Python/SciPy		KS KE U W T	1			
EDA061	4.5	G2	V	4 - 16/17	4	-	S	Object-oriented Modelling and Design	X	KS KE U W T	1			
ETSN05	7.5	A	V	4 - 16/17	4	-	S	Software Development for Large Systems		KS KE U W T	1			
EDA040	6	G2	V	4 - 16/17	4	X	E1	Concurrent Programming		KS KE U W T	1	2		
EDAN10	7.5	A	V	4 - 16/17	4	X	E1	Configuration Management		KS KE U W T		2		
ETS170	7.5	A	V	4 - 16/17	4	X	S	Requirements Engineering		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
EDAF45	7.5	G2	V	4 - 16/17	4	-	S	Software Development in Teams - Project		KS KE U W T			2	3	
ETS200	7.5	A	V	4 - 16/17	4	X	E	Software Testing		KS KE U W T				3	
EDA031	7.5	G2	V	4 - 16/17	4	X	S	C++ Programming		KS KE U W T				3	4
EDA216	7.5	G2	V	4 - 16/17	4	X	S	Database Technology		KS KE U W T				3	4
EDAF35	7.5	G2	V	4 - 16/17	4	X	S	Operating Systems		KS KE U W T					4

EDA061 Object-oriented Modelling and Design: *Only one of the courses EDA061 and EDAF10 may be included in a degree.*

Specialisation ra - Control and Automation

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
EIEN15	7.5	A	V	4 - 16/17	4	X	E1	Electric Power Systems		KS KE U W T	1			
FRTN10	7.5	A	V	4 - 16/17	4	X	E1	Multivariable Control		KS KE U W T	1			
EIEF01	10	G2	V	4 - 16/17	4	X	E1	Applied Mechatronics		KS KE U W T	1	2		
FMA120	6	A	V	4 - 16/17	4	X	E1	Matrix Theory		KS KE U W T	1	2		
FRT041	7.5	A	V	4 - 16/17	4	X	E1	System Identification		KS KE U W T	1	2		
FRTN05	7.5	A	V	4 - 16/17	4	X	E1	Non-Linear Control and Servo Systems		KS KE U W T		2		
FRT090	7.5	A	V	4 - 16/17	4	X	E1	Project in Automatic Control		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
MIE080	7.5	G2	V	4 - 16/17	4	X	E1	Automation		KS KE U W T				3	
EIEN01	10	A	V	4 - 16/17	4	X	E1	Mechatronics, Industrial Product Design		KS KE U W T				3	4
FRTN15	7.5	A	V	4 - 16/17	4	X	E1	Predictive Control		KS KE U W T				3	4
FRTN01	10	A	V	4 - 16/17	4	X	E1	Real-Time Systems		KS KE U W T				3	4
MIE090	7.5	A	V	4 - 16/17	4	X	E1	Automation for Complex Systems		KS KE U W T					4
FRTN30	7.5	A	V	4 - 16/17	4	X	E	Network Dynamics		KS KE U T					4

Specialisation ss - Signals and Sensors

Course Code	Credits	Cycle	Mand./ Elect.	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
EITN55	7.5	A	V	4 - 16/17	4	X	E1	Signal Separation - Independent Components		KS KE U W T	1			
FMSF10	7.5	G2	V	4 - 16/17	4	X	E1	Stationary Stochastic Processes	X	KS KE U W T	1			
EEM031	7.5	G2	V	4 - 16/17	4	-	S	Transducer Technology	X	KS KE U W T	1			
FRT041	7.5	A	V	4 - 16/17	4	X	E1	System Identification		KS KE U W T	1	2		
EEMN10	7.5	A	V	4 - 16/17	4	X	S	Computerised Measurement Systems	X	KS KE U W T		2		
EEMN05	7.5	A	V	4 - 16/17	4	X	E1	EMC, Noise and Noise Reduction		KS KE U W T		2		
FMS051	7.5	A	V	4 - 16/17	4	X	E1	Mathematical Statistics, Time Series Analysis		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
EITN60	7.5	A	V	4 - 16/17	4	X	E	Optimum and Adaptive Signal Processing		KS KE U W T		2		
ETIN80	7.5	A	V	4 - 16/17	4	X	E1	Algorithms in Signal Processors – Project Course		KS KE U W T			3	
EEMN15	7.5	A	V	4 - 16/17	4	X	E1	Ultrasound Physics and Technology	X	KS KE U W T			3	
EEMN01	7.5	A	V	4 - 16/17	4	X	E1	Micro Sensors	X	KS KE U W T				4
ETIF10	7.5	G2	V	4 - 16/17	4	X	E1	Signal Processing - Design and Implementation		KS KE U W T				4
EXTP80	7.5	A	V	4 - 16/17	4	X	E1	Artificial Neural Networks	X	KS KE U W T	**Course on hold**			
FMSN35	7.5	A	V	4 - 16/17	4	X	E	Stationary and Non-stationary Spectral Analysis	X	KS KE U W T	**Course on hold**			

FMSF10 Stationary Stochastic Processes: *Only one of the courses FMS045 and FMSF10 may be included in a degree.*
EEM031 Transducer Technology: *Re-examination set by agreement.*
EEMN10 Computerised Measurement Systems: *Re-examination set by agreement.*
EEMN15 Ultrasound Physics and Technology: *Re-examination set by agreement.*
EEMN01 Micro Sensors: *Re-examination set by agreement.*
EXTP80 Artificial Neural Networks: *The course is offered every other academic year and will next be offered in 2017/18.*

FMSN35 Stationary and Non-stationary Spectral Analysis: *The course is offered every other academic year and will next be offered in 2017/18.*

Elective Courses - E

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
EXTA10	3	G1	**2** - 14/15	2	-	S	Introduction to Chinese Society, Culture and Language	X	KS KE U T	1	2		
EXTA35	15	G1	**2** - 14/15	2	-	S	Introductory Course in Chinese for Engineers	X	KS KE U T			3	4
EXTF60	15	G2	**3** - 15/16	3	-	E	Introductory Course in Chinese for Engineers, Part 2	X	KS KE U W T	1	2		
GEMA65	7.5	G1	**3** - 15/16	1	-	S	Chinese for Engineers	X	KS KE U T			3	4
MIO022	6	G2	**3** - 15/16	3	-	S	Management Organization		KS KE U W T				4
EITN50	7.5	A	**4** - 16/17	4	X	E	Advanced Computer Security	X	KS KE U W T	1			
MMKF15	7.5	G2	**4** - 16/17	4	X	E1	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
EDAA25	3	G1	4 - 16/17	4	X	S	C Programming		KS KE U W T	1			
EDAN65	7.5	A	4 - 16/17	4	X	E1	Compilers	X	KS KE U W T	1			
ETEN05	7.5	A	4 - 16/17	4	X	E	Electromagnetic Wave Propagation		KS KE U W T	1			
FMSF15	7.5	G2	4 - 16/17	4	X	E1	Markov Processes		KS KE U W T	1			
EITN10	7.5	A	4 - 16/17	4	X	E	Multiple Antenna Systems		KS KE U W T	1			
EDA230	7.5	A	4 - 16/17	4	X	S	Optimising Compilers	X	KS KE U W T	1			
FMFF15	7.5	G2	4 - 16/17	4	-	E1	Quantum Mechanics and Mathematical Methods		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
AEB010	7.5	G2	4 - 16/17	4	X	E	Solar Heating Technology, Basic Course		KS KE U W T	1			
FMIF20	7.5	G2	4 - 16/17	4	X	E	Environmental Issues		KS KE U W T	1	2		
MIE041	9	G2	4 - 16/17	4	X	E1	Measurement Systems for Control	X	KS KE U W T	1	2		
MVKN05	7.5	A	4 - 16/17	2	-	S	Project - Formula Student		KS KE U W T	1	2	3	4
TEK210	4.5	G1	4 - 16/17	4	-	S	Cognition		KS KE U W T		2		
EITF20	7.5	G2	4 - 16/17	4	X	E1	Computer Architecture		KS KE U W T		2		
FMAA25	7.5	G1	4 - 16/17	4	X	E1	Discrete Mathematics		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
FKFN05	7.5	A	4 - 16/17	4	X	E1	Experimental Tools for Subatomic Physics		KS KE U W T			2		
FMAN45	7.5	A	4 - 16/17	4	X	E	Machine Learning		KS KE U W T			2		
FMA051	6	A	4 - 16/17	4	X	E1	Optimization	X	KS KE U W T			2		
FAFA10	9	G1	4 - 16/17	4	-	S	Physics - Quantum Phenomena and Nanotechnology		KS KE U W T			2		
FMAN40	3	A	4 - 16/17	4	X	E1	Project in Applied Mathematics		KS KE U W T			2		
EDAN70	7.5	A	4 - 16/17	4	X	E1	Project in Computer Science		KS KE U W T			2		
FMAN35	3	A	4 - 16/17	4	X	E1	Project in Mathematics		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
MMKN30	7.5	A	4 - 16/17	4	X	E1	Service Robotics	X	KS KE U W T			2		
FFF042	7.5	A	4 - 16/17	4	X	E	The Physics of Low-dimensional Structures and Quantum Devices	X	KS KE U W T			2		
EDA132	7.5	G2	4 - 16/17	4	X	E	Applied Artificial Intelligence		KS KE U W T				3	
EIT060	7.5	G1	4 - 16/17	4	X	S	Computer Security		KS KE U W T				3	
MVKN20	7.5	A	4 - 16/17	4	-	S	Energy Utilization		KS KE U W T				3	
FHL055	7.5	G1	4 - 16/17	4	-	E	Engineering Mechanics		KS KE U W T				3	
FMA240	6	G2	4 - 16/17	4	X	E1	Linear and Combinatorial Optimization		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
ETIA10	7.5	G1	4 - 16/17	4	X	E	Patent and Intellectual Property Rights		KS KE U W T					3	
TEK070	7.5	G2	4 - 16/17	4	-	S	Safety, Health and Environmental Law		KS KE U W T					3	
FMF061	4.5	G2	4 - 16/17	4	-	S	Theory of Relativity		KS KE U W T					3	
MAMF15	6	G2	4 - 16/17	4	-	S	Work Organization and Management		KS KE U W T					3	
FMA021	7.5	A	4 - 16/17	4	-	S	Applied Mathematics		KS KE U W T					3	4
EXTG15	7.5	G2	4 - 16/17	4	X	E1	Biology, Introductory Course		KS KE U W T					3	4
FMAN25	7.5	A	4 - 16/17	4	X	E1	Calculus of Variations		KS KE U W T					3	4

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links			sp1	sp2	sp3	sp4
EITA05	4.5	G1	4 - 16/17	1	-	S	History of Technology		KS KE U W T					3	4
FKF100	7.5	A	4 - 16/17	4	X	E	Methods for Environmental Monitoring		KS KE U W T					3	4
MAMF21	7.5	G2	4 - 16/17	4	-	S	Working Environment, Occupational Health and Safety		KS KE U W T					3	4
EDAF05	5	G2	4 - 16/17	4	X	E1	Algorithms, Data Structures and Complexity		KS KE U W T						4
FMS072	7.5	G2	4 - 16/17	4	X	E1	Design of Experiments		KS KE U W T						4
FMAA25	7.5	G1	4 - 16/17	4	X	E1	Discrete Mathematics		KS KE U W T						4
FHL064	7.5	G2	4 - 16/17	4	X	E	Finite Element Method		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
KII010	7.5	G2	4 - 16/17	4	X	E1	Industrial Environmental Management		KS KE U W T				4
FMAN40	3	A	4 - 16/17	4	X	E1	Project in Applied Mathematics		KS KE U W T				4
EDAN70	7.5	A	4 - 16/17	4	X	E1	Project in Computer Science		KS KE U W T				4
MIOF05	2	G2	4 - 16/17	4	-	S	Project in Managerial Economics, Advanced Course		KS KE U W T				4
FMAN35	3	A	4 - 16/17	4	X	E1	Project in Mathematics		KS KE U W T				4
EITN35	7.5	A	5 - 17/18	4	X	E1	Advanced Course in Electrical and Information Technology	X	KS KE U W T	1			
EITF05	4	G2	5 - 17/18	4	-	S	Web Security		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
EITN35	7.5	A	5 - 17/18	4	X	E1	Advanced Course in Electrical and Information Technology	X	KS KE U W T			2		
EITN41	7.5	A	5 - 17/18	4	-	S	Advanced Web Security		KS KE U W T			2		
FMAN45	7.5	A	5 - 17/18	4	-	E	Machine Learning		KS KE U W T			2		
EXTP85	7.5	A	5 - 17/18	4	-	S	Quantitative Human Physiology		KS KE U W T			2		
EITN35	7.5	A	5 - 17/18	4	X	E1	Advanced Course in Electrical and Information Technology	X	KS KE U W T				3	
EITN35								X						4

EXTA10 Introduction to Chinese Society, Culture and Language: *Compulsory for students admitted to the China specialisation.*
EXTA35 Introductory Course in Chinese for Engineers: *Compulsory for students admitted to the China specialisation.*
EXTF60 Introductory Course in Chinese for Engineers, Part 2: *Compulsory for students admitted to the China specialisation. The course is given in China.*
GEMA65 Chinese for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011*

and later.
EITN50 Advanced Computer Security: *Only one of the courses EITN50 and EIT015 may be included in a degree.*
EDAN65 Compilers: *Replaces EDA180 Compiler Construction*
EDA230 Optimising Compilers: *The course is offered every other academic year and will be given in 2016/17, 2018/19.*
MIE041 Measurement Systems for Control: *The course is offered every other academic year and will be given in 2014/15, 2016/17.*
FMA051 Optimization: *Written examination before Christmas so that exchange students may participate.*
MMKN30 Service Robotics: *The course is offered every other academic year and will be given in 2016/17, 2018/2019.*
FFF042 The Physics of Low-dimensional Structures and Quantum Devices: *Re-examination set by agreement.*
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.*

Externally Elective Courses - E

Course Code	Credits	Cycle	Year	From year	S.Ex. stud.	Language	Course Name	Footnote	Links	sp1	sp2	sp3	sp4
GEMA20	7.5	G1	4 - 16/17	1	-	E	English for Engineers	X	KS KE U W T	1	2		
GEMA25	7.5	G1	4 - 16/17	1	-	S	German for Engineers	X	KS KE U W T	1	2		
GEMA60	7.5	G1	4 - 16/17	1	-	S	Law for Engineers, Introductory Course in Business Law	X	KS KE U W T	1	2		
GEMA70	15	G1	4 - 16/17	1	-	S	Japanese for Engineers	X	KS KE U W T	1	2	3	
GEMA20	7.5	G1	4 - 16/17	1	-	E	English for Engineers	X	KS KE U W T			3	4
GEMA01	7.5	G1	4 - 16/17	1	-	S	French for Engineers: Language, Culture and Society, First Course	X	KS KE U W T			3	4
GEMA60	7.5	G1	4 - 16/17	1	-	S	Law for Engineers, Introductory Course in Business Law	X	KS KE U W T			3	4
GEMA55	6	G1	4 - 16/17	1	-	S	Medicine for Engineers	X	KS KE U W T	Course on hold			

GEMA20 English for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*
GEMA25 German for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*
GEMA60 Law for Engineers, Introductory Course in Business Law: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*
GEMA70 Japanese for Engineers: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*
GEMA01 French for Engineers: Language, Culture and Society, First Course: *LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*
GEMA55 Medicine for Engineers: *The course is offered every other academic year and will be given in 2015/16, 2017/18 LTH common courses (courses where the course code begins with GEM) counts as external elective courses in the degree requirements for students admitted autumn 2011 and later.*

Bachelor's Projects - E

The list contains the bachelor's projects that are included in the E programme. The list is not necessarily complete before the academic year 2016/17.

			Links
Course Code	**Credits**	**Course Name**	
FRTL01	15	Bachelor Project in Automatic Control	KS KE U
BMEL01	15	Bachelor Project in Biomedical Engineering	KS KE U
EDAL01	15	Bachelor Project in Computer Science	KS KE U W
EITL01	15	Bachelor Project in Electrical and Information Technology	KS KE U W
EEML01	15	Bachelor Project in Electrical Measurements	KS KE U
EIEL01	15	Bachelor Project in Industrial Electrical Engineering and Automation	KS KE U
FMSL01	15	Bachelor Project in Mathematical Statistics	KS KE U W
FMAL01	15	Bachelor Project in Mathematics	KS KE U
FMNL01	15	Bachelor Project in Numerical Analysis	KS KE U
PHYL01	15	Bachelor Project in Physics	KS KE U

Degree Projects - E

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

			Links
Course Code	**Credits**	**Course Name**	
FRTM01	30	Degree Project in Automatic Control	KS KE U W
BMEM01	30	Degree Project in Biomedical Engineering	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
BMEM05	30	Degree Project in Electrical Measurements	KS KE U W
AEBM05	30	Degree Project in Energy and Building Design	KS KE U
VTAM01	30	Degree Project in Engineering Acoustics	KS KE U
MAMM10	30	Degree Project in Ergonomics	KS KE U W
EIEM01	30	Degree Project in Industrial Electrical Engineering and Automation	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
FMNM01	30	Degree Project in Numerical Analysis	KS KE U W
PHYM01	30	Degree Project in Physics	KS KE U W
MIOM05	30	Degree Project in Production Management	KS KE U W
TNSM01	30	Degree Project in Rehabilitation Engineering	KS KE U W