Applied Physics and Electrical Engineering, M Sc in Engineering

300 credits

Civilingenjör i teknisk fysik och elektroteknik

6CYYY

Valid from: 2017 Spring semester

Determined by
Board of Studies for Electrical Engineering, Physics and Mathematics

Date determined
2017-01-25

Entry requirements

Degree in Swedish

Civilingenjör 300 hp och Teknologie master 120 hp

Degree in English

Master of Science in Applied Physics and Electrical Engineering

Curriculum

Semester 1 (Autumn 2017)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 0					
TATM79	Foundation Course in Mathematics	6*	G1X	-	C
Period 1					
TATA24	Linear Algebra	8*	G1X	1	C
TATM79	Foundation Course in Mathematics	6*	G1X	4	C
TFYY51	Engineering Project	6*	G1X	4	C
TSEA51	Switching Theory and Logical Design	4	G1X	2	C
TATA40	Perspectives on Mathematics	1*	G1X	-	V
Period 2					
TATA24	Linear Algebra	8*	G1X	4	C
TATA41	Calculus in One Variable 1	6	G1X	2	C
TFYY51	Engineering Project	6*	G1X	3	C
TATA40	Perspectives on Mathematics	1*	G1X	-	V

Semester 2 (Spring 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TATA42	Calculus in One Variable 2	6	G1X	1	C
TDDC74	Programming: Abstraction and Modelling	8*	G1X	2	C
TFYA81	Oscillations and Mechanical Waves	4	G1X	4	C
TBMT32	Perspectives on Biomedical Engineering	2*	G1X	3	E
TFFM12	Perspectives on Physics	2*	G1X	-	E
TSIT04	The Language of Mathematics	4*	G1X	3	E
TATA40	Perspectives on Mathematics	1*	G1X	-	V
TGTU35	Introduction to University Studies	2*	G1X	-	V
Period 2					
TATA43	Calculus in Several Variables	8	G1X	2	C
TDDC74	Programming: Abstraction and Modelling	8*	G1X	1	C
TFYA84	Optics - Theory and Application	4	G1X	4	C
TBMT32	Perspectives on Biomedical Engineering	2*	G1X	3	E
TFFM12	Perspectives on Physics	2*	G1X	-	E
TSIT04	The Language of Mathematics	4*	G1X	3	E
TATA40	Perspectives on Mathematics	1*	G1X	-	V
TGTU35	Introduction to University Studies	2*	G1X	-	V

Semester 3 (Autumn 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TANA21	Scientific Computing	6	G1X	3	C
TATA44	Vector Analysis	4	G1X	1	C
TSRT04	Introduction in Matlab	2	G1X	-	C
TSTE05	Electronics and Measurement Technology	8*	G1X	2	C
Period 2					
TATA45	Complex Analysis	6	G2X	1	C
TMME12	Engineering Mechanics Y	4	G1X	2	C
TSTE05	Electronics and Measurement Technology	8*	G1X	3	C

Semester 4 (Spring 2019)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP07	Introduction to Optimization	6	G1X	3	C
TMME04	Engineering Mechanics II	6	G2X	4	C
TSEA28	Computer Hardware and Architecture Y	6*	G1X	2	C
TGTU63	Visits to Industry	1*	G1X	-	V
Period 2					
TAMS14	Probability, first course	4	G1X	4	C
TFYA13	Electromagnetic Field Theory	8	G2X	2	C
TSEA28	Computer Hardware and Architecture Y	6*	G1X	3	C
TPTE06	Industrial Placement	6	G1X	-	E
TGTU63	Visits to Industry	1*	G1X	-	V

Semester 5 (Autumn 2019)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS24	Statistics, First Course	4	G2X	4	C
TATA77	Fourier Analysis	6	G2X	1	C
TDDC76	Programming and Data Structures	8*	G2X	2	C
TFYA43	Nanotechnology	6	G2X	3	E
TGTU63	Visits to Industry	1*	G1X	-	V
Period 2					
TDDC76	Programming and Data Structures	8*	G2X	2	C
TFYA12	Thermodynamics and Statistical Mechanics	6	G2X	4	C
TSDT18	Signals and Systems	6	G2X	3	C
TGTU63	Visits to Industry	1*	G1X	-	V

Semester 6 (Spring 2020)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFYA73	Modern Physics I	4	G2X	3	C
TSRT12	Automatic Control	6	G2X	1	C
TFYA75	Applied Physics - Bachelor Project	16*	G2E	2	C/E
TSEA56	Electronics Engineering - Bachelor Project	16*	G2X	2	C/E
THEN18	English	6*	G1X	4	E
Period 2					
TFYA74	Modern Physics II	4	G2X	1	C/E
TFYA75	Applied Physics - Bachelor Project	16*	G2E	-	C/E
TSEA56	Electronics Engineering - Bachelor Project	16*	G2X	-	C/E
TSKS10	Signals, Information and Communication	4	G2X	3	C/E
TEAE01	Industrial Economics, Basic Course	6	G1X	2	E
THEN18	English	6*	G1X	4	E

Semester 7 (Autumn 2020)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS22	Probability Theory and Bayesian Networks	6*	A1X	4	E
TAMS32	Stochastic Processes	6	A1X	1	E
TAMS46	Probability Theory, Second Course	6	A1X	3	E
TAOP34	Large Scale Optimization	6	A1X	3	E
TATA34	Real Analysis, Honours Course	6*	G2X	4	E
TATA55	Abstract Algebra	6*	G2X	3	E
TATM85	Functional Analysis	6*	A1X	2	E
TBME04	Anatomy and Physiology	6	G2X	3	E
TBMI19	Medical Information Systems	6*	A1X	2	E
TDDC17	Artificial Intelligence	6	G2X	3	E
TDDD08	Logic Programming	6	A1X	4	E
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TDTS06	Computer Networks	6	G2X	1	E

Course code	Course name	Credits	Level	Timetable module	ECV
TDTS08	Advanced Computer Architecture	6	A1X	2	E
TEAE05	Resource Theory	6	G1X	2	E
TFFM08	Experimental Physics	6*	A1X	1	E
TFFY54	Quantum Mechanics	6	A1X	2	E
TFKE59	Fundamentals of Chemistry	6	G1X	2	E
TFYA18	Mathematical Methods of Physics	6	A1N	3	E
TFYA43	Nanotechnology	6	G2X	3	E
TFYA88	Additive Manufacturing: Tools, Materials and Methods	6	A1X	3	E
TFYA95	Principles of Materials Science	6	A1X	2	E
TFYA97	Modern Optics	6	A1X	4	E
TFYY67	Classical Electrodynamics	6*	A1X	3	E
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
TKMJ24	Environmental Engineering	6	G1N	1	E
TMHL03	Mechanics of Light Structures	6	A1X	2	E
TMMV18	Fluid Mechanics	6	A1X	1	E
TPPE17	Corporate Finance	6	G2X	4	E
TSBB06	Multidimensional Signal Analysis	6*	A1X	2	E
TSBB08	Digital Image Processing	6	A1X	4	E
TSDT14	Signal Theory	6	A1X	1	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	4	E
TSKS01	Digital Communication	6*	A1X	4	E
TSKS15	Detection and Estimation of Signals	6	A1X	2	E
TSRT92	Modelling and Learning for Dynamical Systems	6	A1X	3	E
TSTE12	Design of Digital Systems	6	A1X	3	E
TSTE86	Digital Integrated Circuits	6	A1N	2	E
Period 2					
TAMS17	Statistical Theory, advanced course	6	A1X	1	E
TAMS22	Probability Theory and Bayesian Networks	6*	A1X	4	E

Course code	Course name	Credits	Level	Timetable module	ECV
TAMS41	Statistical Modelling with Regression Methods	6	A1X	3	E
TAOP04	Mathematical Optimization	6	A1X	2	E
TATA34	Real Analysis, Honours Course	6*	G2X	4	E
TATA55	Abstract Algebra	6*	G2X	3	E
TATA71	Ordinary Differential Equations and Dynamical Systems	6	G2X	2	E
TATM85	Functional Analysis	6*	A1X	1	E
TBME03	Biochemistry and Cell Biology	6	G2X	2	E
TBMI19	Medical Information Systems	6*	A1X	3	E
TBMT01	Biomedical Signal Processing	6	A1X	1	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TFFM08	Experimental Physics	6*	A1X	1	E
TFFY70	Physics of Condensed Matter part I	6	A1X	2	E
TFYA20	Surface Physics	6	A1X	4	E
TFYA39	Semiconductor Technology	6	A1X	3	E
TFYA60	Astronomy and Geophysics	6	G1X	3	E
TFYA90	Computational Physics	6	A1X	4	E
TFYY67	Classical Electrodynamics	6*	A1X	3	E
TGTU04	Leadership	6	G2X	2	E
TGTU49	History of Technology	6	G1X	3	E
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
TMKM90	Engineering Materials - Deformation and Fracture	6	A1X	2	E
TMMS31	Biomechanical Modelling of Tissues and Systems	6	A1N	4	E
TMMV54	Computational Heat Transfer	6	A1X	1	E
TPPE29	Financial Markets and Instruments	6	A1N	2	E
TSBB06	Multidimensional Signal Analysis	6*	A1X	3	E
TSBB09	Image Sensors	6	A1X	4	E
TSEA81	Computer Engineering and Real-time Systems	6	A1X	4	E
TSEK02	Radio Electronics	6	A1X	3	E

Course code	Course name	Credits	Level	Timetable module	ECV
TSEK37	Analog CMOS Integrated Circuits	6	A1X	1	E
TSFS02	Vehicle Dynamics and Control	6	A1N	1	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	3	E
TSIN02	Internetworking	6	A1X	1	E
TSIT02	Computer Security	6	G2X	2	E
TSKS01	Digital Communication	6*	A1X	4	E
TSKS33	Complex networks and big data	6	A1X	3	E
TSRT78	Digital Signal Processing	6	A1X	2	E

Specialisation: Applied Physics - Materials and Nano Physics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFFM08	Experimental Physics	6*	A1X	1	C
TFFY54	Quantum Mechanics	6	A1X	2	C
TFYA43	Nanotechnology	6	G2X	3	E
Period 2					
TFFM08	Experimental Physics	6*	A1X	1	C
TFFY70	Physics of Condensed Matter part I	6	A1X	2	C
TFYA20	Surface Physics	6	A1X	4	E
TFYA39	Semiconductor Technology	6	A1X	3	E

Specialisation: Applied Physics - Theory, Modelling and Computation

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFFY54	Quantum Mechanics	6	A1X	2	C
TFYA18	Mathematical Methods of Physics	6	A1N	3	C
TATA75	Theory of Relativity	6*	A1X	-	E
TFYY67	Classical Electrodynamics	6*	A1X	3	E
Period 2					
TFYA90	Computational Physics	6	A1X	4	C
TATA75	Theory of Relativity	6*	A1X	3	E
TDDE01	Machine Learning	6	A1X	1	E
TFFY70	Physics of Condensed Matter part I	6	A1X	2	E
TFYY67	Classical Electrodynamics	6*	A1X	3	E

Specialisation: Biomedical Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TBME04	Anatomy and Physiology	6	G2X	3	C
TBMI19	Medical Information Systems	6*	A1X	2	E
TSDT14	Signal Theory	6	A1X	1	E
Period 2					
TBMT01	Biomedical Signal Processing	6	A1X	1	C
TBME03	Biochemistry and Cell Biology	6	G2X	2	E
TBMI19	Medical Information Systems	6*	A1X	3	E

Specialisation: Communication

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSDT14	Signal Theory	6	A1X	1	C
TSKS01	Digital Communication	6*	A1X	4	C
TSKS15	Detection and Estimation of Signals	6	A1X	2	C
Period 2					
TSKS01	Digital Communication	6*	A1X	4	C
TDDE01	Machine Learning	6	A1X	1	E
TSEK02	Radio Electronics	6	A1X	3	E
TSIN02	Internetworking	6	A1X	1	E
TSKS33	Complex networks and big data	6	A1X	3	E
TSRT78	Digital Signal Processing	6	A1X	2	E

Specialisation: Control and Information Systems

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSRT92	Modelling and Learning for Dynamical Systems	6	A1X	3	C
TSDT14	Signal Theory	6	A1X	1	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	4	E
TSKS15	Detection and Estimation of Signals	6	A1X	2	E
Period 2					
TSRT78	Digital Signal Processing	6	A1X	2	C
TSEA81	Computer Engineering and Real-time Systems	6	A1X	4	C/E
TSFS02	Vehicle Dynamics and Control	6	A1N	1	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	3	E
TSKS33	Complex networks and big data	6	A1X	3	E

Specialisation: Data Science and Machine Intelligence

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS22	Probability Theory and Bayesian Networks	6*	A1X	4	C
TSKS15	Detection and Estimation of Signals	6	A1X	2	C
TSRT92	Modelling and Learning for Dynamical Systems	6	A1X	3	C
Period 2					
TAMS22	Probability Theory and Bayesian Networks	6*	A1X	4	C
TDDE01	Machine Learning	6	A1X	1	C
TSKS33	Complex networks and big data	6	A1X	3	C

Specialisation: Electronics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSKS01	Digital Communication	6*	A1X	4	C
TSTE86	Digital Integrated Circuits	6	A1N	2	C
TSTE12	Design of Digital Systems	6	A1X	3	E
Period 2					
TSEK37	Analog CMOS Integrated Circuits	6	A1X	1	C
TSKS01	Digital Communication	6*	A1X	4	C
TSEA26	Design of Embedded DSP Processor	6	A1X	2	E
TSEK02	Radio Electronics	6	A1X	3	E

Specialisation: Engineering Mathematics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS32	Stochastic Processes	6	A1X	1	C
TATM85	Functional Analysis	6*	A1X	2	C
TAMS46	Probability Theory, Second Course	6	A1X	3	E
TAOP34	Large Scale Optimization	6	A1X	3	E
TATA32	Discrete Mathematics	8*	G1X	3	E
TATA55	Abstract Algebra	6*	G2X	3	E
TDDD08	Logic Programming	6	A1X	4	E
TFYA18	Mathematical Methods of Physics	6	A1N	3	E
TSKS15	Detection and Estimation of Signals	6	A1X	2	E
Period 2					
TATM85	Functional Analysis	6*	A1X	1	C
TAOP04	Mathematical Optimization	6	A1X	2	E
TATA32	Discrete Mathematics	8*	G1X	1	E
TATA55	Abstract Algebra	6*	G2X	3	E
TATA71	Ordinary Differential Equations and Dynamical Systems	6	G2X	2	E

Specialisation: Financial Mathematics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS32	Stochastic Processes	6	A1X	1	C
TPPE17	Corporate Finance	6	G2X	4	C
TAMS46	Probability Theory, Second Course	6	A1X	3	E
TATM85	Functional Analysis	6*	A1X	2	E
Period 2					
TAOP04	Mathematical Optimization	6	A1X	2	E
TATM85	Functional Analysis	6*	A1X	1	E
TPPE29	Financial Markets and Instruments	6	A1N	2	E

Specialisation: Mechanics and Control

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMMV11	Fluid Mechanics and Heat Transfer	6	G2X	2	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	4	E
TSRT92	Modelling and Learning for Dynamical Systems	6	A1X	3	E
Period 2					
TSEA81	Computer Engineering and Real-time Systems	6	A1X	4	C
TSFS02	Vehicle Dynamics and Control	6	A1N	1	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	3	E
TSRT78	Digital Signal Processing	6	A1X	2	E

Specialisation: Photonics and Quantum Technology

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFFY54	Quantum Mechanics	6	A1X	2	C
TFYA97	Modern Optics	6	A1X	4	C
TFYY67	Classical Electrodynamics	6*	A1X	3	C
TFFM08	Experimental Physics	6*	A1X	1	E
Period 2					
TFYY67	Classical Electrodynamics	6*	A1X	3	C
TFFM08	Experimental Physics	6*	A1X	1	E
TFYA28	Quantum Dynamics	6	A1X	1	E
TSIN02	Internetworking	6	A1X	1	E

Specialisation: Signal and Image Processing

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSBB06	Multidimensional Signal Analysis	6*	A1X	2	C
TSBB08	Digital Image Processing	6	A1X	4	C
TSDT14	Signal Theory	6	A1X	1	C
Period 2					
TSBB06	Multidimensional Signal Analysis	6*	A1X	3	C
TSBB09	Image Sensors	6	A1X	4	C
TSRT78	Digital Signal Processing	6	A1X	2	C

Specialisation: System-on-Chip

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSTE12	Design of Digital Systems	6	A1X	3	C
TSTE86	Digital Integrated Circuits	6	A1N	2	C
TDTS06	Computer Networks	6	G2X	1	E
TSKS01	Digital Communication	6*	A1X	4	E
Period 2					
TSEA26	Design of Embedded DSP Processor	6	A1X	2	C
TSEA81	Computer Engineering and Real-time Systems	6	A1X	4	E
TSEK37	Analog CMOS Integrated Circuits	6	A1X	1	E
TSKS01	Digital Communication	6*	A1X	4	E

Semester 8 (Spring 2021)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS29	Stochastic Processes Applied to Financial Models	6	A1X	3	E
TANA15	Numerical Linear Algebra	6	A1X	1	E
TATA27	Partial Differential Equations	6*	A1X	2	E
TATA53	Linear Algebra, Honours Course	6*	G2X	-	E
TATA54	Number Theory	6*	G2X	3	E

Course code	Course name	Credits	Level	Timetable module	ECV
TATA66	Fourier and Wavelet Analysis	6*	A1X	4	E
TATA78	Complex Analysis, second course	6*	A1X	2	E
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
TBMI31	Medical Information and Knowledge	6	A1F	4	E
TBMT02	Medical Imaging	6	A1F	3	E
TBMT09	Physiological Pressures and Flows	6	A1N	1	E
TDDD41	Data Mining - Clustering and Association Analysis	6	A1X	3	E
TDDD95	Algorithmic Problem Solving	6*	A1X	1	E
TDDE09	Natural Language Processing	6	A1X	2	E
TDTS07	System Design and Methodology	6	A1X	1	E
TEAE04	Industrial Economics and Organisation	6	G1X	2	E
TEIO94	Entrepreneurship and Idea Development	6*	G2X	4	E
TFYA17	Advanced Project Work in Applied Physics	6*	A1F	-	E
TFYA38	Optoelectronics	6	A1X	3	E
TFYA85	Alternative Energy Sources and their Applications	6	G2X	4	E
TFYB03	Advanced Quantum Mechanics	6	A1F	4	E
TFYM02	Solid State Physics II	6	A1X	2	E
TFYM04	Growth and characterization of nanomaterials	6*	A1X	1	E
TGTU91	Oral and Written Communication	6	G1X	2	E
TGTU94	Technology and Ethics	6	G1X	1	E
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
TKMJ10	Industrial Ecology	6	A1X	1	E
TKMJ15	Environmental Management Strategies	6	G1F	3	E
TMMS30	Multi Body Dynamics and Robotics	6	A1X	1	E
TNM048	Information Visualisation	6	A1X	3	E
TPPE32	Financial Risk Management	6	A1X	2	E
TSBB15	Computer Vision	12*	A1X	1	E
TSBK07	Computer Graphics	6*	A1X	4	E
TSBK08	Data Compression	6	A1N	2	E

Course code	Course name	Credits	Level	Timetable module	ECV
TSEK06	VLSI Design	12*	A1X	4	E
TSEK38	Radio Frequency Transceiver Design	6	A1X	2	E
TSFS04	Electrical Drives	6	G2X	4	E
TSIT12	Quantum Electronics and Quantum Optics	6*	A1X	1	E
TSKS13	Wireless Communications	6	A1F	4	E
TSRT07	Industrial Control Systems	6	A1N	2	E
TSRT09	Control Theory	6	A1N	3	E
TSTE14	Analog Filters	6	A1X	2	E
TSTE27	Analog and Discrete-Time Integrated Circuits	6	A1F	3	E
TSTE93	Analog Circuits	6*	G2X	1	E
Period 2					
TANA31	Computational Methods for Ordinary and Partial Differential Equations	6	A1X	2	E
TAOP24	Optimization, Advanced Course	6	G2X	1	E
TAOP87	Applied Optimization Project Course	6	A1X	3	E
TATA27	Partial Differential Equations	6*	A1X	4	E
TATA53	Linear Algebra, Honours Course	6*	G2X	-	E
TATA54	Number Theory	6*	G2X	1	E
TATA66	Fourier and Wavelet Analysis	6*	A1X	2	E
TATA78	Complex Analysis, second course	6*	A1X	3	E
TBME08	Biomedical Modeling and Simulation	6	A1X	3	E
TBMT26	Technology in Intensive Care and Surgery	6	A1X	1	E
TDDC78	Programming of Parallel Computers - Methods and Tools	6	A1X	3	E
TDDD12	Database Technology	6	G2X	4	E
TDDD95	Algorithmic Problem Solving	6*	A1X	4	E
TDDE07	Bayesian Learning	6	A1X	2	E
TDDE31	Big Data Analytics	6	A1X	3	E
TEAE13	Civil and Commercial Law	6	G1X	2	E
TEIE44	Intellectual Property Rights	4	G1X	1	E
TEIO94	Entrepreneurship and Idea Development	6*	G2X	4	E
TFMT19	Chemical Sensor Systems	6	A1X	4	E
TFYA17	Advanced Project Work in Applied Physics	6*	A1F	-	E

Course code	Course name	Credits	Level	Timetable module	ECV
TFYA21	Physical Metallurgy	6	A1F	3	E
TFYM04	Growth and characterization of nanomaterials	6*	A1X	1	E
TGTU95	Philosophy of Science and Technology	6	G1X	4	E
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
TKMJ29	Resource Efficient Products	6	A1N	1	E
TNM079	Modelling and Animation	6	A1X	2	E
TPPE33	Portfolio Management	6	A1X	2	E
TSBB15	Computer Vision	12*	A1X	3	E
TSBK02	Image and Audio Coding	6	A1X	4	E
TSBK07	Computer Graphics	6*	A1X	1	E
TSEK06	VLSI Design	12*	A1X	4	E
TSFS03	Vehicle Propulsion Systems	6	A1X	3	E
TSFS06	Diagnosis and Supervision	6	A1N	1	E
TSFS11	Electrical and Energy Technology	6	G2F	4	E
TSIT11	Quantum Algorithms and Quantum Information	6	A1X	3	E
TSIT12	Quantum Electronics and Quantum Optics	6*	A1X	1	E
TSKS14	Multiple Antenna Communications	6	A1X	3	E
TSKS16	Signal Processing for Communications	6	A1N	1	E
TSRT14	Sensor Fusion	6	A1N	2	E
TSTE06	Digital Filters	6	A1X	3	E
TSTE87	Application-Specific Integrated Circuits	6	A1X	2	E
TSTE93	Analog Circuits	6*	G2X	1	E

Specialisation: Applied Physics - Materials and Nano Physics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFYM04	Growth and characterization of nanomaterials	6*	A1X	1	C
TFYA17	Advanced Project Work in Applied Physics	6*	A1F	-	E
TFYA38	Optoelectronics	6	A1X	3	E
TFYM02	Solid State Physics II	6	A1X	2	E
Period 2					
TFYA21	Physical Metallurgy	6	A1F	3	C
TFYM04	Growth and characterization of nanomaterials	6*	A1X	1	C
TFMT19	Chemical Sensor Systems	6	A1X	4	E
TFYA17	Advanced Project Work in Applied Physics	6*	A1F	-	E

Specialisation: Applied Physics - Theory, Modelling and Computation

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TATA27	Partial Differential Equations	6*	A1X	2	E
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
TFYA17	Advanced Project Work in Applied Physics	6*	A1F	-	E
TFYB03	Advanced Quantum Mechanics	6	A1F	4	E
TFYM02	Solid State Physics II	6	A1X	2	E
TSBK07	Computer Graphics	6*	A1X	4	E
Period 2					
TATA27	Partial Differential Equations	6*	A1X	4	E
TFYA17	Advanced Project Work in Applied Physics	6*	A1F	-	E
TFYA21	Physical Metallurgy	6	A1F	3	E
TSBK07	Computer Graphics	6*	A1X	1	E
TSIT11	Quantum Algorithms and Quantum Information	6	A1X	3	E

Specialisation: Biomedical Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TBMT02	Medical Imaging	6	A1F	3	C
TBMT09	Physiological Pressures and Flows	6	A1N	1	C
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
TBMI31	Medical Information and Knowledge	6	A1F	4	E
Period 2					
TBME08	Biomedical Modeling and Simulation	6	A1X	3	E
TBMT26	Technology in Intensive Care and Surgery	6	A1X	1	E

Specialisation: Communication

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
TSBK08	Data Compression	6	A1N	2	E
TSEK38	Radio Frequency Transceiver Design	6	A1X	2	E
TSKS13	Wireless Communications	6	A1F	4	E
Period 2					
TSBK02	Image and Audio Coding	6	A1X	4	E
TSKS14	Multiple Antenna Communications	6	A1X	3	E
TSKS16	Signal Processing for Communications	6	A1N	1	E

Specialisation: Control and Information Systems

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSRT07	Industrial Control Systems	6	A1N	2	C
TSRT09	Control Theory	6	A1N	3	C
Period 2					
TDDD12	Database Technology	6	G2X	4	C/E
TDDC78	Programming of Parallel Computers - Methods and Tools	6	A1X	3	E
TSFS06	Diagnosis and Supervision	6	A1N	1	E
TSRT14	Sensor Fusion	6	A1N	2	E

Specialisation: Data Science and Machine Intelligence

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD95	Algorithmic Problem Solving	6*	A1X	1	C
TANA15	Numerical Linear Algebra	6	A1X	1	E
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TDDD41	Data Mining - Clustering and Association Analysis	6	A1X	3	E
Period 2					
TDDD95	Algorithmic Problem Solving	6*	A1X	4	C
TAOP24	Optimization, Advanced Course	6	G2X	1	E
TDDC78	Programming of Parallel Computers - Methods and Tools	6	A1X	3	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TDDE07	Bayesian Learning	6	A1X	2	E
TDDE31	Big Data Analytics	6	A1X	3	E
TSRT14	Sensor Fusion	6	A1N	2	E

Specialisation: Electronics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSTE27	Analog and Discrete-Time Integrated Circuits	6	A1F	3	C
TSEK06	VLSI Design	12*	A1X	4	C/E
TSEK38	Radio Frequency Transceiver Design	6	A1X	2	E
TSTE14	Analog Filters	6	A1X	2	E
TSTE93	Analog Circuits	6*	G2X	1	E
Period 2					
TSTE87	Application-Specific Integrated Circuits	6	A1X	2	C
TSEK06	VLSI Design	12*	A1X	4	C/E
TSKS16	Signal Processing for Communications	6	A1N	1	E
TSTE06	Digital Filters	6	A1X	3	E
TSTE93	Analog Circuits	6*	G2X	1	E

Specialisation: Engineering Mathematics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TANA15	Numerical Linear Algebra	6	A1X	1	C
TATA27	Partial Differential Equations	6*	A1X	2	E
TATA66	Fourier and Wavelet Analysis	6*	A1X	4	E
TATA78	Complex Analysis, second course	6*	A1X	2	E
TSRT09	Control Theory	6	A1N	3	E
Period 2					
TAOP24	Optimization, Advanced Course	6	G2X	1	C
TATA27	Partial Differential Equations	6*	A1X	4	E
TATA66	Fourier and Wavelet Analysis	6*	A1X	2	E
TATA78	Complex Analysis, second course	6*	A1X	3	E

Specialisation: Financial Mathematics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS29	Stochastic Processes Applied to Financial Models	6	A1X	3	C
TANA15	Numerical Linear Algebra	6	A1X	1	C
TPPE32	Financial Risk Management	6	A1X	2	E
Period 2					
TAOP24	Optimization, Advanced Course	6	G2X	1	E
TDDD12	Database Technology	6	G2X	4	E
TPPE33	Portfolio Management	6	A1X	2	E

Specialisation: Mechanics and Control

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TMMS30	Multi Body Dynamics and Robotics	6	A1X	1	E
TSFS04	Electrical Drives	6	G2X	4	E
TSRT07	Industrial Control Systems	6	A1N	2	E
TSRT09	Control Theory	6	A1N	3	E
Period 2					
TSFS03	Vehicle Propulsion Systems	6	A1X	3	E
TSFS06	Diagnosis and Supervision	6	A1N	1	E
TSRT14	Sensor Fusion	6	A1N	2	E

Specialisation: Photonics and Quantum Technology

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFYA38	Optoelectronics	6	A1X	3	C
TSIT12	Quantum Electronics and Quantum Optics	6*	A1X	1	C
TFYB03	Advanced Quantum Mechanics	6	A1F	4	E
Period 2					
TSIT12	Quantum Electronics and Quantum Optics	6*	A1X	1	C
TSIT11	Quantum Algorithms and Quantum Information	6	A1X	3	E

Specialisation: Signal and Image Processing

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
TBMT02	Medical Imaging	6	A1F	3	E
TDDE09	Natural Language Processing	6	A1X	2	E
TNM048	Information Visualisation	6	A1X	3	E
TSBB15	Computer Vision	12*	A1X	1	E
TSBK07	Computer Graphics	6*	A1X	4	E
TSBK08	Data Compression	6	A1N	2	E
Period 2					
TSBB15	Computer Vision	12*	A1X	3	E
TSBK02	Image and Audio Coding	6	A1X	4	E
TSBK07	Computer Graphics	6*	A1X	1	E
TSRT14	Sensor Fusion	6	A1N	2	E

Specialisation: System-on-Chip

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDTS07	System Design and Methodology	6	A1X	1	C
TSEK06	VLSI Design	12*	A1X	4	C/E
TSBK07	Computer Graphics	6*	A1X	4	E
TSTE27	Analog and Discrete-Time Integrated Circuits	6	A1F	3	E
Period 2					
TSEK06	VLSI Design	12*	A1X	4	C/E
TEIE44	Intellectual Property Rights	4	G1X	1	E
TSBK07	Computer Graphics	6*	A1X	1	E
TSKS16	Signal Processing for Communications	6	A1N	1	E
TSTE06	Digital Filters	6	A1X	3	E
TSTE87	Application-Specific Integrated Circuits	6	A1X	2	E

Semester 9 (Autumn 2021)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS39	Multivariate Statistical Methods	6	A1X	4	E
TATA32	Discrete Mathematics	8*	G1X	3	E
TATA62	Project - Applied Mathematics	12*	A1X	4	E
TATA75	Theory of Relativity	6*	A1X	-	E
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	E
TBMT57	Biomedical Optics	6	A1X	1	E
TDDC88	Software Engineering	12*	A1X	1	E
TDDE15	Advanced Machine Learning	6	A1X	1	E
TFKE59	Fundamentals of Chemistry	6	G1X	2	E
TFYA36	Chaos and Non-Linear Phenomena	6	A1N	2	E
TFYA40	Analytical Mechanics	6*	A1X	1	E
TFYA99	Project Course in Applied Physics, CDIO	12*	A1X	4	E
TFYM03	Nanophysics	6	A1X	3	E
TMES09	Industrial Energy Systems	6	A1X	2	E
TMMS11	Models of Mechanics	6*	A1X	3	E
TMMV01	Aerodynamics	6	A1X	2	E
TNE071	Microwave Engineering	6	A1X	1	E
TNE089	Electromagnetic Compatibility (EMC) and Printed Circuit Board (PCB) Design	6*	A1X	2	E
TNM067	Scientific Visualization	6	A1X	3	E
TPPE53	Financial Valuation Methodology	6	A1X	2	E
TSBB11	Images and Graphics, Project Course CDIO	12*	A1X	4	E
TSBB19	Machine Learning for Computer Vision	6	A1X	2	E
TSBK03	Advanced Game Programming	6*	A1X	1	E
TSEA84	Digital Design Project	6*	A1X	1	E
TSEK03	Radio Frequency Integrated Circuits	6	A1X	2	E
TSEK11	Evaluation of an Integrated Circuit	2	A1X	4	E
TSFS12	Autonomous Vehicles - Planning, Control, and Learning Systems	6	A1X	1	E
TSIN01	Information Networks	6	A1X	3	E
TSIT03	Cryptology	6	A1X	2	E
TSIT13	Quantum Communication	6	A1X	1	E

Course code	Course name	Credits	Level	Timetable module	ECV
TSKS12	Modern Channel Coding, Inference and Learning	6	A1X	1	E
TSKS23	Project Course in Signal Processing, Communications and Networking, CDIO	12*	A1X	4	E
TSRT10	Automatic Control - Project Course	12*	A1F	4	E
TSTE17	System Design	12*	A1F	4	E
TSTE25	Power Electronics	6	A1X	3	E
Period 2					
TATA32	Discrete Mathematics	8*	G1X	1	E
TATA62	Project - Applied Mathematics	12*	A1X	4	E
TATA75	Theory of Relativity	6*	A1X	3	E
TBMI02	Medical Image Analysis	6	A1N	1	E
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	E
TDDC88	Software Engineering	12*	A1X	1	E
TDDD37	Database Technology	6	G2X	1	E
TDDD49	Programming in C# and .NET Framework	4	G2X	3	E
TDDD56	Multicore and GPU Programming	6	A1X	2	E
TDDE01	Machine Learning	6	A1X	1	E
TDDE16	Text Mining	6	A1X	2	E
TFYA40	Analytical Mechanics	6*	A1X	3	E
TFYA99	Project Course in Applied Physics, CDIO	12*	A1X	4	E
TFYB02	Elementary Particles and Quantum Fields	6	A1X	1	E
TMME50	Flight Mechanics	6	A1X	2	E
TMMS11	Models of Mechanics	6*	A1X	3	E
TNE083	Antenna Theory	6	A1X	2	E
TNE089	Electromagnetic Compatibility (EMC) and Printed Circuit Board (PCB) Design	6*	A1X	1	E
TNM086	Virtual Reality Techniques	6	A1X	2	E
TPPE61	Financial Optimization	6	A1X	2	E
TSBB11	Images and Graphics, Project Course CDIO	12*	A1X	4	E
TSBK03	Advanced Game Programming	6*	A1X	-	E
TSEA26	Design of Embedded DSP Processor	6	A1X	2	E
TSEA44	Computer Hardware - a System on Chip	6	A1F	1	E

Course code	Course name	Credits	Level	Timetable module	ECV
TSEA84	Digital Design Project	6*	A1X	3	E
TSKS23	Project Course in Signal Processing, Communications and Networking, CDIO	12*	A1X	4	E
TSRT08	Optimal Control	6	A1X	3	E
TSRT10	Automatic Control - Project Course	12*	A1F	4	E
TSTE17	System Design	12*	A1F	4	E
TSTE26	Powergrid and Technology for Renewable Production	6	A1X	3	E
TSTE85	Low Power Electronics	6	A1N	2	E

Specialisation: Applied Physics - Materials and Nano Physics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFYA99	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TFYA40	Analytical Mechanics	6*	A1X	1	E
TFYM03	Nanophysics	6	A1X	3	E
Period 2					
TFYA99	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TFYA40	Analytical Mechanics	6*	A1X	3	E

Specialisation: Applied Physics - Theory, Modelling and Computation

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFYA40	Analytical Mechanics	6*	A1X	1	C
TFYA99	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TFYA36	Chaos and Non-Linear Phenomena	6	A1N	2	E
Period 2					
TFYA40	Analytical Mechanics	6*	A1X	3	C
TFYA99	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TFYB01	Advanced Electromagnetics	6	A1N	2	E
TFYB02	Elementary Particles and Quantum Fields	6	A1X	1	E

Specialisation: Biomedical Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	C
TAMS39	Multivariate Statistical Methods	6	A1X	4	E
TATM38	Mathematical Models in Biology	6	A1X	3	E
TBMT57	Biomedical Optics	6	A1X	1	E
Period 2					
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	C
TBMI02	Medical Image Analysis	6	A1N	1	E

Specialisation: Communication

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSIN01	Information Networks	6	A1X	3	C
TSKS23	Project Course in Signal Processing, Communications and Networking, CDIO	12*	A1X	4	C
TSEK03	Radio Frequency Integrated Circuits	6	A1X	2	E
TSIT03	Cryptology	6	A1X	2	E
TSKS12	Modern Channel Coding, Inference and Learning	6	A1X	1	E
Period 2					
TSKS23	Project Course in Signal Processing, Communications and Networking, CDIO	12*	A1X	4	C

Specialisation: Control and Information Systems

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TATA62	Project - Applied Mathematics	12*	A1X	4	C/E
TSRT10	Automatic Control - Project Course	12*	A1F	4	C/E
TDTS06	Computer Networks	6	G2X	1	E
TSFS12	Autonomous Vehicles - Planning, Control, and Learning Systems	6	A1X	1	E
Period 2					
TATA62	Project - Applied Mathematics	12*	A1X	4	C/E
TSRT10	Automatic Control - Project Course	12*	A1F	4	C/E
TSRT08	Optimal Control	6	A1X	3	E

Specialisation: Data Science and Machine Intelligence

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSBB11	Images and Graphics, Project Course CDIO	12*	A1X	4	C/E
TSKS23	Project Course in Signal Processing, Communications and Networking, CDIO	12*	A1X	4	C/E
TAMS39	Multivariate Statistical Methods	6	A1X	4	E
TAOP34	Large Scale Optimization	6	A1X	3	E
TDDC17	Artificial Intelligence	6	G2X	3	E
TDDE15	Advanced Machine Learning	6	A1X	1	E
TSBB06	Multidimensional Signal Analysis	6*	A1X	2	E
TSBB08	Digital Image Processing	6	A1X	4	E
TSDT14	Signal Theory	6	A1X	1	E
TSKS12	Modern Channel Coding, Inference and Learning	6	A1X	1	E
Period 2					
TSBB11	Images and Graphics, Project Course CDIO	12*	A1X	4	C/E
TSKS23	Project Course in Signal Processing, Communications and Networking, CDIO	12*	A1X	4	C/E
TBMI02	Medical Image Analysis	6	A1N	1	E
TDDD37	Database Technology	6	G2X	1	E
TDDE16	Text Mining	6	A1X	2	E
TSBB06	Multidimensional Signal Analysis	6*	A1X	3	E
TSRT78	Digital Signal Processing	6	A1X	2	E

Specialisation: Electronics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSTE17	System Design	12*	A1F	4	C/E
TNE071	Microwave Engineering	6	A1X	1	E
TNE089	Electromagnetic Compatibility (EMC) and Printed Circuit Board (PCB) Design	6*	A1X	2	E
TSEA84	Digital Design Project	6*	A1X	1	E
TSEK03	Radio Frequency Integrated Circuits	6	A1X	2	E
TSEK11	Evaluation of an Integrated Circuit	2	A1X	4	E
TSTE25	Power Electronics	6	A1X	3	E
Period 2					
TSTE17	System Design	12*	A1F	4	C/E
TNE083	Antenna Theory	6	A1X	2	E
TNE089	Electromagnetic Compatibility (EMC) and Printed Circuit Board (PCB) Design	6*	A1X	1	E
TSEA26	Design of Embedded DSP Processor	6	A1X	2	E
TSEA44	Computer Hardware - a System on Chip	6	A1F	1	E
TSEA84	Digital Design Project	6*	A1X	3	E
TSTE26	Powergrid and Technology for Renewable Production	6	A1X	3	E
TSTE85	Low Power Electronics	6	A1N	2	E

Specialisation: Engineering Mathematics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TATA62	Project - Applied Mathematics	12*	A1X	4	C/E
TSRT10	Automatic Control - Project Course	12*	A1F	4	C/E
TATA75	Theory of Relativity	6*	A1X	-	E
TATM38	Mathematical Models in Biology	6	A1X	3	E
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TFYA40	Analytical Mechanics	6*	A1X	1	E
TMMS11	Models of Mechanics	6*	A1X	3	E
TPPE53	Financial Valuation Methodology	6	A1X	2	E
Period 2					
TATA62	Project - Applied Mathematics	12*	A1X	4	C/E
TSRT10	Automatic Control - Project Course	12*	A1F	4	C/E
TATA75	Theory of Relativity	6*	A1X	3	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TFYA40	Analytical Mechanics	6*	A1X	3	E
TMMS11	Models of Mechanics	6*	A1X	3	E
TPPE61	Financial Optimization	6	A1X	2	E

Specialisation: Financial Mathematics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TATA62	Project - Applied Mathematics	12*	A1X	4	C
TPPE53	Financial Valuation Methodology	6	A1X	2	C
Period 2					
TATA62	Project - Applied Mathematics	12*	A1X	4	C
TPPE61	Financial Optimization	6	A1X	2	C

Specialisation: Mechanics and Control

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSRT10	Automatic Control - Project Course	12*	A1F	4	C
TFYA40	Analytical Mechanics	6*	A1X	1	E
TSFS12	Autonomous Vehicles - Planning, Control, and Learning Systems	6	A1X	1	E
Period 2					
TSRT10	Automatic Control - Project Course	12*	A1F	4	C
TFYA40	Analytical Mechanics	6*	A1X	3	E
TMME50	Flight Mechanics	6	A1X	2	E
TSRT08	Optimal Control	6	A1X	3	E

Specialisation: Photonics and Quantum Technology

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFYA99	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TBMT57	Biomedical Optics	6	A1X	1	E
TFYM03	Nanophysics	6	A1X	3	E
TSIT03	Cryptology	6	A1X	2	E
TSIT13	Quantum Communication	6	A1X	1	E
Period 2					
TFYA99	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TSIT02	Computer Security	6	G2X	2	E

Specialisation: Signal and Image Processing

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSBB11	Images and Graphics, Project Course CDIO	12*	A1X	4	C
TNM067	Scientific Visualization	6	A1X	3	E
TSBB19	Machine Learning for Computer Vision	6	A1X	2	E
TSBK03	Advanced Game Programming	6*	A1X	1	E
TSKS15	Detection and Estimation of Signals	6	A1X	2	E
Period 2					
TSBB11	Images and Graphics, Project Course CDIO	12*	A1X	4	C
TBMI02	Medical Image Analysis	6	A1N	1	E
TDDD56	Multicore and GPU Programming	6	A1X	2	E
TDDE01	Machine Learning	6	A1X	1	E
TNM086	Virtual Reality Techniques	6	A1X	2	E
TSBK03	Advanced Game Programming	6*	A1X	-	E

Specialisation: System-on-Chip

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSTE17	System Design	12*	A1F	4	C/E
TDTS08	Advanced Computer Architecture	6	A1X	2	E
TSEA84	Digital Design Project	6*	A1X	1	E
TSEK11	Evaluation of an Integrated Circuit	2	A1X	4	E
Period 2					
TSEA26	Design of Embedded DSP Processor	6	A1X	2	C
TSTE17	System Design	12*	A1F	4	C/E
TDDD56	Multicore and GPU Programming	6	A1X	2	E
TSEA44	Computer Hardware - a System on Chip	6	A1F	1	E
TSEA84	Digital Design Project	6*	A1X	3	E
TSIT02	Computer Security	6	G2X	2	E
TSTE85	Low Power Electronics	6	A1N	2	E

Semester 10 (Spring 2022)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TQXX33	Degree project - Master's Thesis	30*	A1X	-	C
Period 2					
TQXX33	Degree project - Master's Thesis	30*	A1X	-	C

ECV = Elective / Compulsory /Voluntary
*The course is divided into several semesters and/or periods

Common rules

Structure and organisation of study programmes

The contents and design of the programmes are to be continuously revised such that new knowledge is integrated into courses and specialisations. Within one programme, several study specialisations or profiles may be available. The identities of the study specialisations or profiles and the regulations governing how these may be selected are given in the syllabus and curriculum for the particular field of study and programmes.

The structure and organisation of the programmes are to follow specified criteria that are summarised in the syllabus for each programme.

- The syllabus defines the aims of the study programme.
- The curriculum, which constitutes one part of the syllabus for the field of study, gives details of the terms in which the various courses have been timetabled, and their scheduling through the academic year.
- The course syllabus specifies, among other things, the aim and contents of the course, and the prior knowledge that a student must have in order to be able to benefit from the course.

Qualification requirements

The qualification requirements specified in the Higher Education Ordinance 2007 apply to students admitted after 1 July 2007. A student who has completed components of a programme after 1 July 2007 has the right to be assessed with respect to the qualification requirements specified by the Higher Education Ordinance 2007. In addition, local regulations laid down by the faculty boards and university board apply, see
http://styrdokument.liu.se/Regelsamling/VisaBeslut/622693.

Higher Education Act Chapter 1, Section 8:

First-cycle courses and study programmes are to develop:

- the ability to make independent and critical assessments
- the ability to identify, formulate and solve problems autonomously, and
- the preparedness to deal with changes in working life.

In addition to knowledge and skills in their field of study, students shall develop the ability to:

- gather and interpret information at a scholarly level
- stay abreast of the development of knowledge, and
- communicate their knowledge to others, including those who lack specialist knowledge in the field.

Qualifications within a study programme

Qualification requirements that are specific to a study programme are given in the syllabus for that programme.

Matriculation and postponement of matriculation

A person who has been accepted for a study programme is to start their studies (matriculate) in the term that is specified in the decision about admission. The date and location of the compulsory matriculation procedure will be communicated to those admitted to the first term of the programme.

At any one admission occasion, it is possible to be admitted to only one place on a study programme. A student who has been granted a place on a study programme and who is offered and accepts a place on another study programme during a supplementary round of admission will lose the place offered for the first study programme.

Regulations concerning postponement of matriculation have been laid down in the admission regulations for Linköping University, http://styrdokument.liu.se/Regelsamling/VisaBeslut/622645.

A person who has been granted postponement must present to the admitting authority, before the term in which the studies are to be started and before the date of application, a renewed registration for the programme and a copy of the decision granting postponement.

Admission to a later part of a programme

Admission to a part of a study programme is used here to refer to admission with the purpose of completing the programme and taking a degree. Admission to a later part of a programme may take place only if sufficient resources and space on the programme are available. Furthermore, the applicant must satisfy the entry requirements for the relevant term of the programme, as specified in http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva/Tekniska_fakulteten.

Interruption in studies

Notification of an interruption in studies is to be made through the Student Portal. If such a notification is not made and if the student does not register for the first term during which the interruption is to take place, the interruption will be considered to be a withdrawal. An interruption in studies must cover a complete term, and notification of interruptions can be given for a maximum of two consecutive terms. Notification of resumption of studies is to take place at the term registration for the term that follows the interruption. If the student does not register at the term registration, this will be regarded as withdrawal from studies.

A student who is taking an interruption in studies may during this period retake examinations if he or she has re-registered for the most recent study term of the programme. A student who wishes to take another course during the interruption in studies must apply for this separately. The student is responsible that

registration for courses is carried out at the correct times in preparation for the resumption of studies.

Withdrawal from a study programme

A student who wishes to withdraw from a study programme must notify the study guidance counsellor. A student who leaves the studies without giving notification of an interruption in study and who fails to register for the immediately subsequent term is considered to have withdrawn. A student who has withdrawn may return to the study programme if a vacancy is available that is not required for students returning after an interruption in study, and not required for students who are changing their location of study and/or study programme.

Interrupting a course

The vice-chancellor's decision concerning regulations for registration, deregistration and reporting results (Dnr LiU-2015-01241) states that interruptions in study are to be recorded in Ladok. Thus, all students who do not participate in a course for which they have registered must record the interruption, such that the registration on the course can be removed. Deregistration from a course is carried out using a web-based form: www.lith.liu.se/for-studenter/kurskomplettering?l=sv.

Courses within a study programme

The curriculum for the various years of a study programme specify which courses are compulsory (o), elective (v) and voluntary (f). If a student wishes to study a different combination than the one specified in the curriculum, an application must be made to the board of studies.

Registration for programme courses

Registration for courses that are given as part of a study programme must be made during the specified period, which has been preliminarily set to 1-10 April for the autumn term, and 1-10 October for the spring term. Information about course registration is published on a webpage, sent to students by email, and disseminated at scheduled information meetings.

Registration for programme courses as single-subject courses

Admission to a programme course as a single-subject subject course may take place only if sufficient resources and space on the course are available. Furthermore, the applicant must satisfy the entry requirements for the relevant course.

Cancelled courses

Courses with few participants (fewer than 10) may be cancelled or organised in a

manner that differs from that stated in the course syllabus. The board of studies is to deliberate and decide whether a course is to be cancelled or changed from the course syllabus.

Timetabling

Courses are timetabled after a decision has been made concerning the assignment of the course to a study period. A central timetable is not drawn up for courses with fewer than five participants. Most project courses do not have a central timetable.

Study planning

Students who require support in planning their continued studies can contact the study guidance counsellor of the programme. Study planning involves the student and the study guidance counsellor together drawing up an individual plan for studies during the subsequent term. The individual plan may allow the student to deviate from the general curriculum.

Completed first-cycle courses are a precondition for successful studies at more advanced levels. For this reason, study planning is based on giving priority to courses from earlier years of study that have not been completed. If further capacity is available, new courses may be taken.

Study planning takes place on a regular basis if the student:

- does not satisfy the requirements for progression to later terms. In order for a student to be able to participate in courses from later years in such cases, a decision of exemption is required.
- does not satisfy the requirements for starting a degree project.

Other situations in which study planning may be required:

- A student has fallen behind during the early part of a study programme and has failed to complete several courses.
- A student has not satisfied the entry requirements for a degree project before term 6 of an engineering degree.
- A student has applied for admission to a later part of a programme.
- Studies have been carried out abroad.
- A study programme is to be resumed after an interruption.

In these cases the study guidance counsellor supports the student in planning the continued studies, also in situations in which the student can register for the relevant courses without the need for a special decision for the continued studies.

Part of education abroad

Students can exchange study at LiTH for study at an institute of higher education abroad, and/or work on a degree project abroad.

In the event that study (courses) at LiTH are exchanged for study abroad, the

relevant board of studies (faculty programme director) is responsible for a decision about an individual study plan, which is to be drawn up in advance, and about the final course approval and its inclusion in the qualification requirements. For this reason, students who plan to participate in an exchange should contact the faculty programme director (or equivalent) at the Dean's Office of the Institute of Technology.

Regulations for entry requirements, ranking and nomination for study abroad through LiTH's exchange agreements are specified in: http://styrdokument.liu.se/Regelsamling/VisaBeslut/622362. Special regulations apply for the compulsory study abroad within Ii (Industrial Engineering and Management – International) and Yi (Applied Physics and Electrical Engineering – International).

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.