Applied Physics and Electrical Engineering - International, M Sc in Engineering

300 credits

Civilingenjör i teknisk fysik och elektroteknik - internationell

6CYYI

Valid from: 2015 Spring semester

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

Date determined

Entry requirements

Degree in Swedish

Civilingenjör 300 hp och Teknologie master 120 hp

Curriculum

Semester 4 (Spring 2017)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP07	Introduction to Optimization	6	G1X	3	C
TMME32	Mechanics, second course	4	G1X	4	C
TSEA28	Computer Hardware and Architecture Y	6*	G1X	2	C
TGTU63	Visits to Industry	1*	G1X	-	V
Period 2					
TATA57	Transform Theory	4	G1X	1	C
TFYA13	Electromagnetic Field Theory	8	G2X	2	C
THSP42	Spanish for Engineers II, part 2	2	G1F	4	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 2017)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAMS24	Statistics, First Course	4	G2X	4	C
TDDC76	Programming and Data Structures	8*	G2X	2	C
TFYA43	Nanotechnology	6	G2X	3	E
Period 2					
TDDC76	Programming and Data Structures	8*	G2X	2	C
TFYA12	Thermodynamics and Statistical Mechanics	6	G2X	1	C
TSDT18	Signals and Systems	6	G2X	3	C

Semester 6 (Spring 2018)

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	E
TSEA56	Electronics Engineering - Bachelor Project	16*	G2X	2	E
Period 2					
TAMS14	Probability, first course	4	G1X	4	C
TEAE01	Industrial Economics, Basic Course	6	G1X	2	E
TFYA74	Modern Physics II	4	G2X	1	E
TFYA75	Applied Physics - Bachelor Project	16*	G2E	-	E
TSEA56	Electronics Engineering - Bachelor Project	16*	G2X	-	E
TSKS10	Signals, Information and Communication	4	G2X	3	E

Semester 7 (Autumn 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
THSP18	Spanish for Engineers III	6*	G2X	-	C
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
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TDTS06	Computer Networks	6	G2X	1	E
TDTS08	Advanced Computer Architecture	6	A1X	2	E
TFFM08	Experimental Physics	6*	A1X	1	E

Course code	Course name	Credits	Level	Timetable module	ECV
TFFY54	Quantum Mechanics	6	A1X	2	E
TFKE59	Fundamentals of Chemistry	6	G1X	2	E
TFYA18	Mathematical Methods of Physics	6	A1X	3	E
TFYA43	Nanotechnology	6	G2X	3	E
TFYA77	Fundamentals in Materials Science	6	A1X	2	E
TFYA88	Additive Manufacturing: Tools, Materials and Methods	6	A1X	3	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
TSRT62	Modelling and Simulation	6	A1X	3	E
TSTE12	Design of Digital Systems	6	A1X	3	E
TSTE86	Digital Integrated Circuits	6	A1X	2	E
Period 2					
THSP18	Spanish for Engineers III	6*	G2X	-	C
TAMS17	Statistical Theory, advanced course	6	A1X	1	E
TAMS22	Probability Theory and Bayesian Networks	6	A1X	1	E
TAMS38	Experimental Design and Biostatistics	6	A1X	3	E
TAOP04	Mathematical Optimization	6	A1X	4	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	3	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

Course code	Course name	Credits	Level	Timetable module	ECV
TEAE05	Resource Theory	6	G1N	1	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
TGTU04	Leadership	6	G2X	2	E
TGTU49	History of Technology	6	G1X	3	E
TKMJ24	Environmental Engineering	6	G1N	3	E
TMHL03	Mechanics of Light Structures	6	A1X	3	E
TMKM90	Engineering Materials - Deformation and Fracture	6	A1X	2	E
TMMS07	Biomechanics	6	A1X	4	E
TMMV18	Fluid Mechanics	6	A1X	2	E
TMMV54	Computational Heat Transfer	6	A1X	1	E
TPPE29	Financial Markets and Instruments	6	A1X	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
TSEK37	Analog CMOS Integrated Circuits	6	A1X	1	E
TSFS02	Vehicle Dynamics and Control	6	A1X	1	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	3	E
TSIN02	Internetworking	6	A1N	1	E
TSIT02	Computer Security	6	G2F	2	E
TSKS01	Digital Communication	6*	A1X	4	E
TSKS11	Networks: Models, Algorithms and Applications	6	G2X	3	E
TSRT78	Digital Signal Processing	6	A1X	2	E

Specialisation: Applied 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
TATA55	Abstract Algebra	6*	G2X	3	E
TFYA18	Mathematical Methods of Physics	6	A1X	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	4	E
TATA55	Abstract Algebra	6*	G2X	3	E
TATA71	Ordinary Differential Equations and Dynamical Systems	6	G2X	3	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	A1X	3	C
TATA75	Theory of Relativity	6*	A1X	-	E
Period 2					
TFYA90	Computational Physics	6	A1X	4	C
TATA75	Theory of Relativity	6*	A1X	3	E
TFFY70	Physics of Condensed Matter part I	6	A1X	2	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
TDTS06	Computer Networks	6	G2X	1	E
Period 2					
TSKS01	Digital Communication	6*	A1X	4	C
TSEK02	Radio Electronics	6	A1X	3	E
TSIN02	Internetworking	6	A1N	1	E
TSKS11	Networks: Models, Algorithms and Applications	6	G2X	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					
TSRT62	Modelling and Simulation	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	A1X	1	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	3	E

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	A1X	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
TSEK02	Radio Electronics	6	A1X	3	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	4	E
TATM85	Functional Analysis	6*	A1X	1	E
TPPE29	Financial Markets and Instruments	6	A1X	2	E

Specialisation: Mechatronics

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
TSRT62	Modelling and Simulation	6	A1X	3	E
Period 2					
TSEA81	Computer Engineering and Real-time Systems	6	A1X	4	C
TSFS02	Vehicle Dynamics and Control	6	A1X	1	E
TSFS09	Modelling and Control of Engines and Drivelines	6*	A1X	3	E
TSRT78	Digital Signal Processing	6	A1X	2	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	A1X	2	C
TDTS06	Computer Networks	6	G2X	1	E
TSKS01	Digital Communication	6*	A1X	4	E
Period 2					
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 2019)

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
TATA66	Fourier and Wavelet Analysis	6*	A1X	4	E
TATA78	Complex Analysis, second course	6*	A1X	2	E
TBMI01	Medical Decision Support	6	A1X	4	E
TBMI03	Medical Information Models and Ontologies	6	A1X	4	E
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
TBMT02	Medical Imaging	6	A1F	3	E
TBMT09	Physiological Pressures and Flows	6	A1X	1	E
TDDD76	Software Engineering Project	8*	G2X	2	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

Course code	Course name	Credits	Level	Timetable module	ECV
TFFM40	Analytical Methods in Materials Science	6*	A1X	1	E
TFYA04	Materials Optics	6	A1X	4	E
TFYA21	Physical Metallurgy	6	A1F	3	E
TFYA25	Physics of Condensed Matter part II	6	A1X	2	E
TFYA71	Cosmology	6*	A1X	1	E
TFYA85	Alternative Energy Sources and their Applications	6	G2X	4	E
TGTU01	Technology and Ethics	6	G1X	1	E
TGTU91	Oral and Written Communication	6	G1X	2	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	A1X	2	E
TSEK06	VLSI Design	12*	A1X	4	E
TSEK38	Radio Frequency Transceiver Design	6	A1X	2	E
TSFS04	Electrical Drives	6	G2X	4	E
TSKS13	Wireless Communications	6	A1F	4	E
TSRT07	Industrial Control Systems	6	A1X	2	E
TSRT09	Control Theory	6	A1X	3	E
TSTE08	Analog and Discrete-Time Integrated Circuits	6	A1X	3	E
TSTE14	Analog Filters	6	A1X	2	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

Course code	Course name	Credits	Level	Timetable module	ECV
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
TDDD76	Software Engineering Project	8*	G2X	2	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
TFFM40	Analytical Methods in Materials Science	6*	A1X	1	E
TFMT19	Chemical Sensor Systems	6	A1X	4	E
TFYA19	Quantum Computers	6	A1X	4	E
TFYA38	Optoelectronics	6	A1X	3	E
TFYA41	Thin Film Physics	6	A1X	2	E
TFYA71	Cosmology	6*	A1X	2	E
TGTU83	Philosophy of Science	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
TSEK12	Test of Analog/Mixed Signal Integrated Circuits	6	A1X	1	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
TSKS14	Multiple Antenna Communications	6	A1X	2	E
TSKS16	Signal Processing for Communications	6	A1X	1	E

Course code	Course name	Credits	Level	Timetable module	ECV
TSRT14	Sensor Fusion	6	A1X	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 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
TSRT09	Control Theory	6	A1X	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
TFYA19	Quantum Computers	6	A1X	4	E

Specialisation: Applied Physics - Materials and Nano Physics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFFM40	Analytical Methods in Materials Science	6*	A1X	1	C
TFYA04	Materials Optics	6	A1X	4	E
TFYA21	Physical Metallurgy	6	A1F	3	E
TFYA25	Physics of Condensed Matter part II	6	A1X	2	E
Period 2					
TFFM40	Analytical Methods in Materials Science	6*	A1X	1	C
TFMT19	Chemical Sensor Systems	6	A1X	4	E
TFYA38	Optoelectronics	6	A1X	3	E
TFYA41	Thin Film Physics	6	A1X	2	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
TFYA21	Physical Metallurgy	6	A1F	3	E
TFYA25	Physics of Condensed Matter part II	6	A1X	2	E
TFYA71	Cosmology	6*	A1X	1	E
TSBK07	Computer Graphics	6*	A1X	4	E
Period 2					
TATA27	Partial Differential Equations	6*	A1X	4	E
TFYA19	Quantum Computers	6	A1X	4	E
TFYA71	Cosmology	6*	A1X	2	E
TSBK07	Computer Graphics	6*	A1X	1	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	A1X	1	C
TBMI01	Medical Decision Support	6	A1X	4	E
TBMI03	Medical Information Models and Ontologies	6	A1X	4	E
TBMI26	Neural Networks and Learning Systems	6	A1X	2	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					
TSBK08	Data Compression	6	A1X	2	E
TSEK38	Radio Frequency Transceiver Design	6	A1X	2	E
TSKS13	Wireless Communications	6	A1F	4	E
Period 2					
TFYA19	Quantum Computers	6	A1X	4	E
TSBK02	Image and Audio Coding	6	A1X	4	E
TSKS14	Multiple Antenna Communications	6	A1X	2	E
TSKS16	Signal Processing for Communications	6	A1X	1	E

Specialisation: Control and Information Systems

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSRT07	Industrial Control Systems	6	A1X	2	C
TSRT09	Control Theory	6	A1X	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	A1X	2	E

Specialisation: Electronics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSTE08	Analog and Discrete-Time Integrated Circuits	6	A1X	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
TSEK12	Test of Analog/Mixed Signal Integrated Circuits	6	A1X	1	E
TSKS16	Signal Processing for Communications	6	A1X	1	E
TSTE06	Digital Filters	6	A1X	3	E
TSTE93	Analog Circuits	6*	G2X	1	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
TPPE33	Portfolio Management	6	A1X	2	E

Specialisation: Mechatronics

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	A1X	2	E
TSRT09	Control Theory	6	A1X	3	E
Period 2					
TSFS03	Vehicle Propulsion Systems	6	A1X	3	E
TSFS06	Diagnosis and Supervision	6	A1N	1	E
TSRT14	Sensor Fusion	6	A1X	2	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	A1X	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	A1X	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
TSTE08	Analog and Discrete-Time Integrated Circuits	6	A1X	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	A1X	1	E
TSTE06	Digital Filters	6	A1X	3	E
TSTE87	Application-Specific Integrated Circuits	6	A1X	2	E

Semester 9 (Autumn 2019)

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
TBMT36	Biomedical Optics	6	A1X	1	E
TDDC88	Software Engineering	12*	A1X	1	E
TFKE59	Fundamentals of Chemistry	6	G1X	2	E
TFYA17	Advanced Project Work in Applied Physics	6*	A1X	-	E
TFYA40	Analytical Mechanics	6	A1X	2	E
TFYA91	Quantum Structures: Photonics and Transport	6	A1X	1	E
TFYA92	Project Course in Applied Physics, CDIO	12*	A1X	4	E
TFYY67	Classical Electrodynamics	6*	A1X	3	E
TMES09	Industrial Energy Systems	6	A1X	3	E

Course code	Course name	Credits	Level	Timetable module	ECV
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
TSBB17	Visual Object Recognition and Detection	6	A1X	2	E
TSBK03	Advanced Game Programming	6*	A1X	1	E
TSEA26	Design of Embedded DSP Processor	6	A1X	1	E
TSEA84	Digital Design Project	6*	A1X	3	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
TSKS05	Communication Systems, Project Course	12*	A1X	4	E
TSKS12	Modern Channel Coding, Inference and Learning	6	A1X	1	E
TSRT10	Automatic Control - Project Course	12*	A1X	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	A1X	1	E
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	E
TDDC88	Software Engineering	12*	A1X	1	E
TDDD49	Programming in C# and .NET Framework	4	G2X	3	E
TDDD56	Multicore and GPU Programming	6	A1X	2	E

Course code	Course name	Credits	Level	Timetable module	ECV
TFYA17	Advanced Project Work in Applied Physics	6*	A1X	-	E
TFYA27	Elementary Particle Physics	6	A1X	2	E
TFYA28	Quantum Dynamics	6	A1X	1	E
TFYA57	Relativistic Quantum Mechanics	6	A1X	2	E
TFYA92	Project Course in Applied Physics, CDIO	12*	A1X	4	E
TFYY54	Nano Physics	6	A1X	3	E
TFYY67	Classical Electrodynamics	6*	A1X	3	E
TMME50	Flight Mechanics	6	A1X	2	E
TMMS11	Models of Mechanics	6*	A1X	4	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
TSEA44	Computer Hardware - a System on Chip	6	A1F	1	E
TSEA84	Digital Design Project	6*	A1X	3	E
TSKS05	Communication Systems, Project Course	12*	A1X	4	E
TSRT08	Optimal Control	6	A1X	3	E
TSRT10	Automatic Control - Project Course	12*	A1X	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	A1X	2	E

Specialisation: Applied 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*	A1X	4	C/E
TATA75	Theory of Relativity	6*	A1X	-	E
TATM38	Mathematical Models in Biology	6	A1X	3	E
TFYA40	Analytical Mechanics	6	A1X	2	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*	A1X	4	C/E
TATA75	Theory of Relativity	6*	A1X	3	E
TFYA57	Relativistic Quantum Mechanics	6	A1X	2	E
TMMS11	Models of Mechanics	6*	A1X	4	E
TPPE61	Financial Optimization	6	A1X	2	E

Specialisation: Applied Physics - Materials and Nano Physics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFYA92	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TFYA17	Advanced Project Work in Applied Physics	6*	A1X	-	E
TFYA40	Analytical Mechanics	6	A1X	2	E
TFYA91	Quantum Structures: Photonics and Transport	6	A1X	1	E
Period 2					
TFYA92	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TFYY54	Nano Physics	6	A1X	3	C
TFYA17	Advanced Project Work in Applied Physics	6*	A1X	-	E

Specialisation: Applied physics -Theory, Modelling and Computation

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TFYA40	Analytical Mechanics	6	A1X	2	C
TFYA92	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TFYA17	Advanced Project Work in Applied Physics	6*	A1X	-	E
TFYA91	Quantum Structures: Photonics and Transport	6	A1X	1	E
TFYY67	Classical Electrodynamics	6*	A1X	3	E
Period 2					
TFYA92	Project Course in Applied Physics, CDIO	12*	A1X	4	C
TFYA17	Advanced Project Work in Applied Physics	6*	A1X	-	E
TFYA27	Elementary Particle Physics	6	A1X	2	E
TFYA28	Quantum Dynamics	6	A1X	1	E
TFYA57	Relativistic Quantum Mechanics	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					
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
TBMT36	Biomedical Optics	6	A1X	1	E
Period 2					
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	C
TBMI02	Medical Image Analysis	6	A1X	1	E

Specialisation: Communication

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSIN01	Information Networks	6	A1X	3	C
TSKS05	Communication Systems, Project Course	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					
TSKS05	Communication Systems, Project Course	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*	A1X	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*	A1X	4	C/E
TSKS11	Networks: Models, Algorithms and Applications	6	G2X	3	E
TSRT08	Optimal Control	6	A1X	3	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
TSEA26	Design of Embedded DSP Processor	6	A1X	1	E
TSEA84	Digital Design Project	6*	A1X	3	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
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	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: Mechatronics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSRT10	Automatic Control - Project Course	12*	A1X	4	C
TFYA40	Analytical Mechanics	6	A1X	2	E
TSFS12	Autonomous Vehicles - Planning, Control, and Learning Systems	6	A1X	1	E
Period 2					
TSRT10	Automatic Control - Project Course	12*	A1X	4	C
TMME50	Flight Mechanics	6	A1X	2	E
TSRT08	Optimal Control	6	A1X	3	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
TSBB17	Visual Object Recognition and Detection	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	A1X	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
TSEA26	Design of Embedded DSP Processor	6	A1X	1	E
TSEA84	Digital Design Project	6*	A1X	3	E
TSEK11	Evaluation of an Integrated Circuit	2	A1X	4	E
Period 2					
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	G2F	2	E
TSTE85	Low Power Electronics	6	A1X	2	E

Semester 10 (Spring 2020)

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