

Information Technology, M Sc in Engineering

300 credits

Civilingenjör i informationsteknologi

6CITE

Valid from: 2015 Spring semester

Determined by

Board of Studies for Computer Science
and Media Technology

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					
TATA76	Multivariable Calculus	4	G1X	4	C
TFYA69	Electromagnetism - Theory and Application	8	G2X	3	C
TSKS06	Linear Systems for Communication	10*	G2X	2	C
THEN18	English	6*	G1X	1	E
TATA40	Perspectives on Mathematics	1*	G1X	-	V
TGTU63	Visits to Industry	1*	G1X	-	V
Period 2					
TAMS36	Probability, First Course	4	G1X	4	C
TSEA48	Computer Hardware and Architecture	4	G1X	1	C
TSKS06	Linear Systems for Communication	10*	G2X	2	C
THEN18	English	6*	G1X	3	E
TPTE06	Industrial Placement	6	G1X	-	E
TATA40	Perspectives on Mathematics	1*	G1X	-	V
TGTU63	Visits to Industry	1*	G1X	-	V

Semester 5 (Autumn 2017)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TAOP86	Combinatorial Optimization with Environmental Applications	8	G2X	2	C
TDDD66	Mobile Networks	6	G2X	3	C
TGTU63	Visits to Industry	1*	G1X	-	V
Period 2					
TDDD46	Database Technology	8	G2X	1	C
TSRT91	Automatic Control	8	G2X	3	C
TGTU63	Visits to Industry	1*	G1X	-	V

Semester 6 (Spring 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD82	Project Semester including Bachelor Thesis Project: Secure, Mobile Systems	30*	G2X	-	C
Period 2					
TDDD82	Project Semester including Bachelor Thesis Project: Secure, Mobile Systems	30*	G2X	-	C

Semester 7 (Autumn 2018)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TANA21	Scientific Computing	6	G1X	3	C/E
TAMS24	Statistics, First Course	4	G2X	4	E
TAMS32	Stochastic Processes	6	A1X	1	E
TATA55	Abstract Algebra	6*	G2X	3	E
TATA77	Fourier Analysis	6	G2X	1	E
TBME04	Anatomy and Physiology	6	G2X	3	E
TBM119	Medical Information Systems	6*	A1X	2	E
Tddb84	Design Patterns	6	A1X	4	E
TDDC17	Artificial Intelligence	6	G2X	3	E
TDDC34	Technical, Economic and Societal Evaluation of IT-products	6	A1X	3	E
TDDD04	Software Testing	6	A1X	2	E
TDDD08	Logic Programming	6	A1X	4	E
TDDD23	Design and Programming of Computer Games	6	A1X	2	E
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TDDD53	Advanced Interaction Design	6	A1X	1	E
TDDE18	Programming C++	6*	G2X	2	E
TDTS06	Computer Networks	6	G2X	1	E
TDTS08	Advanced Computer Architecture	6	A1X	2	E
TEAE01	Industrial Economics, Basic Course	6	G1X	2	E
TEIO32	Project Management and Organization	6*	G2X	3	E

Course code	Course name	Credits	Level	Timetable module	ECV
TGTU91	Oral and Written Communication	6	G1X	2	E
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	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
TSEA29	Microcomputer, Project Laboratory	8*	G2X	3	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					
TANA09	Numerical Algorithms in Computer Science	4	G2X	1	C/E
TAMS22	Probability Theory and Bayesian Networks	6	A1X	1	E
TAOP04	Mathematical Optimization	6	A1X	4	E
TATA55	Abstract Algebra	6*	G2X	3	E
TBMI02	Medical Image Analysis	6	A1X	1	E
TBMI19	Medical Information Systems	6*	A1X	3	E
TBMT01	Biomedical Signal Processing	6	A1X	1	E
TDDC73	Interaction Programming	6	G2X	1	E
TDDC90	Software Security	6	A1X	1	E
TDDD07	Real Time Systems	6	A1X	4	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TDDD49	Programming in C# and .NET Framework	4	G2X	3	E
TDDD55	Compilers and Interpreters	4	G2X	1	E
TDDE01	Machine Learning	6	A1X	1	E
TDDE02	Software Entrepreneurship	6	A1X	2	E
TDDE18	Programming C++	6*	G2X	1	E
TDDI07	Distributed Embedded Software and Networks	4	G2X	1	E
TDEI19	Management Control	6	A1X	2	E

Course code	Course name	Credits	Level	Timetable module	ECV
TDEI21	Strategic Organisational Application of IT - Workflow and Knowledge Management	6	A1X	4	E
TEIM03	Intercultural Communication	4	G1X	4	E
TEIO32	Project Management and Organization	6*	G2X	1	E
TFYA39	Semiconductor Technology	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
TKMJ24	Environmental Engineering	6	G1N	3	E
TSBB06	Multidimensional Signal Analysis	6*	A1X	3	E
TSBB09	Image Sensors	6	A1X	4	E
TSEA29	Microcomputer, Project Laboratory	8*	G2X	-	E
TSEK37	Analog CMOS Integrated Circuits	6	A1X	1	E
TSFS02	Vehicle Dynamics and Control	6	A1X	1	E
TSIN02	Internetworking	6	A1X	1	E
TSIT02	Computer Security	6	G2X	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: AI and Machine Learning

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDC17	Artificial Intelligence	6	G2X	3	C
TAMS24	Statistics, First Course	4	G2X	4	E
TBMI19	Medical Information Systems	6*	A1X	2	E
TDDD08	Logic Programming	6	A1X	4	E
TSBB06	Multidimensional Signal Analysis	6*	A1X	2	E
TSBB08	Digital Image Processing	6	A1X	4	E
Period 2					
TDDE01	Machine Learning	6	A1X	1	C
TBMI19	Medical Information Systems	6*	A1X	3	E
TSBB06	Multidimensional Signal Analysis	6*	A1X	3	E
TSRT78	Digital Signal Processing	6	A1X	2	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	A1X	1	E
TSKS11	Networks: Models, Algorithms and Applications	6	G2X	3	E
TSRT78	Digital Signal Processing	6	A1X	2	E

Specialisation: Computer Games Programming

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD23	Design and Programming of Computer Games	6	A1X	2	C
TDDC17	Artificial Intelligence	6	G2X	3	E
TDDD53	Advanced Interaction Design	6	A1X	1	E
Period 2					
TDDC73	Interaction Programming	6	G2X	1	C
TDDE02	Software Entrepreneurship	6	A1X	2	E

Specialisation: Computer Systems Architecture

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD04	Software Testing	6	A1X	2	E
TDTS06	Computer Networks	6	G2X	1	E
TDTS08	Advanced Computer Architecture	6	A1X	2	E
TSTE86	Digital Integrated Circuits	6	A1X	2	E
Period 2					
TDDD07	Real Time Systems	6	A1X	4	E
TSIT02	Computer Security	6	G2X	2	E

Specialisation: Industrial Economics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEAE01	Industrial Economics, Basic Course	6	G1X	2	C
TEIO32	Project Management and Organization	6*	G2X	3	C
Period 2					
TDDE02	Software Entrepreneurship	6	A1X	2	C
TEIO32	Project Management and Organization	6*	G2X	1	C

Specialisation: International Software Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD62	Internship	18*	A1X	-	C
Period 2					
TDDD62	Internship	18*	A1X	-	C
TEAE01	Industrial Economics, Basic Course	6	G1X	2	C
TDEI19	Management Control	6	A1X	2	E
TSIT02	Computer Security	6	G2X	2	E

Specialisation: Large Scale Software Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
Tddb84	Design Patterns	6	A1X	4	E
TDDC34	Technical, Economic and Societal Evaluation of IT-products	6	A1X	3	E
TDDD04	Software Testing	6	A1X	2	E
Period 2					
TDDD37	Database Technology	6	G2X	1	E
TDDE02	Software Entrepreneurship	6	A1X	2	E

Specialisation: Medical Informatics

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	C
TDDC17	Artificial Intelligence	6	G2X	3	E
TDDD53	Advanced Interaction Design	6	A1X	1	E
Period 2					
TBMI19	Medical Information Systems	6*	A1X	3	C
TBME03	Biochemistry and Cell Biology	6	G2X	2	E
TDDD37	Database Technology	6	G2X	1	E
TSIT02	Computer Security	6	G2X	2	E

Specialisation: Programming and Algorithms

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
Tddb84	Design Patterns	6	A1X	4	E
TDDC17	Artificial Intelligence	6	G2X	3	E
TDDD04	Software Testing	6	A1X	2	E
TDDD08	Logic Programming	6	A1X	4	E
TDDD38	Advanced Programming in C++	6*	A1X	2	E
Period 2					
TDDC90	Software Security	6	A1X	1	E
TDDD37	Database Technology	6	G2X	1	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TSIT02	Computer Security	6	G2X	2	E
TSK511	Networks: Models, Algorithms and Applications	6	G2X	3	E

Specialisation: Secure Systems

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
Tddb84	Design Patterns	6	A1X	4	C
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TDTS06	Computer Networks	6	G2X	1	E
TSIT03	Cryptology	6	A1X	2	E
Period 2					
TDDC90	Software Security	6	A1X	1	C
TSIT02	Computer Security	6	G2X	2	C
TDDD30	Advanced Software Engineering	6	A1X	4	E
TDDD37	Database Technology	6	G2X	1	E
TDDD38	Advanced Programming in C++	6*	A1X	-	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	E
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: Systems Technology

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDC17	Artificial Intelligence	6	G2X	3	C
TSBB08	Digital Image Processing	6	A1X	4	E
TSKS15	Detection and Estimation of Signals	6	A1X	2	E
Period 2					
TDDD37	Database Technology	6	G2X	1	C
TDDD07	Real Time Systems	6	A1X	4	C/E
TDDD55	Compilers and Interpreters	4	G2X	1	C/E
TSKS11	Networks: Models, Algorithms and Applications	6	G2X	3	E

Semester 8 (Spring 2019)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TANA15	Numerical Linear Algebra	6	A1X	1	E
TATA53	Linear Algebra, Honours Course	6*	G2X	-	E
TATA54	Number Theory	6*	G2X	3	E
TATA64	Graph Theory	6*	A1X	2	E
TBMI01	Medical Decision Support	6	A1X	4	E
TBMI03	Medical Information Models and Ontologies	6	A1X	4	E

Course code	Course name	Credits	Level	Timetable module	ECV
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
TBMT02	Medical Imaging	6	A1X	3	E
TBMT09	Physiological Pressures and Flows	6	A1X	1	E
TBMT32	Perspectives on Biomedical Engineering	2*	G1X	3	E
TDDA69	Data and Program Structures	6*	G2X	3	E
TDDD17	Information Security, Second Course	6*	A1X	4	E
TDDD20	Design and Analysis of Algorithms	6	A1X	3	E
TDDD25	Distributed 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
TDDD50	Green Computing	4	G2X	4	E
TDDD57	Physical Interaction and Game Programming	6	A1X	1	E
TDDD75	Effect-Driven Development and Human-Centered Design of Interactive Systems	6	G2X	3	E
TDDD76	Software Engineering Project	8*	G2X	2	E
TDDD95	Algorithmic Problem Solving	6*	A1X	1	E
TDDD97	Web Programming	6	G2X	3	E
TDDE05	AI Robotics	6*	A1X	4	E
TDDE06	Large-Scale Software Development - Structures and Processes	6*	A1X	4	E
TDDE09	Natural Language Processing	6	A1X	2	E
TDDE46	Software Quality	6*	A1X	2	E
TDTS07	System Design and Methodology	6	A1X	1	E
TDTS21	Advanced Networking	6*	A1X	1	E
TEIE88	Computer Law	4	G1X	1	E
TEIO13	Leadership and Organizational Change	6	A1X	4	E
TEIO94	Entrepreneurship and Idea Development	6*	G2X	4	E
TGTU01	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
TKMJ15	Environmental Management Strategies	6	G1F	3	E

Course code	Course name	Credits	Level	Timetable module	ECV
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
TSEK06	VLSI Design	12*	A1X	4	E
TSEK38	Radio Frequency Transceiver Design	6	A1X	2	E
TSKS13	Wireless Communications	6	A1X	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					
TAOP87	Applied Optimization Project Course	6	A1X	3	E
TATA53	Linear Algebra, Honours Course	6*	G2X	-	E
TATA54	Number Theory	6*	G2X	1	E
TATA64	Graph Theory	6*	A1X	2	E
TBMT26	Technology in Intensive Care and Surgery	6	A1X	1	E
TBMT32	Perspectives on Biomedical Engineering	2*	G1X	3	E
TDDA69	Data and Program Structures	6*	G2X	1	E
TDDC78	Programming of Parallel Computers - Methods and Tools	6	A1X	3	E
TDDD14	Formal Languages and Automata Theory	6	G2X	2	E
TDDD17	Information Security, Second Course	6*	A1X	4	E
TDDD27	Advanced Web Programming	6	A1X	3	E
TDDD29	IT-Project Management	6	A1X	3	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TDDD48	Automated Planning	6	A1X	1	E
TDDD76	Software Engineering Project	8*	G2X	2	E
TDDD95	Algorithmic Problem Solving	6*	A1X	4	E
TDDE05	AI Robotics	6*	A1X	4	E
TDDE06	Large-Scale Software Development - Structures and Processes	6*	A1X	4	E

Course code	Course name	Credits	Level	Timetable module	ECV
TDDE07	Bayesian Learning	6	A1X	2	E
TDDE31	Big Data Analytics	6	A1X	3	E
TDDE34	Software Verification	6	A1X	1	E
TDDE41	Software Architectures	6	A1X	1	E
TDDE46	Software Quality	6*	A1X	2	E
TDEI35	Strategy and Management Control	6	A1X	2	E
TDTS21	Advanced Networking	6*	A1X	1	E
TEAE13	Civil and Commercial Law	6	G1X	2	E
TEIE44	Intellectual Property Rights	4	G1X	1	E
TEIO06	Innovative Entrepreneurship	6	A1X	2	E
TEIO94	Entrepreneurship and Idea Development	6*	G2X	4	E
TFYA19	Quantum Computers	6	A1X	4	E
TGTU83	Philosophy of Science	6	G1X	4	E
THFR05	Communicative French	6*	G1X	4	E
THSP05	Spanish	6*	G1X	4	E
THTY05	German	6*	G1X	4	E
TNM079	Modelling and Animation	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
TSFS06	Diagnosis and Supervision	6	A1X	1	E
TSKS14	Multiple Antenna Communications	6	A1X	2	E
TSKS16	Signal Processing for Communications	6	A1X	1	E
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: AI and Machine Learning

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
TDDD20	Design and Analysis of Algorithms	6	A1X	3	E
TDDD41	Data Mining - Clustering and Association Analysis	6	A1X	3	E
TDDD95	Algorithmic Problem Solving	6*	A1X	1	E
TDDE05	AI Robotics	6*	A1X	4	E
TDDE09	Natural Language Processing	6	A1X	2	E
TSRT07	Industrial Control Systems	6	A1X	2	E
Period 2					
TDDD48	Automated Planning	6	A1X	1	E
TDDD95	Algorithmic Problem Solving	6*	A1X	4	E
TDDE05	AI Robotics	6*	A1X	4	E
TDDE07	Bayesian Learning	6	A1X	2	E
TDDE31	Big Data Analytics	6	A1X	3	E
TSFS06	Diagnosis and Supervision	6	A1X	1	E
TSRT14	Sensor Fusion	6	A1X	2	E

Specialisation: Communication

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDTS21	Advanced Networking	6*	A1X	1	E
TSBK08	Data Compression	6	A1X	2	E
TSKS13	Wireless Communications	6	A1X	4	E
Period 2					
TDTS21	Advanced Networking	6*	A1X	1	E
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: Computer Games Programming

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD57	Physical Interaction and Game Programming	6	A1X	1	C
TSBK07	Computer Graphics	6*	A1X	4	C
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
Period 2					
TSBK07	Computer Graphics	6*	A1X	1	C
TNM079	Modelling and Animation	6	A1X	2	E

Specialisation: Computer Systems Architecture

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDA69	Data and Program Structures	6*	G2X	3	E
TDDD25	Distributed Systems	6	A1X	2	E
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TDDD97	Web Programming	6	G2X	3	E
TDTS07	System Design and Methodology	6	A1X	1	E
TDTS21	Advanced Networking	6*	A1X	1	E
Period 2					
TDDA69	Data and Program Structures	6*	G2X	1	E
TDDC78	Programming of Parallel Computers - Methods and Tools	6	A1X	3	E
TDDD14	Formal Languages and Automata Theory	6	G2X	2	E
TDDD27	Advanced Web Programming	6	A1X	3	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TDDE34	Software Verification	6	A1X	1	E
TDDE41	Software Architectures	6	A1X	1	E
TDTS21	Advanced Networking	6*	A1X	1	E

Specialisation: Industrial Economics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEIO13	Leadership and Organizational Change	6	A1X	4	C
Period 2					
TEIO06	Innovative Entrepreneurship	6	A1X	2	C

Specialisation: Large Scale Software Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDE06	Large-Scale Software Development - Structures and Processes	6*	A1X	4	E
TDDE46	Software Quality	6*	A1X	2	E
Period 2					
TDDE06	Large-Scale Software Development - Structures and Processes	6*	A1X	4	E
TDDE34	Software Verification	6	A1X	1	E
TDDE41	Software Architectures	6	A1X	1	E
TDDE46	Software Quality	6*	A1X	2	E

Specialisation: Medical Informatics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
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
TDDD17	Information Security, Second Course	6*	A1X	4	E
Period 2					
TBMT26	Technology in Intensive Care and Surgery	6	A1X	1	E
TDDD17	Information Security, Second Course	6*	A1X	4	E
TDDE31	Big Data Analytics	6	A1X	3	E

Specialisation: Programming and Algorithms

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDA69	Data and Program Structures	6*	G2X	3	E
TDDD20	Design and Analysis of Algorithms	6	A1X	3	E
TDDD38	Advanced Programming in C++	6*	A1X	2	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
Period 2					
TDDA69	Data and Program Structures	6*	G2X	1	E
TDDC78	Programming of Parallel Computers - Methods and Tools	6	A1X	3	E
TDDD14	Formal Languages and Automata Theory	6	G2X	2	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TDDD95	Algorithmic Problem Solving	6*	A1X	4	E
TDDE34	Software Verification	6	A1X	1	E
TDDE41	Software Architectures	6	A1X	1	E

Specialisation: Secure Systems

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD17	Information Security, Second Course	6*	A1X	4	C
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TDDD97	Web Programming	6	G2X	3	E
TDDE46	Software Quality	6*	A1X	2	E
TDTS21	Advanced Networking	6*	A1X	1	E
Period 2					
TDDD17	Information Security, Second Course	6*	A1X	4	C
TDDD27	Advanced Web Programming	6	A1X	3	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TDDE46	Software Quality	6*	A1X	2	E
TDTS21	Advanced Networking	6*	A1X	1	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	A1X	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: Systems Technology

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDTS07	System Design and Methodology	6	A1X	1	C
TDDD25	Distributed Systems	6	A1X	2	C/E
TSBK08	Data Compression	6	A1X	2	C/E
TSRT07	Industrial Control Systems	6	A1X	2	C/E
TBMI26	Neural Networks and Learning Systems	6	A1X	2	E
Period 2					
TDDE41	Software Architectures	6	A1X	1	C/E
TSFS06	Diagnosis and Supervision	6	A1X	1	C/E

Semester 9 (Autumn 2019)

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TANA21	Scientific Computing	6	G1X	3	C/E

Course code	Course name	Credits	Level	Timetable module	ECV
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	E
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
TDDD53	Advanced Interaction Design	6	A1X	1	E
TDDE14	Large-Scale Software Development: Contributions and Evolution	6*	A1X	4	E
TDDE15	Advanced Machine Learning	6	A1X	1	E
TDDE19	Advanced Project Course - AI and Machine Learning	6*	A1X	4	E
TDDE20	Advanced Project Course - Game, App and Web Development	6*	A1X	4	E
TDDE21	Advanced Project Course: Secure Distributed and Embedded Systems	6*	A1X	4	E
TDEI13	Enterprise Resource Planning Systems: Process and Implementation	6	A1X	2	E
TDEI72	Strategy and Digitisation - Technology, Standards and Network Effects	6	A1X	4	E
TEIM11	Industrial Marketing	6	G2X	3	E
TEIO90	Innovation Management	6	A1X	2	E
TNCG15	Advanced Global Illumination and Rendering	6	A1X	4	E
TNM067	Scientific Visualization	6	A1X	3	E
TNM095	Artificial Intelligence for Interactive Media	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
TSKS12	Modern Channel Coding, Inference and Learning	6	A1X	1	E
TSRT10	Automatic Control - Project Course	12*	A1X	4	E
TSTE17	System Design	12*	A1X	4	E

Course code	Course name	Credits	Level	Timetable module	ECV
TSTE25	Power Electronics	6	A1X	3	E
Period 2					
TDDD89	Scientific Method	6	A1X	3	C
TANA09	Numerical Algorithms in Computer Science	4	G2X	1	C/E
TAOP61	Optimization of Realistic Complex Systems	6	A1X	3	E
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	E
Tddb44	Compiler Construction	6	A1X	1	E
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
TDDD56	Multicore and GPU Programming	6	A1X	2	E
TDDE13	Multi Agent Systems	6	A1X	1	E
TDDE14	Large-Scale Software Development: Contributions and Evolution	6*	A1X	4	E
TDDE16	Text Mining	6	A1X	2	E
TDDE19	Advanced Project Course - AI and Machine Learning	6*	A1X	4	E
TDDE20	Advanced Project Course - Game, App and Web Development	6*	A1X	4	E
TDDE21	Advanced Project Course: Secure Distributed and Embedded Systems	6*	A1X	4	E
TNM086	Virtual Reality Techniques	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	A1X	1	E
TSEA84	Digital Design Project	6*	A1X	3	E
TSRT10	Automatic Control - Project Course	12*	A1X	4	E
TSTE17	System Design	12*	A1X	4	E
TSTE26	Powergrid and Technology for Renewable Production	6	A1X	3	E
TSTE85	Low Power Electronics	6	A1X	2	E

Specialisation: AI and Machine Learning

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDE19	Advanced Project Course - AI and Machine Learning	6*	A1X	4	C
TDDE15	Advanced Machine Learning	6	A1X	1	E
TSBB17	Visual Object Recognition and Detection	6	A1X	2	E
TSFS12	Autonomous Vehicles - Planning, Control, and Learning Systems	6	A1X	1	E
TSRT62	Modelling and Simulation	6	A1X	3	E
Period 2					
TDDE19	Advanced Project Course - AI and Machine Learning	6*	A1X	4	C
TDDE13	Multi Agent Systems	6	A1X	1	E
TDDE16	Text Mining	6	A1X	2	E

Specialisation: Communication

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
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
Period 2					
TDDD07	Real Time Systems	6	A1X	4	E
TSKS05	Communication Systems, Project Course	12*	A1X	4	E

Specialisation: Computer Games Programming

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSBK03	Advanced Game Programming	6*	A1X	1	C
TDDE20	Advanced Project Course - Game, App and Web Development	6*	A1X	4	E
TNCG15	Advanced Global Illumination and Rendering	6	A1X	4	E
TSBB11	Images and Graphics, Project Course CDIO	12*	A1X	4	E
Period 2					
TSBK03	Advanced Game Programming	6*	A1X	-	C
TDDE20	Advanced Project Course - Game, App and Web Development	6*	A1X	4	E
TSBB11	Images and Graphics, Project Course CDIO	12*	A1X	4	E
TSIN02	Internetworking	6	A1X	1	E

Specialisation: Computer Systems Architecture

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
TDDE21	Advanced Project Course: Secure Distributed and Embedded Systems	6*	A1X	4	E
TSEA26	Design of Embedded DSP Processor	6	A1X	1	E
TSIT03	Cryptography	6	A1X	2	E
TSKS01	Digital Communication	6*	A1X	4	E
Period 2					
Tddb44	Compiler Construction	6	A1X	1	E
TDDC90	Software Security	6	A1X	1	E
TDDD37	Database Technology	6	G2X	1	E
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
TDDD56	Multicore and GPU Programming	6	A1X	2	E
TDDE21	Advanced Project Course: Secure Distributed and Embedded Systems	6*	A1X	4	E
TSIN02	Internetworking	6	A1X	1	E
TSKS01	Digital Communication	6*	A1X	4	E
TSKS11	Networks: Models, Algorithms and Applications	6	G2X	3	E

Specialisation: Industrial Economics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TEIM11	Industrial Marketing	6	G2X	3	C
TEIO90	Innovation Management	6	A1X	2	C
TDEI72	Strategy and Digitisation - Technology, Standards and Network Effects	6	A1X	4	E

Specialisation: International Software Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDC34	Technical, Economic and Societal Evaluation of IT-products	6	A1X	3	C
TDDD69	Software Engineering - Company Project	6*	A1X	1	C
TDDD04	Software Testing	6	A1X	2	E
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
TDDE45	Software Design and Construction	6	A1X	4	E
TDEI13	Enterprise Resource Planning Systems: Process and Implementation	6	A1X	2	E
Period 2					
TDDD69	Software Engineering - Company Project	6*	A1X	1	C
TDDC90	Software Security	6	A1X	1	E
TDDD07	Real Time Systems	6	A1X	4	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
TDEI19	Management Control	6	A1X	2	E
TEIM03	Intercultural Communication	4	G1X	4	E

Specialisation: Large Scale Software Engineering

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDE14	Large-Scale Software Development: Contributions and Evolution	6*	A1X	4	E
Period 2					
TDDE14	Large-Scale Software Development: Contributions and Evolution	6*	A1X	4	E

Specialisation: Medical Informatics

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	E
TDDC17	Artificial Intelligence	6	G2X	3	E
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
Period 2					
TBMT14	Biomedical Engineering - Project Course	12*	A1X	4	E
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
TDDE01	Machine Learning	6	A1X	1	E

Specialisation: Programming and Algorithms

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD08	Logic Programming	6	A1X	4	E
TDDE45	Software Design and Construction	6	A1X	4	E
TSIT03	Cryptology	6	A1X	2	E
Period 2					
Tddb44	Compiler Construction	6	A1X	1	E
TDDD56	Multicore and GPU Programming	6	A1X	2	E

Specialisation: Secure Systems

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TDDD04	Software Testing	6	A1X	2	C
TDDD38	Advanced Programming in C++	6*	A1X	2	E
TDDE21	Advanced Project Course: Secure Distributed and Embedded Systems	6*	A1X	4	E
TDTS06	Computer Networks	6	G2X	1	E
TSIT03	Cryptology	6	A1X	2	E
Period 2					
TDDC90	Software Security	6	A1X	1	C
TDDD37	Database Technology	6	G2X	1	E
TDDD38	Advanced Programming in C++	6*	A1X	-	E
TDDE21	Advanced Project Course: Secure Distributed and Embedded Systems	6*	A1X	4	E

Specialisation: Signal and Image Processing

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TNM067	Scientific Visualization	6	A1X	3	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
TSKS15	Detection and Estimation of Signals	6	A1X	2	E
Period 2					
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
TSBB11	Images and Graphics, Project Course CDIO	12*	A1X	4	E
TSBK03	Advanced Game Programming	6*	A1X	-	E

Specialisation: Systems Technology

Course code	Course name	Credits	Level	Timetable module	ECV
Period 1					
TSRT62	Modelling and Simulation	6	A1X	3	C/E
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
TDDE19	Advanced Project Course - AI and Machine Learning	6*	A1X	4	E
TDDE45	Software Design and Construction	6	A1X	4	E
Period 2					
Tddb44	Compiler Construction	6	A1X	1	C/E
TDDD43	Advanced Data Models and Databases	6*	A1X	2	E
TDDE19	Advanced Project Course - AI and Machine Learning	6*	A1X	4	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