

Computer Science and Software Engineering, M Sc in Engineering

300 credits

Civilingenjör i mjukvaruteknik

6CMJU

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 | | | | | |
| TATA41 | Calculus in One Variable 1 | 6 | G1X | 4 | C |
| Tddb68 | Concurrent Programming and Operating Systems | 6 | G2X | 3 | C |
| TDDD79 | Professionalism for Engineers, part 2 | 1* | G1X | - | C |
| TDDD93 | Large-Scale Distributed Systems and Networks | 13* | G1X | 2 | C |
| THEN18 | English | 6* | G1X | 1 | E |
| TATA40 | Perspectives on Mathematics | 1* | G1X | - | V |
| TGTU63 | Visits to Industry | 1* | G1X | - | V |
| Period 2 | | | | | |
| TATA90 | Multivariable Calculus and Differential Equations | 4 | G1X | 4 | C |
| TDDD79 | Professionalism for Engineers, part 2 | 1* | G1X | - | C |
| TDDD93 | Large-Scale Distributed Systems and Networks | 13* | G1X | 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 | | | | | |
| TDAB01 | Probability and Statistics | 6 | G2X | 1 | C |
| TDDC17 | Artificial Intelligence | 6 | G2X | 3 | C |
| TDDD91 | Professionalism for Engineers, part 5 | 1* | G1X | - | C |
| TDDD92 | Artificial Intelligence - Project | 5* | G2X | 4 | C |
| TGTU63 | Visits to Industry | 1* | G1X | - | V |
| Period 2 | | | | | |
| TDDD37 | Database Technology | 6 | G2X | 1 | C |
| TDDD91 | Professionalism for Engineers, part 5 | 1* | G1X | - | C |
| TDDD92 | Artificial Intelligence - Project | 5* | G2X | 4 | C |
| TFYA87 | Physics and Mechanics | 6 | G1X | 3 | C |
| TGTU63 | Visits to Industry | 1* | G1X | - | V |

Semester 6 (Spring 2018)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TDDD79 | Professionalism for Engineers, part 2 | 1* | G1X | - | C |
| TDDD94 | Professionalism for Engineers, part 4 | 1* | G1X | - | C |
| TDDD96 | Software Engineering - Bachelor Project | 15* | G2X | 2/3 | C |
| TDDD98 | Professionalism for Engineers, part 6 | 1* | G1X | - | C |
| TSKS21 | Signals, Information and Images | 8 | G2X | 1 | C |
| TSRT04 | Introduction in Matlab | 2 | G1X | 2 | E |
| Period 2 | | | | | |
| TDDD79 | Professionalism for Engineers, part 2 | 1* | G1X | - | C |
| TDDD94 | Professionalism for Engineers, part 4 | 1* | G1X | - | C |
| TDDD96 | Software Engineering - Bachelor Project | 15* | G2X | 2/4 | C |
| TDDD98 | Professionalism for Engineers, part 6 | 1* | G1X | - | C |
| TSRT19 | Automatic Control | 6 | G2X | 1 | C |

Semester 7 (Autumn 2018)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TAOP33 | Combinatorial Optimization, Introductory Course | 4 | G2X | 2 | C/E |
| TANA21 | Scientific Computing | 6 | G1X | 3 | E |
| TATA55 | Abstract Algebra | 6* | G2X | 3 | E |
| TBME04 | Anatomy and Physiology | 6 | G2X | 3 | E |
| TBMI19 | Medical Information Systems | 6* | A1X | 2 | E |
| 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 |
| 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 |
| TDDD43 | Advanced Data Models and Databases | 6* | A1X | 2 | E |
| TDDD53 | Advanced Interaction Design | 6 | A1X | 1 | E |
| TEIO32 | Project Management and Organization | 6* | G2X | 3 | E |
| TGTU91 | Oral and Written Communication | 6 | G1X | 2 | E |
| TSBB06 | Multidimensional Signal Analysis | 6* | A1X | 2 | E |
| TSBB08 | Digital Image Processing | 6 | A1X | 4 | E |
| TSDT14 | Signal Theory | 6 | A1X | 1 | E |
| TSIT03 | Cryptology | 6 | A1X | 2 | E |
| TSRT62 | Modelling and Simulation | 6 | A1X | 3 | E |
| Period 2 | | | | | |
| TAMS22 | Probability Theory and Bayesian Networks | 6 | A1X | 1 | E |
| TANA09 | Numerical Algorithms in Computer Science | 4 | G2X | 1 | E |
| TATA55 | Abstract Algebra | 6* | G2X | 3 | E |
| TBMI19 | Medical Information Systems | 6* | A1X | 3 | E |
| TDDC73 | Interaction Programming | 6 | G2X | 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 |
| TDDD49 | Programming in C# and .NET Framework | 4 | G2X | 3 | E |

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|------------------|-----|
| TDDE01 | Machine Learning | 6 | A1X | 1 | E |
| TDDE02 | Software Entrepreneurship | 6 | A1X | 2 | E |
| TEAE01 | Industrial Economics, Basic Course | 6 | G1X | 2 | E |
| TEIM03 | Intercultural Communication | 4 | G1X | 4 | E |
| TEIO32 | Project Management and Organization | 6* | G2X | 1 | E |
| TGTU04 | Leadership | 6 | G2X | 2 | E |
| TGTU49 | History of Technology | 6 | G1X | 3 | E |
| TKMJ24 | Environmental Engineering | 6 | G1N | 3 | E |
| TSBB06 | Multidimensional Signal Analysis | 6* | A1X | 3 | E |
| TSIT02 | Computer Security | 6 | G2F | 2 | E |
| TSK511 | 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 |
| 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: 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: 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 | G2F | 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: Programming and Algorithms Specialization

| 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 | G2F | 2 | E |
| TSKS11 | 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 | G2F | 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 |

Semester 8 (Spring 2019)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TAOP07 | Introduction to Optimization | 6 | G1X | 3 | C/E |
| 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 |
| TBMI26 | Neural Networks and Learning Systems | 6 | A1X | 2 | 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 |
| 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 |

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| TDDD95 | Algorithmic Problem Solving | 6* | A1X | 1 | E |
| TDDD97 | Web Programming | 6 | G2X | 3 | E |
| TDDE05 | AI Robotics | 6* | A1N | 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* | A1N | 2 | E |
| TDS07 | System Design and Methodology | 6 | A1X | 1 | E |
| TDS21 | 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 |
| TKMJ15 | Environmental Management Strategies | 6 | G1F | 3 | E |
| TNM048 | Information Visualisation | 6 | A1X | 3 | E |
| TSBK07 | Computer Graphics | 6* | A1X | 4 | E |
| TSBK08 | Data Compression | 6 | A1X | 2 | E |
| TSRT07 | Industrial Control Systems | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| TATA53 | Linear Algebra, Honours Course | 6* | G2X | - | E |
| TATA54 | Number Theory | 6* | G2X | 1 | E |
| TATA64 | Graph Theory | 6* | A1X | 2 | E |
| TDDA69 | Data and Program Structures | 6* | G2X | 1 | E |
| TDDC78 | Programming of Parallel Computers - Methods and Tools | 6 | A1X | 3 | 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 |
| TDDD95 | Algorithmic Problem Solving | 6* | A1X | 4 | E |
| TDDE05 | AI Robotics | 6* | A1N | 4 | E |

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|------------------|-----|
| TDDE06 | Large-Scale Software Development - Structures and Processes | 6* | A1X | 4 | E |
| TDDE07 | Bayesian Learning | 6 | A1F | 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* | A1N | 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 |
| TGTU83 | Philosophy of Science | 6 | G1X | 4 | E |
| TNM079 | Modelling and Animation | 6 | A1X | 2 | E |
| TSBK07 | Computer Graphics | 6* | A1X | 1 | E |
| TSFS06 | Diagnosis and Supervision | 6 | A1N | 1 | E |
| TSRT14 | Sensor Fusion | 6 | A1X | 2 | 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* | A1N | 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* | A1N | 4 | E |
| TDDE07 | Bayesian Learning | 6 | A1F | 2 | E |
| TDDE31 | Big Data Analytics | 6 | A1X | 3 | E |
| TSFS06 | Diagnosis and Supervision | 6 | A1N | 1 | E |
| TSRT14 | Sensor Fusion | 6 | A1X | 2 | 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: 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* | A1N | 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* | A1N | 2 | E |

Specialisation: Programming and Algorithms Specialization

| 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* | A1N | 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* | A1N | 2 | E |
| TDTS21 | Advanced Networking | 6* | A1X | 1 | E |

Semester 9 (Autumn 2019)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| 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* | A1F | 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 |
| TSBB17 | Visual Object Recognition and Detection | 6 | A1X | 2 | E |
| TSBK03 | Advanced Game Programming | 6* | A1X | 1 | 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 |
| Period 2 | | | | | |
| TDDD89 | Scientific Method | 6 | A1X | 3 | C |
| TAOP61 | Optimization of Realistic Complex Systems | 6 | A1N | 3 | E |
| TBMI02 | Medical Image Analysis | 6 | A1X | 1 | E |
| Tddb44 | Compiler Construction | 6 | A1X | 1 | E |
| TDDC90 | Software Security | 6 | A1X | 1 | E |

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|------------------|-----|
| 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* | A1F | 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 |
| TSBK03 | Advanced Game Programming | 6* | A1X | - | E |
| TSIN02 | Internetworking | 6 | A1N | 1 | 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* | A1F | 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* | A1F | 4 | C |
| TDDE13 | Multi Agent Systems | 6 | A1X | 1 | E |
| TDDE16 | Text Mining | 6 | A1X | 2 | 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 | A1N | 1 | 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* | A1N | 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* | A1N | 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: Programming and Algorithms Specialization

| 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 |

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