

Computer Science and Software Engineering, M Sc in Engineering

300 credits

Civilingenjör i mjukvaruteknik

6CMJU

Valid from: 2016 Spring semester

Determined by

Board of Studies for Computer Science
and Media Technology

Date determined

2016-01-19

Entry requirements

Degree in Swedish

Civilingenjör 300 hp och Teknologie master 120 hp

Curriculum

Semester 2 (Spring 2017)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TDDD78 | Object Oriented Programming and Java | 6* | G1F | 1 | C |
| TDDD79 | Professionalism for Engineers, part 2 | 1* | G1F | - | C |
| TDDD80 | Project: Mobile and Social Applications | 11* | G1F | 3/4 | C |
| TSEA28 | Computer Hardware and Architecture Y | 6* | G1X | 2 | C |
| Period 2 | | | | | |
| TDDD78 | Object Oriented Programming and Java | 6* | G1F | 1 | C |
| TDDD79 | Professionalism for Engineers, part 2 | 1* | G1F | - | C |
| TDDD80 | Project: Mobile and Social Applications | 11* | G1F | 4 | C |
| TDDD85 | Formal Languages and Automata Theory | 6 | G1F | 2 | C |
| TSEA28 | Computer Hardware and Architecture Y | 6* | G1X | 3 | C |

Semester 3 (Autumn 2017)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TATA24 | Linear Algebra | 8* | G1N | 4 | C |
| TDDC93 | Software Engineering Theory | 4 | G2F | 1 | C |
| TDDD84 | Professionalism for Engineers, part 3 | 1* | G1F | - | C |
| TDDD86 | Data Structures, Algorithms and Programming Paradigms | 11* | G1F | 2 | C |
| TATA40 | Perspectives on Mathematics | 1* | G1N | - | V |
| Period 2 | | | | | |
| TATA24 | Linear Algebra | 8* | G1N | 4 | C |
| TATA79 | Introductory Course in Calculus | 6 | G1X | 2 | C |
| TDDD84 | Professionalism for Engineers, part 3 | 1* | G1F | - | C |
| TDDD86 | Data Structures, Algorithms and Programming Paradigms | 11* | G1F | 3 | C |
| TATA40 | Perspectives on Mathematics | 1* | G1N | - | V |

Semester 4 (Spring 2018)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TATA41 | Calculus in One Variable 1 | 6 | G1F | 4 | C |
| Tddb68 | Concurrent Programming and Operating Systems | 6 | G2X | 3 | C |
| TDDD79 | Professionalism for Engineers, part 2 | 1* | G1F | - | C |
| TDDD94 | Professionalism for Engineers, part 4 | 1* | G1F | - | C |
| TDDD98 | Professionalism for Engineers, part 6 | 1* | G1F | - | C |
| TDDE35 | Large-Scale Distributed Systems and Networks | 11* | G1F | 2 | C |
| THEN18 | English | 6* | G1N | 1 | E |
| TATA40 | Perspectives on Mathematics | 1* | G1N | - | V |
| TGTU63 | Visits to Industry | 1* | G1X | - | V |
| Period 2 | | | | | |
| TATA91 | Calculus in One and Several Variables | 6 | G1F | 4 | C |
| TDDD79 | Professionalism for Engineers, part 2 | 1* | G1F | - | C |
| TDDD94 | Professionalism for Engineers, part 4 | 1* | G1F | - | C |
| TDDD98 | Professionalism for Engineers, part 6 | 1* | G1F | - | C |
| TDDE35 | Large-Scale Distributed Systems and Networks | 11* | G1F | 2 | C |
| THEN18 | English | 6* | G1N | 3 | E |
| TPTE06 | Industrial Placement | 6 | G1X | - | E |
| TATA40 | Perspectives on Mathematics | 1* | G1N | - | V |
| TGTU63 | Visits to Industry | 1* | G1X | - | V |

Semester 5 (Autumn 2018)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---------------------------------------|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TDAB01 | Probability and Statistics | 6 | G2F | 1 | C |
| TDDC17 | Artificial Intelligence | 6 | G2F | 3 | C |
| TDDD91 | Professionalism for Engineers, part 5 | 1* | G1F | - | C |
| TDDD92 | Artificial Intelligence - Project | 5* | G2F | 4 | C |
| TGTU63 | Visits to Industry | 1* | G1X | - | V |
| Period 2 | | | | | |
| TDDD37 | Database Technology | 6 | G2F | 1 | C |
| TDDD91 | Professionalism for Engineers, part 5 | 1* | G1F | - | C |
| TDDD92 | Artificial Intelligence - Project | 5* | G2F | 4 | C |
| TGTU63 | Visits to Industry | 1* | G1X | - | V |

Semester 6 (Spring 2019)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TDDD79 | Professionalism for Engineers, part 2 | 1* | G1F | - | C |
| TDDD94 | Professionalism for Engineers, part 4 | 1* | G1F | - | C |
| TDDD96 | Software Engineering - Bachelor Project | 15* | G2E | 2/3 | C |
| TDDD98 | Professionalism for Engineers, part 6 | 1* | G1F | - | 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* | G1F | - | C |
| TDDD94 | Professionalism for Engineers, part 4 | 1* | G1F | - | C |
| TDDD96 | Software Engineering - Bachelor Project | 15* | G2E | 2/4 | C |
| TDDD98 | Professionalism for Engineers, part 6 | 1* | G1F | - | C |
| TSRT19 | Automatic Control | 6 | G2X | 1 | C |

Semester 7 (Autumn 2019)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TAOP33 | Combinatorial Optimization, Introductory Course | 4 | G2F | 2 | C/E |
| TANA21 | Scientific Computing | 6 | G1F | 3 | E |
| TATA55 | Abstract Algebra | 6* | G2F | 3 | E |
| TBME04 | Anatomy and Physiology | 6 | G2F | 3 | E |
| TBMI19 | Medical Information Systems | 6* | A1N | 2 | E |
| TDDC34 | Technical, Economic and Societal Evaluation of IT-products | 6 | A1X | 3 | E |
| TDDD04 | Software Testing | 6 | A1N | 2 | E |
| TDDD08 | Logic Programming | 6 | A1N | 4 | E |
| TDDD23 | Design and Programming of Computer Games | 6 | A1N | 2 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | 2 | E |
| TDDD43 | Advanced Data Models and Databases | 6* | A1N | 2 | E |
| TDDD53 | Advanced Interaction Design | 6 | A1N | 1 | E |
| TDDE45 | Software Design and Construction | 6 | A1N | 4 | E |
| TEIO32 | Project Management and Organization | 6* | G2X | 3 | E |
| TGTU91 | Oral and Written Communication | 6 | G1F | 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 | G2F | 1 | E |
| TATA55 | Abstract Algebra | 6* | G2F | 3 | E |
| TBMI19 | Medical Information Systems | 6* | A1N | 3 | E |
| TDDC73 | Interaction Programming | 6 | G2F | 1 | E |
| TDDD07 | Real Time Systems | 6 | A1N | 4 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | - | E |
| TDDD43 | Advanced Data Models and Databases | 6* | A1N | 2 | E |
| TDDD49 | Programming in C# and .NET Framework | 4 | G2F | 3 | E |

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|------------------|-----|
| TDDE01 | Machine Learning | 6 | A1N | 1 | E |
| TDDE02 | Software Entrepreneurship | 6 | A1N | 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 | G1F | 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 | G2F | 3 | C |
| TBMI19 | Medical Information Systems | 6* | A1N | 2 | E |
| TDDD08 | Logic Programming | 6 | A1N | 4 | E |
| TSBB06 | Multidimensional Signal Analysis | 6* | A1X | 2 | E |
| TSBB08 | Digital Image Processing | 6 | A1X | 4 | E |
| Period 2 | | | | | |
| TDDE01 | Machine Learning | 6 | A1N | 1 | C |
| TBMI19 | Medical Information Systems | 6* | A1N | 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 | A1N | 2 | C |
| TDDC17 | Artificial Intelligence | 6 | G2F | 3 | E |
| TDDD53 | Advanced Interaction Design | 6 | A1N | 1 | E |
| Period 2 | | | | | |
| TDDC73 | Interaction Programming | 6 | G2F | 1 | C |
| TDDE02 | Software Entrepreneurship | 6 | A1N | 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 | A1N | 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 | | | | | |
| TDDD04 | Software Testing | 6 | A1N | 2 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | 2 | E |
| TDDE45 | Software Design and Construction | 6 | A1N | 4 | E |
| Period 2 | | | | | |
| TEAE01 | Industrial Economics, Basic Course | 6 | G1X | 2 | C |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | - | E |
| TDDE02 | Software Entrepreneurship | 6 | A1N | 2 | E |
| TDEI19 | Management Control | 6 | A1X | 2 | E |
| TEIM03 | Intercultural Communication | 4 | G1X | 4 | E |
| TSIT02 | Computer Security | 6 | G2F | 2 | E |

Specialisation: Large Scale 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 | E |
| TDDD04 | Software Testing | 6 | A1N | 2 | E |
| TDDE45 | Software Design and Construction | 6 | A1N | 4 | E |
| Period 2 | | | | | |
| TDDD37 | Database Technology | 6 | G2F | 1 | E |
| TDDE02 | Software Entrepreneurship | 6 | A1N | 2 | E |

Specialisation: Programming and Algorithms Specialization

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TDDC17 | Artificial Intelligence | 6 | G2F | 3 | E |
| TDDD04 | Software Testing | 6 | A1N | 2 | E |
| TDDD08 | Logic Programming | 6 | A1N | 4 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | 2 | E |
| TDDE45 | Software Design and Construction | 6 | A1N | 4 | E |
| Period 2 | | | | | |
| TDDE90 | Software Security | 6 | A1N | 1 | E |
| TDDD37 | Database Technology | 6 | G2F | 1 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | - | E |
| TSIT02 | Computer Security | 6 | G2F | 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 | | | | | |
| TDDE45 | Software Design and Construction | 6 | A1N | 4 | C |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | 2 | E |
| TDTS06 | Computer Networks | 6 | G2F | 1 | E |
| TSIT03 | Cryptology | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| TDDC90 | Software Security | 6 | A1N | 1 | C |
| TSIT02 | Computer Security | 6 | G2F | 2 | C |
| TDDD37 | Database Technology | 6 | G2F | 1 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | - | E |

Semester 8 (Spring 2020)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TAOP07 | Introduction to Optimization | 6 | G1F | 3 | C/E |
| TANA15 | Numerical Linear Algebra | 6 | A1N | 1 | E |
| TATA53 | Linear Algebra, Honours Course | 6* | G2F | - | E |
| TATA54 | Number Theory | 6* | G2F | 3 | E |
| TATA64 | Graph Theory | 6* | A1N | 2 | E |
| TBMI26 | Neural Networks and Learning Systems | 6 | A1N | 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 | A1N | 3 | E |
| TDDD25 | Distributed Systems | 6 | A1N | 2 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | 2 | E |
| TDDD41 | Data Mining - Clustering and Association Analysis | 6 | A1N | 3 | E |
| TDDD57 | Physical Interaction and Game Programming | 6 | A1N | 1 | E |
| TDDD75 | Effect-Driven Development and Human-Centered Design of Interactive Systems | 6 | G2X | 3 | E |
| TDDD95 | Algorithmic Problem Solving | 6* | A1F | 1 | E |

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| TDDD97 | Web Programming | 6 | G2F | 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 | A1F | 2 | E |
| TDDE46 | Software Quality | 6* | A1N | 2 | E |
| TDS07 | System Design and Methodology | 6 | A1N | 1 | E |
| TDS21 | Advanced Networking | 6* | A1N | 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 |
| TGTU94 | Technology and Ethics | 6 | G1F | 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 | A1N | 2 | E |
| TSRT07 | Industrial Control Systems | 6 | A1N | 2 | E |
| Period 2 | | | | | |
| TATA53 | Linear Algebra, Honours Course | 6* | G2F | - | E |
| TATA54 | Number Theory | 6* | G2F | 1 | E |
| TATA64 | Graph Theory | 6* | A1N | 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 | A1N | 3 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | - | E |
| TDDD48 | Automated Planning | 6 | A1N | 1 | E |
| TDDD95 | Algorithmic Problem Solving | 6* | A1F | 4 | E |
| TDDE05 | AI Robotics | 6* | A1N | 4 | E |
| TDDE06 | Large-Scale Software Development - Structures and Processes | 6* | A1X | 4 | E |
| TDDE07 | Bayesian Learning | 6 | A1F | 2 | E |

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---------------------------------------|---------|-------|------------------|-----|
| TDDE31 | Big Data Analytics | 6 | A1F | 3 | E |
| TDDE34 | Software Verification | 6 | A1N | 1 | E |
| TDDE41 | Software Architectures | 6 | A1N | 1 | E |
| TDDE46 | Software Quality | 6* | A1N | 2 | E |
| TDTS21 | Advanced Networking | 6* | A1N | 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 |
| TGTU95 | Philosophy of Science and Technology | 6 | G1F | 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 | A1N | 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 | A1N | 2 | E |
| TDDD20 | Design and Analysis of Algorithms | 6 | A1N | 3 | E |
| TDDD41 | Data Mining - Clustering and Association Analysis | 6 | A1N | 3 | E |
| TDDD95 | Algorithmic Problem Solving | 6* | A1F | 1 | E |
| TDDE05 | AI Robotics | 6* | A1N | 4 | E |
| TDDE09 | Natural Language Processing | 6 | A1F | 2 | E |
| TSRT07 | Industrial Control Systems | 6 | A1N | 2 | E |
| Period 2 | | | | | |
| TDDD48 | Automated Planning | 6 | A1N | 1 | E |
| TDDD95 | Algorithmic Problem Solving | 6* | A1F | 4 | E |
| TDDE05 | AI Robotics | 6* | A1N | 4 | E |
| TDDE07 | Bayesian Learning | 6 | A1F | 2 | E |
| TDDE31 | Big Data Analytics | 6 | A1F | 3 | E |
| TSFS06 | Diagnosis and Supervision | 6 | A1N | 1 | E |
| TSRT14 | Sensor Fusion | 6 | A1N | 2 | E |

Specialisation: Computer Games Programming

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TDDD57 | Physical Interaction and Game Programming | 6 | A1N | 1 | C |
| TSBK07 | Computer Graphics | 6* | A1X | 4 | C |
| TBMI26 | Neural Networks and Learning Systems | 6 | A1N | 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 | A1N | 1 | E |
| TDDE41 | Software Architectures | 6 | A1N | 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 | A1N | 3 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | 2 | E |
| TDDD41 | Data Mining - Clustering and Association Analysis | 6 | A1N | 3 | E |
| TDDD95 | Algorithmic Problem Solving | 6* | A1F | 1 | E |
| TDDE09 | Natural Language Processing | 6 | A1F | 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 | G2F | 2 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | - | E |
| TDDD95 | Algorithmic Problem Solving | 6* | A1F | 4 | E |
| TDDE34 | Software Verification | 6 | A1N | 1 | E |
| TDDE41 | Software Architectures | 6 | A1N | 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* | A1N | 2 | E |
| TDDD97 | Web Programming | 6 | G2F | 3 | E |
| TDDE46 | Software Quality | 6* | A1N | 2 | E |
| TDTS21 | Advanced Networking | 6* | A1N | 1 | E |
| Period 2 | | | | | |
| TDDD17 | Information Security, Second Course | 6* | A1X | 4 | C |
| TDDD27 | Advanced Web Programming | 6 | A1N | 3 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | - | E |
| TDDE46 | Software Quality | 6* | A1N | 2 | E |
| TDTS21 | Advanced Networking | 6* | A1N | 1 | E |

Semester 9 (Autumn 2020)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TDDD53 | Advanced Interaction Design | 6 | A1N | 1 | E |
| TDDE14 | Large-Scale Software Development: Contributions and Evolution | 6* | A1X | 4 | E |
| TDDE15 | Advanced Machine Learning | 6 | A1F | 1 | E |
| TDDE19 | Advanced Project Course - AI and Machine Learning | 6* | A1F | 4 | E |
| TDDE20 | Advanced Project Course - Game, App and Web Development | 6* | A1F | 4 | E |
| TDDE21 | Advanced Project Course: Secure Distributed and Embedded Systems | 6* | A1F | 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 | A1N | 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 | A1N | 1 | E |
| TSRT92 | Modelling and Learning for Dynamical Systems | 6 | A1X | 3 | E |
| Period 2 | | | | | |
| TDDD89 | Scientific Method | 6 | A1F | 3 | C |
| TAOP61 | Optimization of Realistic Complex Systems | 6 | A1N | 3 | E |
| TBMI02 | Medical Image Analysis | 6 | A1N | 1 | E |
| Tddb44 | Compiler Construction | 6 | A1X | 1 | E |

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|------------------|-----|
| TDDC90 | Software Security | 6 | A1N | 1 | E |
| TDDD56 | Multicore and GPU Programming | 6 | A1N | 2 | E |
| TDDE13 | Multi Agent Systems | 6 | A1N | 1 | E |
| TDDE14 | Large-Scale Software Development: Contributions and Evolution | 6* | A1X | 4 | E |
| TDDE16 | Text Mining | 6 | A1F | 2 | E |
| TDDE19 | Advanced Project Course - AI and Machine Learning | 6* | A1F | 4 | E |
| TDDE20 | Advanced Project Course - Game, App and Web Development | 6* | A1F | 4 | E |
| TDDE21 | Advanced Project Course: Secure Distributed and Embedded Systems | 6* | A1F | 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 | A1F | 1 | E |
| TSBB17 | Visual Object Recognition and Detection | 6 | A1X | 2 | E |
| TSFS12 | Autonomous Vehicles - Planning, Control, and Learning Systems | 6 | A1X | 1 | E |
| TSRT92 | Modelling and Learning for Dynamical Systems | 6 | A1X | 3 | E |
| Period 2 | | | | | |
| TDDE19 | Advanced Project Course - AI and Machine Learning | 6* | A1F | 4 | C |
| TDDE13 | Multi Agent Systems | 6 | A1N | 1 | E |
| TDDE16 | Text Mining | 6 | A1F | 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* | A1F | 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* | A1F | 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 | A1N | 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 | A1N | 2 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | 2 | E |
| TDDD43 | Advanced Data Models and Databases | 6* | A1N | 2 | E |
| TDDE45 | Software Design and Construction | 6 | A1N | 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 | A1N | 1 | E |
| TDDD07 | Real Time Systems | 6 | A1N | 4 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | - | E |
| TDDD43 | Advanced Data Models and Databases | 6* | A1N | 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 | A1N | 4 | E |
| TDDE45 | Software Design and Construction | 6 | A1N | 4 | E |
| TSIT03 | Cryptology | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| Tddb44 | Compiler Construction | 6 | A1X | 1 | E |
| TDDD56 | Multicore and GPU Programming | 6 | A1N | 2 | E |

Specialisation: Secure Systems

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TDDD04 | Software Testing | 6 | A1N | 2 | C |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | 2 | E |
| TDDE21 | Advanced Project Course: Secure Distributed and Embedded Systems | 6* | A1F | 4 | E |
| TDTS06 | Computer Networks | 6 | G2F | 1 | E |
| TSIT03 | Cryptology | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| TDDC90 | Software Security | 6 | A1N | 1 | C |
| TDDD37 | Database Technology | 6 | G2F | 1 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1N | - | E |
| TDDE21 | Advanced Project Course: Secure Distributed and Embedded Systems | 6* | A1F | 4 | E |

Semester 10 (Spring 2021)

| 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