

Industrial Engineering and Management - International, M Sc in Engineering

300 credits

Civilingenjör i industriell ekonomi - internationell 6CIEI

Valid from: 2015 Spring semester

Determined byBoard of Studies for Industrial
Engineering and Logistics

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 | | | | | |
| TAOP37 | Operations Research, Extended Course | 4 | G2X | 3 | С |
| TPPE98 | Economic Analysis: Economic Theory | 4 | G2X | 4 | С |
| TDDE10 | Object Oriented Programming in Java | 6 | G2X | 2 | Е |
| TEIO61 | Industrial Management | 6 | G2X | 1 | Е |
| TFBI11 | Genetics and Evolution | 6 | G1X | 2 | Е |
| TMMV04 | Engineering Thermodynamics | 6 | G1X | 2 | Е |
| TMPT07 | Manufacturing Technology | 6 | G2X | 2 | E |
| TRTE16 | Basic Principles for Environmental Chemistry | 6* | G1X | 1 | Е |
| TSRT12 | Automatic Control | 6 | G2X | 1 | E |
| Period 2 | | | | | |
| TAMS65 | Mathematical Statistics, second course | 6 | G2X | 2 | С |
| THTY42 | German for Engineers II, part 2 | 2 | G1X | 4 | С |
| TPPE24 | Economic Analysis: Decision- and Financial Methodology | 6 | G2X | 3 | С |
| TATA57 | Transform Theory | 4 | G1X | 1 | E |
| TATA82 | Discrete Mathematics | 6 | G1X | 1 | E |
| TMES44 | Energy Systems - Supply and Demand | 6 | G2X | 1 | E |
| TMKT14 | CAD and Machine Elements | 6 | G2X | 1 | E |
| TRTE16 | Basic Principles for Environmental Chemistry | 6* | G1X | 1 | E |
| TPTE06 | Industrial Placement | 6 | G1X | - | V |
| | | | | | |

Specialisation: Specialization Biotechnical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TFBI11 | Genetics and Evolution | 6 | G1X | 2 | С |
| TRTE16 | Basic Principles for Environmental Chemistry | 6* | G1X | 1 | С |
| Period 2 | | | | | |
| TRTE16 | Basic Principles for Environmental Chemistry | 6* | G1X | 1 | С |



Specialisation: Specialization Computer Science and Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|-------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TDDE10 | Object Oriented Programming in Java | 6 | G2X | 2 | С |
| Period 2 | | | | | |
| TATA82 | Discrete Mathematics | 6 | G1X | 1 | С |

Specialisation: Specialization Electrical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|-------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TSRT12 | Automatic Control | 6 | G2X | 1 | С |
| Period 2 | | | | | |
| TATA57 | Transform Theory | 4 | G1X | 1 | С |

Specialisation: Specialization Energy Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMMV04 | Engineering Thermodynamics | 6 | G1X | 2 | С |
| Period 2 | | | | | |
| TMES44 | Energy Systems - Supply and Demand | 6 | G2X | 1 | С |

Specialisation: Specialization Mechanical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--------------------------|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TMPT07 | Manufacturing Technology | 6 | G2X | 2 | С |
| Period 2 | | | | | |
| TMKT14 | CAD and Machine Elements | 6 | G2X | 1 | С |



Semester 5 (Autumn 2017)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TPPE13 | Production and Operations Management | 6 | G2X | 1 | С |
| TSRT22 | Automatic Control | 6 | G2X | 4 | С |
| TDDE22 | Data Structures and Algorithms | 6 | G2X | 3 | E |
| TFBI22 | Cell Biology and Microbial Processes | 6 | G1X | 3 | Е |
| TMHL22 | Solid Mechanics | 6 | G2X | 3 | E |
| TMKM86 | Engineering Materials | 6* | G2X | 4 | Е |
| TMMV11 | Fluid Mechanics and Heat Transfer | 6 | G2X | 2 | Е |
| TMMV57 | Applied Energy Engineering | 6* | G2X | 3 | E |
| TSEA52 | Switching Theory and Logical Design | 6* | G1X | 2 | E |
| TSEA82 | Computer Hardware and Architecture | 4 | G1X | 3 | E |
| Period 2 | | | | | |
| TEIO04 | Project Management | 6 | G2X | 2 | С |
| NBIB45 | Principles in Physiology and Ethics | 6 | G1X | 1 | Е |
| TDTS10 | Computer Architecture | 6 | G1X | 3 | Е |
| TEIM03 | Intercultural Communication | 4 | G1X | 4 | E |
| TKMJ35 | Industrial Ecology | 6 | G2X | 3 | E |
| TKMJ39 | Resource Efficient Products and Production | 6 | G2X | 1 | E |
| TMKM86 | Engineering Materials | 6* | G2X | 4 | E |
| TMMI46 | Industrial Automation | 6 | G2X | 3 | E |
| TMMV57 | Applied Energy Engineering | 6* | G2X | 3 | E |
| TSDT18 | Signals and Systems | 6 | G2X | 3 | E |
| TSEA52 | Switching Theory and Logical Design | 6* | G1X | 4 | E |

Specialisation: Specialization Biotechnical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TFBI22 | Cell Biology and Microbial Processes | 6 | G1X | 3 | С |
| Period 2 | | | | | |
| NBIB45 | Principles in Physiology and Ethics | 6 | G1X | 1 | С |
| TKMJ35 | Industrial Ecology | 6 | G2X | 3 | Е |



Specialisation: Specialization Computer Science and Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|-------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TSEA52 | Switching Theory and Logical Design | 6* | G1X | 2 | С |
| TDDE22 | Data Structures and Algorithms | 6 | G2X | 3 | Е |
| Period 2 | | | | | |
| TDTS10 | Computer Architecture | 6 | G1X | 3 | С |
| TSEA52 | Switching Theory and Logical Design | 6* | G1X | 4 | С |

Specialisation: Specialization Electrical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|-------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TSEA52 | Switching Theory and Logical Design | 6* | G1X | 2 | С |
| TSEA82 | Computer Hardware and Architecture | 4 | G1X | 3 | С |
| Period 2 | | | | | |
| TSDT18 | Signals and Systems | 6 | G2X | 3 | С |
| TSEA52 | Switching Theory and Logical Design | 6* | G1X | 4 | С |

Specialisation: Specialization Energy Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMMV11 | Fluid Mechanics and Heat Transfer | 6 | G2X | 2 | С |
| TMMV57 | Applied Energy Engineering | 6* | G2X | 3 | С |
| Period 2 | | | | | |
| TMMV57 | Applied Energy Engineering | 6* | G2X | 3 | С |
| TKMJ39 | Resource Efficient Products and Production | 6 | G2X | 1 | E |



Specialisation: Specialization Mechanical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|-----------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMHL22 | Solid Mechanics | 6 | G2X | 3 | С |
| TMKM86 | Engineering Materials | 6* | G2X | 4 | С |
| Period 2 | | | | | |
| TMKM86 | Engineering Materials | 6* | G2X | 4 | С |
| TMMI46 | Industrial Automation | 6 | G2X | 3 | E |

Semester 6 (Spring 2018)



| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEIM32 | Industrial Marketing | 6 | G2X | 4 | С |
| TDDD81 | Database Technology | 6* | G2X | 2 | E |
| TDDD83 | Computer Engineering - Bachelor Project | 18* | G2X | 1/3 | E |
| TDDE11 | Object Oriented Programming in Java | 4 | G2X | 1 | E |
| TFBI23 | Ecology and the Environment | 6 | G1X | 3 | E |
| TFBI24 | Biotechnology - Bachelor Project | 18* | G2X | 2 | Е |
| TFYA89 | Natural Sciences for Engineers - Principles and Applications | 6* | G2X | - | E |
| TMMV04 | Engineering Thermodynamics | 6 | G1X | 2 | Е |
| TMMV16 | Energy Engineering - Bachelor Project | 18* | G2X | 3 | Е |
| TMMV58 | Modelling and Simulation of Energy and Heat Transfer Processes | 6 | G2X | 1 | E |
| TMPS32 | Mechanical Engineering - Bachelor Project | 18* | G2X | 3 | Е |
| TSEA56 | Electronics Engineering - Bachelor Project | 16* | G2X | 2 | Е |
| Period 2 | | | | | |
| TDDD12 | Database Technology | 6 | G2X | 4 | E |
| TDDD81 | Database Technology | 6* | G2X | 4 | Е |
| TDDD83 | Computer Engineering - Bachelor Project | 18* | G2X | 1/3 | E |
| TFBI24 | Biotechnology - Bachelor Project | 18* | G2X | 2/3/4 | E |
| TFYA89 | Natural Sciences for Engineers - Principles and Applications | 6* | G2X | - | E |
| TMMV16 | Energy Engineering - Bachelor Project | 18* | G2X | 3 | E |
| TMPS32 | Mechanical Engineering - Bachelor Project | 18* | G2X | 3 | E |
| TSEA56 | Electronics Engineering - Bachelor Project | 16* | G2X | - | E |
| TSKS10 | Signals, Information and Communication | 4 | G2X | 3 | E |
| | | | | | |



Specialisation: Specialization Biotechnical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|----------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TFBI23 | Ecology and the Environment | 6 | G1X | 3 | С |
| TFBI24 | Biotechnology - Bachelor Project | 18* | G2X | 2 | E |
| Period 2 | | | | | |
| TFBI24 | Biotechnology - Bachelor Project | 18* | G2X | 2/3/4 | E |

Specialisation: Specialization Computer Science and Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TDDD81 | Database Technology | 6* | G2X | 2 | E |
| TDDD83 | Computer Engineering - Bachelor Project | 18* | G2X | 1/3 | E |
| Period 2 | | | | | |
| TDDD12 | Database Technology | 6 | G2X | 4 | С |
| TDDD81 | Database Technology | 6* | G2X | 4 | E |
| TDDD83 | Computer Engineering - Bachelor Project | 18* | G2X | 1/3 | E |

Specialisation: Specialization Electrical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TDDE11 | Object Oriented Programming in Java | 4 | G2X | 1 | С |
| TSEA56 | Electronics Engineering - Bachelor Project | 16* | G2X | 2 | E |
| Period 2 | | | | | |
| TSKS10 | Signals, Information and Communication | 4 | G2X | 3 | С |
| TSEA56 | Electronics Engineering - Bachelor Project | 16* | G2X | - | Е |



Specialisation: Specialization Energy Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMMV58 | Modelling and Simulation of Energy and Heat Transfer Processes | 6 | G2X | 1 | С |
| TMMV16 | Energy Engineering - Bachelor Project | 18* | G2X | 3 | E |
| Period 2 | | | | | |
| TMMV16 | Energy Engineering - Bachelor Project | 18* | G2X | 3 | Е |

Specialisation: Specialization Mechanical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMMV04 | Engineering Thermodynamics | 6 | G1X | 2 | С |
| TMPS32 | Mechanical Engineering - Bachelor Project | 18* | G2X | 3 | Е |
| Period 2 | | | | | |
| TMPS32 | Mechanical Engineering - Bachelor Project | 18* | G2X | 3 | E |

Semester 7 (Autumn 2018)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| THTY18 | German for Engineers III | 6* | G2X | - | С |
| TAMS32 | Stochastic Processes | 6 | A1X | 1 | Е |
| TAMS46 | Probability Theory, Second Course | 6 | A1X | 3 | Е |
| TANA21 | Scientific Computing | 6 | G1X | 3 | Е |
| TAOP34 | Large Scale Optimization | 6 | A1X | 3 | E |
| TATA34 | Real Analysis, Honours Course | 6* | G2X | 4 | Е |
| TATA44 | Vector Analysis | 4 | G1X | 1 | Е |
| TATM38 | Mathematical Models in Biology | 6 | A1X | 3 | Е |
| TDDC17 | Artificial Intelligence | 6 | G2X | 3 | Е |
| TDDC88 | Software Engineering | 12* | A1X | 1 | E |
| TDDD23 | Design and Programming of Computer Games | 6 | A1X | 2 | Е |
| TDDD38 | Advanced Programming in C++ | 6* | A1X | 2 | E |
| TDDD43 | Advanced Data Models and Databases | 6* | A1X | 2 | E |
| | | | | | |



| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| TDDE18 | Programming C++ | 6* | G2X | 2 | 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 |
| TEIE72 | Corporate Strategies | 6 | A1X | 4 | Е |
| TEIO07 | Project Based Organization and Management | 6 | A1X | 4 | Е |
| TEIO90 | Innovation Management | 6 | A1X | 2 | E |
| TETS23 | Purchasing | 6 | A1X | 2 | E |
| TETS37 | Basics in Logistics Management | 6 | G2X | 4 | E |
| TKMJ31 | Biofuels for Transportation | 6 | A1N | 1 | Е |
| TKMJ49 | Environmentally Driven Business Development | 6* | A1N | 3 | E |
| TMES09 | Industrial Energy Systems | 6 | A1X | 3 | E |
| TMES27 | Modelling of Energy Systems | 6 | A1X | 3 | Е |
| TMKM16 | Sustainable Material Selection | 6 | A1X | 4 | E |
| TMKT80 | Wood - Material | 6 | G2X | 2 | E |
| TMPS35 | Emerging Factory Technologies | 6 | A1X | 3 | E |
| TMQU03 | Quality Management and Engineering | 6 | G2X | 2 | E |
| TPPE16 | Manufacturing Strategies | 6 | A1X | 2 | 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 |
| TSKS01 | Digital Communication | 6* | A1X | 4 | Е |
| TSKS15 | Detection and Estimation of Signals | 6 | A1X | 2 | Е |
| TSRT62 | Modelling and Simulation | 6 | A1X | 3 | E |
| TSTE86 | Digital Integrated Circuits | 6 | A1X | 2 | Е |
| Period 2 | | | | | |
| THTY18 | German for Engineers III | 6* | G2X | - | С |
| NBID31 | Modelling of Biological Systems | 6 | A1X | 3/4 | E |
| TAOP04 | Mathematical Optimization | 6 | A1X | 4 | E |
| TATA34 | Real Analysis, Honours Course | 6* | G2X | 4 | Е |
| | | | | | |



| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|---------------------|-----|
| TATA45 | Complex Analysis | 6 | G2X | 1 | E |
| TDDC88 | Software Engineering | 12* | 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 |
| TDDD55 | Compilers and Interpreters | 4 | G2X | 1 | E |
| TDDE01 | Machine Learning | 6 | A1X | 1 | E |
| TDDE18 | Programming C++ | 6* | G2X | 1 | E |
| TDEI19 | Management Control | 6 | A1X | 2 | E |
| TDEI21 | Strategic Organisational Application of IT - Workflow and Knowledge Management | 6 | A1X | 4 | E |
| TEIE42 | Industrial Sales Management | 6 | A1X | 4 | E |
| TEIM10 | Industrial Service Development | 6 | A1X | 2 | E |
| TETS27 | Supply Chain Logistics | 6 | A1X | 2 | E |
| TFBI17 | Advanced Project Course in Ecosystem Service Valuation | 6 | A1X | - | Е |
| TKMJ35 | Industrial Ecology | 6 | G2F | 3 | E |
| TKMJ49 | Environmentally Driven Business Development | 6* | A1N | 3 | E |
| TMES45 | Energy Planning and Modelling of Communities | 6 | A1X | 4 | E |
| TMHL63 | Introduction to Computational Mechanics | 6 | G2X | 3 | E |
| ТМКМ90 | Engineering Materials - Deformation and Fracture | 6 | A1X | 2 | E |
| TMKT71 | Affective Engineering | 6 | A1X | 2 | Е |
| TMKT81 | Wood - Realisation | 6 | G2X | 1 | E |
| TMMV18 | Fluid Mechanics | 6 | A1X | 2 | E |
| TMMV54 | Computational Heat Transfer | 6 | A1X | 1 | E |
| TMPS18 | Engineering Design and Product Development | 6 | A1X | 3 | E |
| TMPS22 | Assembly Technology | 6 | A1X | 3 | E |
| TMQU12 | Lean Production | 6 | A1X | 2 | Е |
| TPPE29 | Financial Markets and Instruments | 6 | A1X | 2 | E |
| TPPE76 | Operations Planning and Control | 6 | A1X | 4 | E |
| TSBB06 | Multidimensional Signal Analysis | 6* | A1X | 3 | E |
| | | | | • | |



| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|---------------------|-----|
| TSBB09 | Image Sensors | 6 | A1X | 4 | E |
| TSEA81 | Computer Engineering and Real-time Systems | 6 | A1X | 4 | E |
| TSIT02 | Computer Security | 6 | G2X | 2 | E |
| TSKS01 | Digital Communication | 6* | A1X | 4 | Е |
| TSKS11 | Networks: Models, Algorithms and Applications | 6 | G2X | 3 | E |
| TSRT78 | Digital Signal Processing | 6 | A1X | 2 | E |

Specialisation: Master Profile Automatic Control

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TSDT14 | Signal Theory | 6 | A1X | 1 | С |
| TSRT62 | Modelling and Simulation | 6 | A1X | 3 | С |
| Period 2 | | | | | |
| TSEA81 | Computer Engineering and Real-time Systems | 6 | A1X | 4 | E |
| TSRT78 | Digital Signal Processing | 6 | A1X | 2 | E |

Specialisation: Master Profile Computer Science and Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|----------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TDDC88 | Software Engineering | 12* | A1X | 1 | С |
| Period 2 | | | | | |
| TDDC88 | Software Engineering | 12* | A1X | 1 | С |



Specialisation: Master Profile Digitisation and Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TDEI72 | Strategy and Digitisation - Technology, Standards and Network Effects | 6 | A1X | 4 | С |
| TDEI13 | Enterprise Resource Planning Systems: Process and Implementation | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| TDEI21 | Strategic Organisational Application of IT - Workflow and Knowledge Management | 6 | A1X | 4 | С |
| TDEI19 | Management Control | 6 | A1X | 2 | Е |

Specialisation: Master Profile Energy Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|-----------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMES09 | Industrial Energy Systems | 6 | A1X | 3 | Е |
| TMES27 | Modelling of Energy Systems | 6 | A1X | 3 | Е |
| Period 2 | | | | | |
| TMMV18 | Fluid Mechanics | 6 | A1X | 2 | E |
| TMMV54 | Computational Heat Transfer | 6 | A1X | 1 | E |

Specialisation: Master Profile Finance

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|-----------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TPPE17 | Corporate Finance | 6 | G2X | 4 | E |
| Period 2 | | | | | |
| TPPE29 | Financial Markets and Instruments | 6 | A1X | 2 | С |



Specialisation: Master Profile Industrial Marketing

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEIE72 | Corporate Strategies | 6 | A1X | 4 | Е |
| Period 2 | | | | | |
| TEIE42 | Industrial Sales Management | 6 | A1X | 4 | C/E |
| TEIM10 | Industrial Service Development | 6 | A1X | 2 | C/E |

Specialisation: Master Profile Logistics Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TETS37 | Basics in Logistics Management | 6 | G2X | 4 | С |
| TETS23 | Purchasing | 6 | A1X | 2 | Е |
| Period 2 | | | | | |
| TETS27 | Supply Chain Logistics | 6 | A1X | 2 | C/E |

Specialisation: Master Profile Manufacturing

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|-------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMPS35 | Emerging Factory Technologies | 6 | A1X | 3 | E |
| Period 2 | | | | | |
| TMPS22 | Assembly Technology | 6 | A1X | 3 | С |

Specialisation: Master Profile Operations Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TPPE16 | Manufacturing Strategies | 6 | A1X | 2 | С |
| Period 2 | | | | | |
| TPPE76 | Operations Planning and Control | 6 | A1X | 4 | E |



Specialisation: Master Profile Product Development

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 2 | | | | | |
| TMPS18 | Engineering Design and Product Development | 6 | A1X | 3 | E |

Specialisation: Master Profile Project, Innovation and Entrepreneurship

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEIO90 | Innovation Management | 6 | A1X | 2 | С |
| TEIO07 | Project Based Organization and Management | 6 | A1X | 4 | E |
| TKMJ49 | Environmentally Driven Business Development | 6* | A1N | 3 | E |
| Period 2 | | | | | |
| TKMJ49 | Environmentally Driven Business Development | 6* | A1N | 3 | E |

Specialisation: Master Profile Quality Technology and Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMQU03 | Quality Management and Engineering | 6 | G2X | 2 | С |
| Period 2 | | | | | |
| TMQU12 | Lean Production | 6 | A1X | 2 | Е |

Specialisation: Master Profile Signal and Image Processing

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



Specialisation: Master Profile Strategic Management and Control

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEIE72 | Corporate Strategies | 6 | A1X | 4 | С |
| TEIO90 | Innovation Management | 6 | A1X | 2 | E |
| TKMJ49 | Environmentally Driven Business Development | 6* | A1N | 3 | Е |
| TPPE16 | Manufacturing Strategies | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| TDEI19 | Management Control | 6 | A1X | 2 | С |
| TDEI21 | Strategic Organisational Application of IT - Workflow and Knowledge Management | 6 | A1X | 4 | E |
| TEIE42 | Industrial Sales Management | 6 | A1X | 4 | E |
| TKMJ49 | Environmentally Driven Business Development | 6* | A1N | 3 | E |

Specialisation: Master Profile Telecommunication

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TSDT14 | Signal Theory | 6 | A1X | 1 | С |
| TSKS01 | Digital Communication | 6* | A1X | 4 | С |
| TSKS15 | Detection and Estimation of Signals | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| TSKS01 | Digital Communication | 6* | A1X | 4 | С |
| TSIT02 | Computer Security | 6 | G2X | 2 | Е |
| TSKS11 | Networks: Models, Algorithms and Applications | 6 | G2X | 3 | E |

Specialisation: Master Profile Wood Technology

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMKT80 | Wood - Material | 6 | G2X | 2 | С |
| TMKM16 | Sustainable Material Selection | 6 | A1X | 4 | Е |
| Period 2 | | | | | |
| TMKT81 | Wood - Realisation | 6 | G2X | 1 | С |
| | | | | | |



Specialisation: Specialization Biotechnical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TATM38 | Mathematical Models in Biology | 6 | A1X | 3 | E |
| TKMJ31 | Biofuels for Transportation | 6 | A1N | 1 | E |
| Period 2 | | | | | |
| NBID31 | Modelling of Biological Systems | 6 | A1X | 3/4 | С |
| TFBI17 | Advanced Project Course in Ecosystem Service Valuation | 6 | A1X | - | E |
| TKMJ35 | Industrial Ecology | 6 | G2F | 3 | Е |

Specialisation: Specialization Computer Science and Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TDDC88 | Software Engineering | 12* | A1X | 1 | С |
| TDDC17 | Artificial Intelligence | 6 | G2X | 3 | E |
| TDDD23 | Design and Programming of Computer Games | 6 | A1X | 2 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1X | 2 | E |
| TDDE18 | Programming C++ | 6* | G2X | 2 | E |
| TSTE86 | Digital Integrated Circuits | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| TDDC88 | Software Engineering | 12* | A1X | 1 | С |
| TDDD38 | Advanced Programming in C++ | 6* | A1X | - | Е |
| TDDD55 | Compilers and Interpreters | 4 | G2X | 1 | Е |
| TDDE01 | Machine Learning | 6 | A1X | 1 | E |
| TDDE18 | Programming C++ | 6* | G2X | 1 | Е |
| TSEA81 | Computer Engineering and Real-time Systems | 6 | A1X | 4 | E |
| TSIT02 | Computer Security | 6 | G2X | 2 | Е |
| TSKS11 | Networks: Models, Algorithms and Applications | 6 | G2X | 3 | Е |



Specialisation: Specialization Electrical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TSBB06 | Multidimensional Signal Analysis | 6* | A1X | 2 | E |
| TSBB08 | Digital Image Processing | 6 | A1X | 4 | E |
| TSDT14 | Signal Theory | 6 | A1X | 1 | 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 |
| TSTE86 | Digital Integrated Circuits | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| 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 |
| 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: Specialization Energy Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMES09 | Industrial Energy Systems | 6 | A1X | 3 | E |
| TMES27 | Modelling of Energy Systems | 6 | A1X | 3 | E |
| Period 2 | | | | | |
| TMES45 | Energy Planning and Modelling of Communities | 6 | A1X | 4 | E |
| TMMV18 | Fluid Mechanics | 6 | A1X | 2 | E |
| TMMV54 | Computational Heat Transfer | 6 | A1X | 1 | E |



Specialisation: Specialization Mechanical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TANA21 | Scientific Computing | 6 | G1X | 3 | E |
| TMKM16 | Sustainable Material Selection | 6 | A1X | 4 | E |
| TMKT80 | Wood - Material | 6 | G2X | 2 | E |
| TMPS35 | Emerging Factory Technologies | 6 | A1X | 3 | E |
| Period 2 | | | | | |
| ТМКМ90 | Engineering Materials - Deformation and Fracture | 6 | A1X | 2 | E |
| TMKT71 | Affective Engineering | 6 | A1X | 2 | E |
| TMKT81 | Wood - Realisation | 6 | G2X | 1 | E |
| TMPS18 | Engineering Design and Product Development | 6 | A1X | 3 | E |
| TMPS22 | Assembly Technology | 6 | A1X | 3 | E |

Semester 8 (Spring 2019)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEIE06 | Corporate Planning | 6* | A1X | - | С |
| NBIC50 | Ecotoxicology and Environmental Monitoring | 6 | G2X | 1 | E |
| TAMS29 | Stochastic Processes Applied to Financial Models | 6 | A1X | 3 | E |
| TATA53 | Linear Algebra, Honours Course | 6* | G2X | - | E |
| TBMI26 | Neural Networks and Learning Systems | 6 | A1X | 2 | E |
| TDDB68 | Concurrent Programming and Operating Systems | 6 | G2X | 3 | E |
| TDDD17 | Information Security, Second Course | 6* | A1X | 4 | 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 |
| TDDD51 | Service Design and Innovation | 6 | A1X | 4 | E |
| TDDD57 | Physical Interaction and Game Programming | 6 | A1X | 1 | E |



| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| TDDD75 | Effect-Driven Development and Human- Centered Design of Interactive Systems | 6 | G2X | 3 | E |
| TDDD97 | Web Programming | 6 | G2X | 3 | Е |
| TDDE46 | Software Quality | 6* | A1X | 2 | E |
| TDEI71 | Digitisation, Business Ecologies and Business Models | 6 | A1X | 4 | E |
| TDTS04 | Computer Networks and Distributed Systems | 8 | G2X | 2 | E |
| TEIE88 | Computer Law | 4 | G1X | 1 | Е |
| TEIM09 | International Business | 6 | A1X | 2 | E |
| TEIO13 | Leadership and Organizational Change | 6 | A1X | 4 | E |
| TETS57 | Logistics Analysis | 6 | A1X | 2 | E |
| TFYA45 | Biotechnology Project | 6* | A1X | - | E |
| TFYA62 | Introduction to Biosensor Technology | 6 | G2X | 4 | E |
| TFYA85 | Alternative Energy Sources and their Applications | 6 | G2X | 4 | Е |
| TGTU01 | Technology and Ethics | 6 | G1X | 1 | Е |
| TGTU91 | Oral and Written Communication | 6 | G1X | 2 | E |
| TKMJ10 | Industrial Ecology | 6 | A1X | 1 | E |
| TKMJ47 | Environmental Systems Analysis | 6* | A1N | 2 | E |
| TMES17 | Building Energy Systems | 6 | A1X | 3 | Е |
| TMES43 | Analysis and Modelling of Industrial Energy Systems | 6 | A1X | 1 | E |
| TMKA04 | Wood - Innovation | 6 | A1X | 1 | E |
| TMKT48 | Design Optimization | 6 | A1X | 3 | Е |
| TMMS21 | Mechatronics | 6 | G2X | 1 | E |
| TMPS42 | Production System Automation | 6 | A1X | 1 | E |
| TMQU31 | Statistical Quality Control | 6 | A1X | 2 | E |
| TPPE32 | Financial Risk Management | 6 | A1X | 2 | E |
| TPPE78 | Quantitative Models and Analysis in Operations Management | 6 | A1X | 1 | E |
| TSBK07 | Computer Graphics | 6* | A1X | 4 | E |
| TSBK08 | Data Compression | 6 | A1X | 2 | Е |
| TSKS13 | Wireless Communications | 6 | A1X | 4 | Е |
| TSRT07 | Industrial Control Systems | 6 | A1X | 2 | Е |
| | | | | | |



| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|---------------------|-----|
| TSRT09 | Control Theory | 6 | A1X | 3 | E |
| TSTE08 | Analog and Discrete-Time Integrated Circuits | 6 | A1X | 3 | Е |
| TVCB11 | Cellbiological Methodology | 6 | G2X | 1/4 | E |
| Period 2 | | | | | |
| TEIE06 | Corporate Planning | 6* | A1X | - | С |
| TATA53 | Linear Algebra, Honours Course | 6* | G2X | - | E |
| TDDC78 | Programming of Parallel Computers - Methods and Tools | 6 | A1X | 3 | E |
| TDDD17 | Information Security, Second Course | 6* | A1X | 4 | Е |
| TDDD27 | Advanced Web Programming | 6 | A1X | 3 | Е |
| TDDD38 | Advanced Programming in C++ | 6* | A1X | - | Е |
| TDDE41 | Software Architectures | 6 | A1X | 1 | E |
| TDDE46 | Software Quality | 6* | A1X | 2 | E |
| TDEI35 | Strategy and Management Control | 6 | A1X | 2 | Е |
| TEAE13 | Civil and Commercial Law | 6 | G1X | 2 | E |
| TEIM07 | Industrial Market Research | 6 | A1X | 2 | E |
| TEIO06 | Innovative Entrepreneurship | 6 | A1X | 2 | Е |
| TEIO41 | Corporate Social Responsibility | 6 | A1X | 3 | E |
| TETS36 | Sustainable Logistics Systems | 6 | A1X | 4 | Е |
| TETS56 | Logistics and Quality in Health Care | 6 | A1X | 4 | E |
| TFYA45 | Biotechnology Project | 6* | A1X | - | E |
| TGTU83 | Philosophy of Science | 6 | G1X | 4 | E |
| TKMJ47 | Environmental Systems Analysis | 6* | A1N | 2 | E |
| TMES21 | Industrial Energy Systems | 6 | A1X | 3 | Е |
| TMES41 | Strategic Development of Sustainable Energy Systems | 6 | A1X | 2 | E |
| TMKT57 | Product Modelling | 6 | A1X | 3 | E |
| TMKT83 | Small Scale Renewable Energy Conversion | 6 | A1X | 4 | Е |
| TMME11 | Road Vehicle Dynamics | 6 | A1X | 1 | E |
| TMPS27 | Production Systems | 6 | A1X | 3 | E |
| TMQU04 | Six Sigma Quality | 6 | A1X | 2 | E |
| TMQU13 | Customer Focused Product and Service Development | 6 | A1X | 4 | E |



TSFS06

TSRT14

Diagnosis and Supervision

Sensor Fusion

| Portfolio Management Design and Development of Manufacturing Operations Image and Audio Coding | 6 6 | A1X | 4 | E E |
|--|--|---|--|--|
| Operations | | | 4 | E |
| Image and Audio Coding | 6 | 441/ | | |
| | - | A1X | 4 | Е |
| Computer Graphics | 6* | A1X | 1 | E |
| Diagnosis and Supervision | 6 | A1X | 1 | Е |
| Multiple Antenna Communications | 6 | A1X | 2 | E |
| Signal Processing for Communications | 6 | A1X | 1 | E |
| Sensor Fusion | 6 | A1X | 2 | E |
| Specialisation: Master Profile Aut | omatic (| Control | ! | |
| Course name | Credits | Level | Timetable module | ECV |
| | | | | |
| Industrial Control Systems | 6 | A1X | 2 | E |
| Control Theory | 6 | A1X | 3 | E |
| ı | Diagnosis and Supervision Multiple Antenna Communications Signal Processing for Communications Sensor Fusion Specialisation: Master Profile Aut Course name | Diagnosis and Supervision 6 Multiple Antenna Communications 6 Signal Processing for Communications 6 Sensor Fusion 6 Specialisation: Master Profile Automatic Course name Credits | Diagnosis and Supervision 6 A1X Multiple Antenna Communications 6 A1X Signal Processing for Communications 6 A1X Sensor Fusion 6 A1X Specialisation: Master Profile Automatic Control Course name Credits Level | Diagnosis and Supervision 6 A1X 1 Multiple Antenna Communications 6 A1X 2 Signal Processing for Communications 6 A1X 1 Sensor Fusion 6 A1X 2 Specialisation: Master Profile Automatic Control Course name Credits Level Timetable module |

Specialisation: Master Profile Computer Science and Engineering

6

A1X

A1X

2

Ε

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|------------------------|---------|-------|---------------------|-----|
| Period 2 | | | | | |
| TDDE41 | Software Architectures | 6 | A1X | 1 | E |

Specialisation: Master Profile Digitisation and Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TDEI71 | Digitisation, Business Ecologies and Business Models | 6 | A1X | 4 | С |
| Period 2 | | | | | |
| TDEI35 | Strategy and Management Control | 6 | A1X | 2 | Е |



Specialisation: Master Profile Energy Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMES17 | Building Energy Systems | 6 | A1X | 3 | Е |
| TMES43 | Analysis and Modelling of Industrial Energy Systems | 6 | A1X | 1 | E |
| Period 2 | | | | | |
| TMES21 | Industrial Energy Systems | 6 | A1X | 3 | Е |
| TMKT83 | Small Scale Renewable Energy Conversion | 6 | A1X | 4 | E |

Specialisation: Master Profile Finance

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TPPE32 | Financial Risk Management | 6 | A1X | 2 | С |
| Period 2 | | | | | |
| TPPE33 | Portfolio Management | 6 | A1X | 2 | E |

Specialisation: Master Profile Industrial Marketing

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|----------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEIM09 | International Business | 6 | A1X | 2 | C/E |
| Period 2 | | | | | |
| TEIM07 | Industrial Market Research | 6 | A1X | 2 | С |

Specialisation: Master Profile Logistics Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TETS57 | Logistics Analysis | 6 | A1X | 2 | C/E |
| Period 2 | | | | | |
| TETS36 | Sustainable Logistics Systems | 6 | A1X | 4 | E |
| TETS56 | Logistics and Quality in Health Care | 6 | A1X | 4 | E |



Specialisation: Master Profile Manufacturing

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMPS42 | Production System Automation | 6 | A1X | 1 | E |
| Period 2 | | | | | |
| TMPS27 | Production Systems | 6 | A1X | 3 | С |

Specialisation: Master Profile Operations Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TPPE78 | Quantitative Models and Analysis in Operations Management | 6 | A1X | 1 | E |
| Period 2 | | | | | |
| TPPE74 | Design and Development of Manufacturing Operations | 6 | A1X | 4 | С |

Specialisation: Master Profile Product Development

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMKT48 | Design Optimization | 6 | A1X | 3 | С |
| Period 2 | | | | | |
| TMKT57 | Product Modelling | 6 | A1X | 3 | С |

Specialisation: Master Profile Project, Innovation and Entrepreneurship

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEIO13 | Leadership and Organizational Change | 6 | A1X | 4 | E |
| Period 2 | | | | | |
| TEIO06 | Innovative Entrepreneurship | 6 | A1X | 2 | E |
| TEIO41 | Corporate Social Responsibility | 6 | A1X | 3 | E |



| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMQU31 | Statistical Quality Control | 6 | A1X | 2 | E |
| Period 2 | | | | | |
| TMQU04 | Six Sigma Quality | 6 | A1X | 2 | C/E |
| TMQU13 | Customer Focused Product and Service Development | 6 | A1X | 4 | C/E |
| TETS56 | Logistics and Quality in Health Care | 6 | A1X | 4 | E |

Specialisation: Master Profile 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 |
| TSBK07 | Computer Graphics | 6* | A1X | 4 | E |
| Period 2 | | | | | |
| TSBK02 | Image and Audio Coding | 6 | A1X | 4 | E |
| TSBK07 | Computer Graphics | 6* | A1X | 1 | E |

Specialisation: Master Profile Strategic Management and Control

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEIM09 | International Business | 6 | A1X | 2 | E |
| TEIO13 | Leadership and Organizational Change | 6 | A1X | 4 | E |
| Period 2 | | | | | |
| TEIM07 | Industrial Market Research | 6 | A1X | 2 | E |
| TETS36 | Sustainable Logistics Systems | 6 | A1X | 4 | E |



Specialisation: Master Profile Telecommunication

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TSBK08 | Data Compression | 6 | A1X | 2 | E |
| TSKS13 | Wireless Communications | 6 | A1X | 4 | E |
| Period 2 | | | | | |
| TSBK02 | Image and Audio Coding | 6 | A1X | 4 | E |
| TSKS14 | Multiple Antenna Communications | 6 | A1X | 2 | E |

Specialisation: Master Profile Wood Technology

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMKA04 | Wood - Innovation | 6 | A1X | 1 | С |
| Period 2 | | | | | _ |
| TMKT57 | Product Modelling | 6 | A1X | 3 | Е |
| TMPS27 | Production Systems | 6 | A1X | 3 | E |

Specialisation: Specialization Biotechnical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| NBIC50 | Ecotoxicology and Environmental Monitoring | 6 | G2X | 1 | E |
| TFYA45 | Biotechnology Project | 6* | A1X | - | E |
| TFYA85 | Alternative Energy Sources and their Applications | 6 | G2X | 4 | E |
| TKMJ47 | Environmental Systems Analysis | 6* | A1N | 2 | E |
| Period 2 | | | | | |
| TFYA45 | Biotechnology Project | 6* | A1X | - | Е |
| TKMJ47 | Environmental Systems Analysis | 6* | A1N | 2 | Е |



Specialisation: Specialization Computer Science and Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TBMI26 | Neural Networks and Learning Systems | 6 | A1X | 2 | E |
| TDDB68 | Concurrent Programming and Operating Systems | 6 | G2X | 3 | E |
| TDDD17 | Information Security, Second Course | 6* | A1X | 4 | 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 |
| TDDD75 | Effect-Driven Development and Human- Centered Design of Interactive Systems | 6 | G2X | 3 | E |
| TDTS04 | Computer Networks and Distributed Systems | 8 | G2X | 2 | E |
| Period 2 | | | | | |
| TDDD17 | Information Security, Second Course | 6* | A1X | 4 | E |
| TDDD27 | Advanced Web Programming | 6 | A1X | 3 | E |
| TDDD38 | Advanced Programming in C++ | 6* | A1X | - | E |
| TDDE41 | Software Architectures | 6 | A1X | 1 | E |



Specialisation: Specialization Electrical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TBMI26 | Neural Networks and Learning Systems | 6 | A1X | 2 | Е |
| TSBK07 | Computer Graphics | 6* | A1X | 4 | E |
| TSBK08 | Data Compression | 6 | A1X | 2 | E |
| TSKS13 | Wireless Communications | 6 | A1X | 4 | Е |
| TSRT07 | Industrial Control Systems | 6 | A1X | 2 | E |
| TSRT09 | Control Theory | 6 | A1X | 3 | Е |
| Period 2 | | | | | |
| TSBK02 | Image and Audio Coding | 6 | A1X | 4 | Е |
| TSBK07 | Computer Graphics | 6* | A1X | 1 | E |
| TSFS06 | Diagnosis and Supervision | 6 | A1X | 1 | E |
| TSKS14 | Multiple Antenna Communications | 6 | A1X | 2 | Е |
| TSKS16 | Signal Processing for Communications | 6 | A1X | 1 | E |
| TSRT14 | Sensor Fusion | 6 | A1X | 2 | Е |

Specialisation: Specialization Energy Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TKMJ10 | Industrial Ecology | 6 | A1X | 1 | Е |
| TMES17 | Building Energy Systems | 6 | A1X | 3 | E |
| TMES43 | Analysis and Modelling of Industrial Energy Systems | 6 | A1X | 1 | E |
| Period 2 | | | | | |
| TMES21 | Industrial Energy Systems | 6 | A1X | 3 | Е |
| TMES41 | Strategic Development of Sustainable Energy Systems | 6 | A1X | 2 | E |
| TMKT83 | Small Scale Renewable Energy Conversion | 6 | A1X | 4 | Е |



Specialisation: Specialization Mechanical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMKA04 | Wood - Innovation | 6 | A1X | 1 | E |
| TMKT48 | Design Optimization | 6 | A1X | 3 | E |
| TMMS21 | Mechatronics | 6 | G2X | 1 | E |
| TMPS42 | Production System Automation | 6 | A1X | 1 | E |
| Period 2 | | | | | |
| TMKT57 | Product Modelling | 6 | A1X | 3 | E |
| TMME11 | Road Vehicle Dynamics | 6 | A1X | 1 | E |
| TMPS27 | Production Systems | 6 | A1X | 3 | E |

Semester 9 (Autumn 2019)

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TAMS39 | Multivariate Statistical Methods | 6 | A1X | 4 | Е |
| TATM38 | Mathematical Models in Biology | 6 | A1X | 3 | Е |
| TDDC34 | Technical, Economic and Societal Evaluation of IT-products | 6 | A1X | 3 | E |
| TDDD04 | Software Testing | 6 | A1X | 2 | E |
| TDDE45 | Software Design and Construction | 6 | A1X | 4 | Е |
| TDEI72 | Strategy and Digitisation - Technology, Standards and Network Effects | 6 | A1X | 4 | E |
| TEAE12 | Strategic Analysis and Methods for Strategic Change | 12* | A1X | 2 | E |
| TEIM04 | Industrial Market and Technology Strategies | 12* | A1X | 2 | Е |
| TEIO89 | Innovation and Entrepreneurship - Project Course | 12* | A1X | 4 | E |
| TETS38 | Logistics Project | 12* | A1X | 4 | Е |
| TKMJ31 | Biofuels for Transportation | 6 | A1N | 1 | E |
| TMMV01 | Aerodynamics | 6 | A1X | 2 | E |
| TMMV12 | Gas Turbine Engines | 6 | A1X | 4 | Е |
| TMPE01 | Project Course Advanced - Energy Engineering | 12* | A1X | - | E |
| | | | | | |



| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| TMPM05 | Project Course Advanced - Design Engineering and Product Development | 12* | A1X | - | E |
| TMPM08 | Project Course Advanced - Manufacturing Engineering | 12* | A1X | - | E |
| TMQU27 | Quality Management - Project Course | 12* | A1X | 2 | E |
| TPPE53 | Financial Valuation Methodology | 6 | A1X | 2 | Е |
| TPPE66 | Investment Valuation | 6* | A1X | 4 | Е |
| TPPE73 | Operations Management - Project Course | 12* | A1X | 4 | Е |
| TPPE99 | Simulation in Production and Logistics | 6 | A1X | 3 | E |
| TSFS12 | Autonomous Vehicles - Planning, Control, and Learning Systems | 6 | A1X | 1 | E |
| TSIT03 | Cryptology | 6 | A1X | 2 | E |
| TSKS12 | Modern Channel Coding, Inference and Learning | 6 | A1X | 1 | E |
| Period 2 | | | | | |
| TAOP18 | Supply Chain Optimization | 6 | A1X | 1 | E |
| TDDB44 | Compiler Construction | 6 | A1X | 1 | E |
| TDDC90 | Software Security | 6 | A1X | 1 | E |
| TDDD56 | Multicore and GPU Programming | 6 | A1X | 2 | E |
| TDDD89 | Scientific Method | 6 | A1X | 3 | E |
| TEAE12 | Strategic Analysis and Methods for Strategic Change | 12* | A1X | 2 | E |
| TEIM04 | Industrial Market and Technology Strategies | 12* | A1X | 2 | E |
| TEIM10 | Industrial Service Development | 6 | A1X | 2 | Е |
| TEIO89 | Innovation and Entrepreneurship - Project Course | 12* | A1X | 4 | E |
| TETS31 | Logistics Strategies | 6 | A1X | 4 | Е |
| TETS38 | Logistics Project | 12* | A1X | 2 | Е |
| TFBI17 | Advanced Project Course in Ecosystem Service Valuation | 6 | A1X | - | E |
| TKMJ32 | Integrated Product Service Engineering | 6 | A1N | 3 | E |
| TMES51 | International Energy Markets | 6 | A1X | 1 | Е |
| TMKA03 | Industrial Design | 6 | G2X | 1 | E |
| TMPE01 | Project Course Advanced - Energy Engineering | 12* | A1X | - | E |
| | | | | | |



| _ | | | | | |
|--|---|--------------|------------------|-----------------------------------|------------|
| Course code | Course name | Credits | Level | Timetable module | ECV |
| TMPM05 | Project Course Advanced - Design Engineering and Product Development | 12* | A1X | - | E |
| TMPM08 | Project Course Advanced - Manufacturing Engineering | 12* | A1X | - | E |
| TMQU12 | Lean Production | 6 | A1X | 2 | Е |
| TMQU27 | Quality Management - Project Course | 12* | A1X | 4 | E |
| TPPE61 | Financial Optimization | 6 | A1X | 2 | E |
| TPPE66 | Investment Valuation | 6* | A1X | 4 | E |
| TPPE73 | Operations Management - Project Course | 12* | A1X | 4 | E |
| TSRT08 | Optimal Control | 6 | A1X | 3 | E |
| | Specialisation: Master Profile Aut | omatic (| Control | ! | |
| Course code | Course name | Credits | Level | Timetable module | ECV |
| coue | | | | illouule | |
| Period 2 | | | | illoudie | |
| | Optimal Control | 6 | A1X | 3 | E |
| Period 2 TSRT08 | · | | | 3 | E |
| Period 2 TSRT08 | Optimal Control Specialisation: Master Profile Computer S Course name | | | 3 | E |
| Period 2 TSRT08 S Course | pecialisation: Master Profile Computer S | cience a | nd Eng | 3 ineering Timetable | |
| Period 2 TSRT08 S Course code | pecialisation: Master Profile Computer S | cience a | nd Eng | 3 ineering Timetable | |
| Period 2 TSRT08 S Course code Period 1 | pecialisation: Master Profile Computer S Course name | cience ar | nd Eng Level | 3 ineering Timetable module | ECV |
| Period 2 TSRT08 S Course code Period 1 TDDD04 | pecialisation: Master Profile Computer S Course name Software Testing | Credits | nd Eng Level A1X | 3 ineering Timetable module | ECV |
| Period 2 TSRT08 Course code Period 1 TDDD04 TDDE45 | pecialisation: Master Profile Computer S Course name Software Testing | Credits | nd Eng Level A1X | 3 ineering Timetable module | ECV |
| Period 2 TSRT08 Course code Period 1 TDDD04 TDDE45 Period 2 | pecialisation: Master Profile Computer S Course name Software Testing Software Design and Construction | Credits 6 6 | Level A1X A1X | 3 rineering Timetable module 2 4 | C C |
| Period 2 TSRT08 Course code Period 1 TDDD04 TDDE45 Period 2 | Course name Software Testing Software Design and Construction Scientific Method | Credits 6 6 | Level A1X A1X | 3 rineering Timetable module 2 4 | C C |

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Specialisation: Master Profile Energy Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TKMJ31 | Biofuels for Transportation | 6 | A1N | 1 | E |
| TMMV12 | Gas Turbine Engines | 6 | A1X | 4 | E |
| TMPE01 | Project Course Advanced - Energy Engineering | 12* | A1X | - | E |
| Period 2 | | | | | |
| TMPE01 | Project Course Advanced - Energy Engineering | 12* | A1X | - | E |

Specialisation: Master Profile Finance

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TPPE53 | Financial Valuation Methodology | 6 | A1X | 2 | E |
| TPPE66 | Investment Valuation | 6* | A1X | 4 | E |
| Period 2 | | | | | |
| TPPE61 | Financial Optimization | 6 | A1X | 2 | E |
| TPPE66 | Investment Valuation | 6* | A1X | 4 | E |

Specialisation: Master Profile Industrial Marketing

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|------------------|-----|
| Period 1 | | | | | |
| TEIM04 | Industrial Market and Technology Strategies | 12* | A1X | 2 | С |
| Period 2 | | | | | |
| TEIM04 | Industrial Market and Technology Strategies | 12* | A1X | 2 | С |

Specialisation: Master Profile Logistics Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TETS38 | Logistics Project | 12* | A1X | 4 | С |
| TPPE99 | Simulation in Production and Logistics | 6 | A1X | 3 | Е |
| Period 2 | | | | | |
| TETS38 | Logistics Project | 12* | A1X | 2 | С |
| TETS31 | Logistics Strategies | 6 | A1X | 4 | E |



Specialisation: Master Profile Manufacturing

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMPM08 | Project Course Advanced - Manufacturing Engineering | 12* | A1X | - | С |
| Period 2 | | | | | |
| TMPM08 | Project Course Advanced - Manufacturing Engineering | 12* | A1X | - | С |

Specialisation: Master Profile Operations Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TPPE73 | Operations Management - Project Course | 12* | A1X | 4 | С |
| TPPE99 | Simulation in Production and Logistics | 6 | A1X | 3 | E |
| Period 2 | | | | | |
| TPPE73 | Operations Management - Project Course | 12* | A1X | 4 | С |

Specialisation: Master Profile Product Development

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMPM05 | Project Course Advanced - Design Engineering and Product Development | 12* | A1X | - | С |
| Period 2 | | | | | |
| TMPM05 | Project Course Advanced - Design Engineering and Product Development | 12* | A1X | - | С |

Specialisation: Master Profile Project, Innovation and Entrepreneurship

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEIO89 | Innovation and Entrepreneurship - Project Course | 12* | A1X | 4 | С |
| Period 2 | | | | | |
| TEIO89 | Innovation and Entrepreneurship - Project Course | 12* | A1X | 4 | С |



Specialisation: Master Profile Quality Technology and Management

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|-------------------------------------|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMQU27 | Quality Management - Project Course | 12* | A1X | 2 | С |
| Period 2 | | | | | |
| TMQU27 | Quality Management - Project Course | 12* | A1X | 4 | С |

Specialisation: Master Profile Strategic Management and Control

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TEAE12 | Strategic Analysis and Methods for Strategic Change | 12* | A1X | 2 | С |
| TDEI72 | Strategy and Digitisation - Technology, Standards and Network Effects | 6 | A1X | 4 | E |
| Period 2 | | | | | |
| TEAE12 | Strategic Analysis and Methods for Strategic Change | 12* | A1X | 2 | С |
| TEIM10 | Industrial Service Development | 6 | A1X | 2 | Е |
| TMQU12 | Lean Production | 6 | A1X | 2 | E |

Specialisation: Master Profile Telecommunication

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TSKS12 | Modern Channel Coding, Inference and Learning | 6 | A1X | 1 | E |

Specialisation: Master Profile Wood Technology

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TMPM05 | Project Course Advanced - Design Engineering and Product Development | 12* | A1X | - | С |
| Period 2 | | | | | |
| TMPM05 | Project Course Advanced - Design Engineering and Product Development | 12* | A1X | - | С |



Specialisation: Specialization Biotechnical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TATM38 | Mathematical Models in Biology | 6 | A1X | 3 | E |
| Period 2 | | | | | |
| TFBI17 | Advanced Project Course in Ecosystem Service Valuation | 6 | A1X | - | Е |

Specialisation: Specialization Computer Science and Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TDDD04 | Software Testing | 6 | A1X | 2 | E |
| TDDE45 | Software Design and Construction | 6 | A1X | 4 | E |
| TSFS12 | Autonomous Vehicles - Planning, Control, and Learning Systems | 6 | A1X | 1 | E |
| TSIT03 | Cryptology | 6 | A1X | 2 | E |

Specialisation: Specialization Electrical Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV | |
|----------------|--|---------|-------|---------------------|-----|--|
| Period 1 | | | | | | |
| TSFS12 | Autonomous Vehicles - Planning, Control, and Learning Systems | 6 | A1X | 1 | E | |
| TSIT03 | Cryptology | 6 | A1X | 2 | E | |
| TSKS12 | Modern Channel Coding, Inference and Learning | 6 | A1X | 1 | E | |
| Period 2 | | | | • | | |
| TSRT08 | Optimal Control | 6 | A1X | 3 | E | |



Specialisation: Specialization Energy Engineering

| Course code | Course name | Credits | Level | Timetable module | ECV |
|----------------|--|---------|-------|---------------------|-----|
| Period 1 | | | | | |
| TKMJ31 | Biofuels for Transportation | 6 | A1N | 1 | E |
| TMMV12 | Gas Turbine Engines | 6 | A1X | 4 | E |
| TMPE01 | Project Course Advanced - Energy Engineering | 12* | A1X | - | E |
| Period 2 | | | | | |
| TMPE01 | Project Course Advanced - Energy Engineering | 12* | A1X | - | E |

Specialisation: Specialization Mechanical Engineering

| | - F | | | | |
|----------------|--|---------|-------|---------------------|-----|
| Course code | Course name | Credits | Level | Timetable module | ECV |
| Period 1 | | | | | |
| TMMV01 | Aerodynamics | 6 | A1X | 2 | E |
| TMPM05 | Project Course Advanced - Design Engineering and Product Development | 12* | A1X | - | E |
| TMPM08 | Project Course Advanced - Manufacturing Engineering | 12* | A1X | - | E |
| Period 2 | | | | | |
| TKMJ32 | Integrated Product Service Engineering | 6 | A1N | 3 | E |
| TMKA03 | Industrial Design | 6 | G2X | 1 | E |
| TMPM05 | Project Course Advanced - Design Engineering and Product Development | 12* | A1X | - | E |
| TMPM08 | Project Course Advanced - Manufacturing Engineering | 12* | A1X | - | E |

Semester 10 (Spring 2020)

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

ECV = Elective / Compulsory / Voluntary

*The course is divided into several semesters and/or periods

