

# Industrial Engineering and Management - International, M Sc in Engineering

300 credits

Civilingenjör i industriell ekonomi - internationell

6CIEI

Valid from: 2015 Spring semester

**Determined by**

Board 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 |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TAOP37          | Operations Research, Extended Course                   | 4       | G2X   | 3                | C   |
| TPPE98          | Economic Analysis: Economic Theory                     | 4       | G2X   | 4                | C   |
| TDDE10          | Object Oriented Programming in Java                    | 6       | G2X   | 2                | E   |
| TEIO61          | Industrial Management                                  | 6       | G2X   | 1                | E   |
| TFBI11          | Genetics and Evolution                                 | 6       | G1X   | 2                | E   |
| TMMV04          | Engineering Thermodynamics                             | 6       | G1X   | 2                | E   |
| TMPT07          | Manufacturing Technology                               | 6       | G2X   | 2                | E   |
| TRTE16          | Basic Principles for Environmental Chemistry           | 6*      | G1X   | 1                | E   |
| TSRT12          | Automatic Control                                      | 6       | G2X   | 1                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TAMS65          | Mathematical Statistics, second course                 | 6       | G2X   | 2                | C   |
| THSP42          | Spanish for Engineers II, part 2                       | 2       | G1X   | 4                | C   |
| TPPE24          | Economic Analysis: Decision- and Financial Methodology | 6       | G2X   | 3                | C   |
| 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 |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TFBI11          | Genetics and Evolution                       | 6       | G1X   | 2                | C   |
| TRTE16          | Basic Principles for Environmental Chemistry | 6*      | G1X   | 1                | C   |
| <b>Period 2</b> |  |         |       |                  |     |
| TRTE16          | Basic Principles for Environmental Chemistry | 6*      | G1X   | 1                | C   |

*Specialisation: Specialization Computer Science and Engineering*

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

*Specialisation: Specialization Electrical Engineering*

| Course code     | Course name       | Credits | Level | Timetable module | ECV |
|-----------------|-------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                   |         |       |                  |     |
| TSRT12          | Automatic Control | 6       | G2X   | 1                | C   |
| <b>Period 2</b> |                   |         |       |                  |     |
| TATA57          | Transform Theory  | 4       | G1X   | 1                | C   |

*Specialisation: Specialization Energy Engineering*

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

*Specialisation: Specialization Mechanical Engineering*

| Course code     | Course name              | Credits | Level | Timetable module | ECV |
|-----------------|--------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                          |         |       |                  |     |
| TMPT07          | Manufacturing Technology | 6       | G2X   | 2                | C   |
| <b>Period 2</b> |                          |         |       |                  |     |
| TMKT14          | CAD and Machine Elements | 6       | G2X   | 1                | C   |

## Semester 5 (Autumn 2017)

| Course code     | Course name                                | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TPPE13          | Production and Operations Management       | 6       | G2X   | 1                | C   |
| TSRT22          | Automatic Control                          | 6       | G2X   | 4                | C   |
| TDDE22          | Data Structures and Algorithms             | 6       | G2X   | 3                | E   |
| TFBI22          | Cell Biology and Microbial Processes       | 6       | G1X   | 3                | E   |
| TMHL22          | Solid Mechanics                            | 6       | G2X   | 3                | E   |
| TMKM86          | Engineering Materials                      | 6*      | G2X   | 4                | E   |
| TMMV11          | Fluid Mechanics and Heat Transfer          | 6       | G2X   | 2                | E   |
| 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   |
| <b>Period 2</b> |  |         |       |                  |     |
| TEIO04          | Project Management                         | 6       | G2X   | 2                | C   |
| NBIB45          | Principles in Physiology and Ethics        | 6       | G1F   | 1                | E   |
| TDS10           | Computer Architecture                      | 6       | G1X   | 3                | E   |
| 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 |
|-----------------|--------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                      |         |       |                  |     |
| TFBI22          | Cell Biology and Microbial Processes | 6       | G1X   | 3                | C   |
| <b>Period 2</b> |                                      |         |       |                  |     |
| NBIB45          | Principles in Physiology and Ethics  | 6       | G1F   | 1                | C   |
| TKMJ35          | Industrial Ecology                   | 6       | G2X   | 3                | E   |

*Specialisation: Specialization Computer Science and Engineering*

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

*Specialisation: Specialization Electrical Engineering*

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

*Specialisation: Specialization Energy Engineering*

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

*Specialisation: Specialization Mechanical Engineering*

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

**Semester 6 (Spring 2018)**

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

*Specialisation: Specialization Energy Engineering*

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

*Specialisation: Specialization Mechanical Engineering*

| Course code     | Course name                               | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TMMV04          | Engineering Thermodynamics                | 6       | G1X   | 2                | C   |
| TMPS32          | Mechanical Engineering - Bachelor Project | 18*     | G2X   | 3                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TMPS32          | Mechanical Engineering - Bachelor Project | 18*     | G2X   | 3                | E   |

**Semester 7 (Autumn 2018)**

| Course code     | Course name                              | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| THSP18          | Spanish for Engineers III                | 6*      | G2X   | -                | C   |
| TAMS32          | Stochastic Processes                     | 6       | A1X   | 1                | E   |
| TAMS46          | Probability Theory, Second Course        | 6       | A1X   | 3                | E   |
| TANA21          | Scientific Computing                     | 6       | G1X   | 3                | E   |
| TAOP34          | Large Scale Optimization                 | 6       | A1X   | 3                | E   |
| TATA34          | Real Analysis, Honours Course            | 6*      | G2X   | 4                | E   |
| TATA44          | Vector Analysis                          | 4       | G1X   | 1                | E   |
| TATM38          | Mathematical Models in Biology           | 6       | A1X   | 3                | E   |
| TDDC17          | Artificial Intelligence                  | 6       | G2X   | 3                | E   |
| TDDC88          | Software Engineering                     | 12*     | A1X   | 1                | 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   |

| 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                | E   |
| TEIO07          | Project Based Organization and Management                             | 6       | A1X   | 4                | E   |
| TEIO90          | Innovation Management   | 6       | A1X   | 2                | E   |
| TETS23          | Purchasing  | 6       | A1N   | 2                | E   |
| TETS37          | Basics in Logistics Management  | 6       | G2X   | 4                | E   |
| TKMJ31          | Biofuels for Transportation   | 6       | A1N   | 1                | E   |
| 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                | E   |
| TMKM16          | Sustainable Material Selection  | 6       | A1X   | 4                | E   |
| TMKT80          | Wood - Material   | 6       | G2X   | 2                | E   |
| TMPS35          | Emerging Factory Technologies   | 6       | A1N   | 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                | 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   |
| <b>Period 2</b> |   |         |       |                  |     |
| THSP18          | Spanish for Engineers III   | 6*      | G2X   | -                | C   |
| 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                | E   |

| 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 -<br>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<br>Valuation                         | 6       | A1X   | -                | E   |
| TKMJ35      | Industrial Ecology  | 6       | G2F   | 3                | E   |
| TKMJ49      | Environmentally Driven Business<br>Development                                    | 6*      | A1N   | 3                | E   |
| TMES45      | Energy Planning and Modelling of<br>Communities                                   | 6       | A1X   | 4                | E   |
| TMHL63      | Introduction to Computational Mechanics   | 6       | G2X   | 3                | E   |
| TMKM90      | Engineering Materials - Deformation and<br>Fracture                               | 6       | A1X   | 2                | E   |
| TMKT71      | Affective Engineering   | 6       | A1X   | 2                | E   |
| 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                | E   |
| 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                | E   |
| 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 |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TSDT14          | Signal Theory                              | 6       | A1X   | 1                | C   |
| TSRT62          | Modelling and Simulation                   | 6       | A1X   | 3                | C   |
| <b>Period 2</b> |  |         |       |                  |     |
| 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 |
|-----------------|----------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                      |         |       |                  |     |
| TDDC88          | Software Engineering | 12*     | A1X   | 1                | C   |
| <b>Period 2</b> |                      |         |       |                  |     |
| TDDC88          | Software Engineering | 12*     | A1X   | 1                | C   |

*Specialisation: Master Profile Digitisation and Management*

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

*Specialisation: Master Profile Energy Engineering*

| Course code     | Course name                 | Credits | Level | Timetable module | ECV |
|-----------------|-----------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                             |         |       |                  |     |
| TMES09          | Industrial Energy Systems   | 6       | A1X   | 3                | E   |
| TMES27          | Modelling of Energy Systems | 6       | A1X   | 3                | E   |
| <b>Period 2</b> |                             |         |       |                  |     |
| 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 |
|-----------------|-----------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                   |         |       |                  |     |
| TPPE17          | Corporate Finance                 | 6       | G2X   | 4                | E   |
| <b>Period 2</b> |                                   |         |       |                  |     |
| TPPE29          | Financial Markets and Instruments | 6       | A1X   | 2                | C   |

*Specialisation: Master Profile Industrial Marketing*

| Course code     | Course name                    | Credits | Level | Timetable module | ECV |
|-----------------|--------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                |         |       |                  |     |
| TEIE72          | Corporate Strategies           | 6       | A1X   | 4                | E   |
| <b>Period 2</b> |                                |         |       |                  |     |
| 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 |
|-----------------|--------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                |         |       |                  |     |
| TETS37          | Basics in Logistics Management | 6       | G2X   | 4                | C   |
| TETS23          | Purchasing                     | 6       | A1N   | 2                | E   |
| <b>Period 2</b> |                                |         |       |                  |     |
| TETS27          | Supply Chain Logistics         | 6       | A1X   | 2                | C/E |

*Specialisation: Master Profile Manufacturing*

| Course code     | Course name                   | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                               |         |       |                  |     |
| TMPS35          | Emerging Factory Technologies | 6       | A1N   | 3                | E   |
| <b>Period 2</b> |                               |         |       |                  |     |
| TMPS22          | Assembly Technology           | 6       | A1X   | 3                | C   |

*Specialisation: Master Profile Operations Management*

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

*Specialisation: Master Profile Product Development*

| Course code     | Course name                                | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 2</b> |  |         |       |                  |     |
| 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 |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TEIO90          | Innovation Management                       | 6       | A1X   | 2                | C   |
| TEIO07          | Project Based Organization and Management   | 6       | A1X   | 4                | E   |
| TKMJ49          | Environmentally Driven Business Development | 6*      | A1N   | 3                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| 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 |
|-----------------|------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                    |         |       |                  |     |
| TMQU03          | Quality Management and Engineering | 6       | G2X   | 2                | C   |
| <b>Period 2</b> |                                    |         |       |                  |     |
| TMQU12          | Lean Production                    | 6       | A1X   | 2                | E   |

*Specialisation: Master Profile Signal and Image Processing*

| Course code     | Course name                      | Credits | Level | Timetable module | ECV |
|-----------------|----------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                  |         |       |                  |     |
| TSBB08          | Digital Image Processing         | 6       | A1X   | 4                | C   |
| TSDT14          | Signal Theory                    | 6       | A1X   | 1                | C   |
| TSBB06          | Multidimensional Signal Analysis | 6*      | A1X   | 2                | E   |
| <b>Period 2</b> |                                  |         |       |                  |     |
| 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 |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TEIE72          | Corporate Strategies   | 6       | A1X   | 4                | C   |
| TEIO90          | Innovation Management  | 6       | A1X   | 2                | E   |
| TKMJ49          | Environmentally Driven Business Development                                    | 6*      | A1N   | 3                | E   |
| TPPE16          | Manufacturing Strategies   | 6       | A1X   | 2                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TDEI19          | Management Control   | 6       | A1X   | 2                | C   |
| 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 |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TSDT14          | Signal Theory                                 | 6       | A1X   | 1                | C   |
| TSKS01          | Digital Communication                         | 6*      | A1X   | 4                | C   |
| TSKS15          | Detection and Estimation of Signals           | 6       | A1X   | 2                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TSKS01          | Digital Communication                         | 6*      | A1X   | 4                | C   |
| TSIT02          | Computer Security                             | 6       | G2X   | 2                | E   |
| TSKS11          | Networks: Models, Algorithms and Applications | 6       | G2X   | 3                | E   |

*Specialisation: Master Profile Wood Technology*

| Course code     | Course name                    | Credits | Level | Timetable module | ECV |
|-----------------|--------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                |         |       |                  |     |
| TMKT80          | Wood - Material                | 6       | G2X   | 2                | C   |
| TMKM16          | Sustainable Material Selection | 6       | A1X   | 4                | E   |
| <b>Period 2</b> |                                |         |       |                  |     |
| TMKT81          | Wood - Realisation             | 6       | G2X   | 1                | C   |

*Specialisation: Specialization Biotechnical Engineering*

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

*Specialisation: Specialization Computer Science and Engineering*

| Course code     | Course name                                   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TDDC88          | Software Engineering                          | 12*     | A1X   | 1                | C   |
| 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   |
| <b>Period 2</b> |   |         |       |                  |     |
| TDDC88          | Software Engineering                          | 12*     | A1X   | 1                | C   |
| TDDD38          | Advanced Programming in C++                   | 6*      | A1X   | -                | E   |
| TDDD55          | Compilers and Interpreters                    | 4       | G2X   | 1                | E   |
| TDDE01          | Machine Learning                              | 6       | A1X   | 1                | E   |
| TDDE18          | Programming C++                               | 6*      | G2X   | 1                | E   |
| TSEA81          | Computer Engineering and Real-time Systems    | 6       | A1X   | 4                | E   |
| TSIT02          | Computer Security                             | 6       | G2X   | 2                | E   |
| TSKS11          | Networks: Models, Algorithms and Applications | 6       | G2X   | 3                | E   |

*Specialisation: Specialization Electrical Engineering*

| Course code     | Course name                                   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| 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   |
| <b>Period 2</b> |   |         |       |                  |     |
| 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 |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TMES09          | Industrial Energy Systems                    | 6       | A1X   | 3                | E   |
| TMES27          | Modelling of Energy Systems                  | 6       | A1X   | 3                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| 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 |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| 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       | A1N   | 3                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TMKM90          | 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 |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TEIE06          | Corporate Planning                                | 6*      | A1X   | -                | C   |
| 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                | E   |
| TDDE46      | Software Quality   | 6*      | A1N   | 2                | E   |
| TDEI71      | Digitisation, Business Ecologies and Business Models                       | 6       | A1N   | 4                | E   |
| TDTS04      | Computer Networks and Distributed Systems                                  | 8       | G2X   | 2                | E   |
| TEIE88      | Computer Law   | 4       | G1X   | 1                | E   |
| 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                | E   |
| TGTU01      | Technology and Ethics  | 6       | G1X   | 1                | E   |
| TGTU91      | Oral and Written Communication   | 6       | G1X   | 2                | E   |
| TKMJ10      | Industrial Ecology   | 6       | A1X   | 1                | E   |
| TKMJ47      | Environmental Systems Analysis   | 6*      | A1N   | 2                | E   |
| TMES17      | Building Energy Systems  | 6       | A1X   | 3                | E   |
| 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                | E   |
| 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                | E   |
| TSKS13      | Wireless Communications  | 6       | A1F   | 4                | E   |
| TSRT07      | Industrial Control Systems   | 6       | A1X   | 2                | E   |

| 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                | E   |
| TVCB11          | Cellbiological Methodology                            | 6       | G2X   | 1/4              | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TEIE06          | Corporate Planning                                    | 6*      | A1X   | -                | C   |
| 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                | E   |
| TDDD27          | Advanced Web Programming                              | 6       | A1X   | 3                | E   |
| TDDD38          | Advanced Programming in C++                           | 6*      | A1X   | -                | E   |
| TDDE41          | Software Architectures                                | 6       | A1X   | 1                | E   |
| TDDE46          | Software Quality                                      | 6*      | A1N   | 2                | E   |
| TDEI35          | Strategy and Management Control                       | 6       | A1X   | 2                | E   |
| TEAE13          | Civil and Commercial Law                              | 6       | G1X   | 2                | E   |
| TEIM07          | Industrial Market Research                            | 6       | A1X   | 2                | E   |
| TEIO06          | Innovative Entrepreneurship                           | 6       | A1X   | 2                | E   |
| TEIO41          | Corporate Social Responsibility                       | 6       | A1X   | 3                | E   |
| TETS36          | Sustainable Logistics Systems                         | 6       | A1X   | 4                | E   |
| 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                | E   |
| 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                | E   |
| 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   |

| Course code | Course name  | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|------------------|-----|
| TPPE33      | Portfolio Management                               | 6       | A1X   | 2                | E   |
| TPPE74      | Design and Development of Manufacturing Operations | 6       | A1X   | 4                | E   |
| TSBK02      | Image and Audio Coding                             | 6       | A1X   | 4                | E   |
| TSBK07      | Computer Graphics                                  | 6*      | A1X   | 1                | E   |
| TSFS06      | Diagnosis and Supervision                          | 6       | A1N   | 1                | E   |
| TSKS14      | Multiple Antenna Communications                    | 6       | A1X   | 2                | E   |
| TSKS16      | Signal Processing for Communications               | 6       | A1X   | 1                | E   |
| TSRT14      | Sensor Fusion                                      | 6       | A1X   | 2                | E   |

*Specialisation: Master Profile Automatic Control*

| Course code     | Course name                | Credits | Level | Timetable module | ECV |
|-----------------|----------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                            |         |       |                  |     |
| TSRT07          | Industrial Control Systems | 6       | A1X   | 2                | E   |
| TSRT09          | Control Theory             | 6       | A1X   | 3                | E   |
| <b>Period 2</b> |                            |         |       |                  |     |
| TSFS06          | Diagnosis and Supervision  | 6       | A1N   | 1                | E   |
| TSRT14          | Sensor Fusion              | 6       | A1X   | 2                | E   |

*Specialisation: Master Profile Computer Science and Engineering*

| Course code     | Course name            | Credits | Level | Timetable module | ECV |
|-----------------|------------------------|---------|-------|------------------|-----|
| <b>Period 2</b> |                        |         |       |                  |     |
| TDDE41          | Software Architectures | 6       | A1X   | 1                | C   |

*Specialisation: Master Profile Digitisation and Management*

| Course code     | Course name  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TDEI71          | Digitisation, Business Ecologies and Business Models | 6       | A1N   | 4                | C   |
| <b>Period 2</b> |  |         |       |                  |     |
| TDEI35          | Strategy and Management Control                      | 6       | A1X   | 2                | C   |

*Specialisation: Master Profile Energy Engineering*

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

*Specialisation: Master Profile Finance*

| Course code     | Course name               | Credits | Level | Timetable module | ECV |
|-----------------|---------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                           |         |       |                  |     |
| TPPE32          | Financial Risk Management | 6       | A1X   | 2                | C   |
| <b>Period 2</b> |                           |         |       |                  |     |
| TPPE33          | Portfolio Management      | 6       | A1X   | 2                | E   |

*Specialisation: Master Profile Industrial Marketing*

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

*Specialisation: Master Profile Logistics Management*

| Course code     | Course name                          | Credits | Level | Timetable module | ECV |
|-----------------|--------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                      |         |       |                  |     |
| TETS57          | Logistics Analysis                   | 6       | A1X   | 2                | C/E |
| <b>Period 2</b> |                                      |         |       |                  |     |
| 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 |
|-----------------|------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                              |         |       |                  |     |
| TMPS42          | Production System Automation | 6       | A1X   | 1                | E   |
| <b>Period 2</b> |                              |         |       |                  |     |
| TMPS27          | Production Systems           | 6       | A1X   | 3                | C   |

*Specialisation: Master Profile Operations Management*

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

*Specialisation: Master Profile Product Development*

| Course code     | Course name         | Credits | Level | Timetable module | ECV |
|-----------------|---------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                     |         |       |                  |     |
| TMKT48          | Design Optimization | 6       | A1X   | 3                | C   |
| <b>Period 2</b> |                     |         |       |                  |     |
| TMKT57          | Product Modelling   | 6       | A1X   | 3                | C   |

*Specialisation: Master Profile Project, Innovation and Entrepreneurship*

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

*Specialisation: Master Profile Quality Technology and Management*

| Course code     | Course name                                      | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TMQU31          | Statistical Quality Control                      | 6       | A1X   | 2                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| 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 |
|-----------------|--------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                      |         |       |                  |     |
| TBMI26          | Neural Networks and Learning Systems | 6       | A1X   | 2                | E   |
| TSBK07          | Computer Graphics                    | 6*      | A1X   | 4                | E   |
| <b>Period 2</b> |                                      |         |       |                  |     |
| 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 |
|-----------------|--------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                      |         |       |                  |     |
| TEIM09          | International Business               | 6       | A1X   | 2                | E   |
| TEIO13          | Leadership and Organizational Change | 6       | A1X   | 4                | E   |
| <b>Period 2</b> |                                      |         |       |                  |     |
| 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 |
|-----------------|---------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                 |         |       |                  |     |
| TSBK08          | Data Compression                | 6       | A1X   | 2                | E   |
| TSKS13          | Wireless Communications         | 6       | A1F   | 4                | E   |
| <b>Period 2</b> |                                 |         |       |                  |     |
| 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 |
|-----------------|--------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                    |         |       |                  |     |
| TMKA04          | Wood - Innovation  | 6       | A1X   | 1                | C   |
| <b>Period 2</b> |                    |         |       |                  |     |
| TMKT57          | Product Modelling  | 6       | A1X   | 3                | E   |
| TMPS27          | Production Systems | 6       | A1X   | 3                | E   |

*Specialisation: Specialization Biotechnical Engineering*

| Course code     | Course name                                       | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| 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   |
| <b>Period 2</b> |   |         |       |                  |     |
| TFYA45          | Biotechnology Project                             | 6*      | A1X   | -                | E   |
| TKMJ47          | Environmental Systems Analysis                    | 6*      | A1N   | 2                | E   |

*Specialisation: Specialization Computer Science and Engineering*

| Course code     | Course name  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| 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   |
| <b>Period 2</b> |  |         |       |                  |     |
| 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 |
|-----------------|--------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                      |         |       |                  |     |
| TBMI26          | Neural Networks and Learning Systems | 6       | A1X   | 2                | E   |
| TSBK07          | Computer Graphics                    | 6*      | A1X   | 4                | E   |
| TSBK08          | Data Compression                     | 6       | A1X   | 2                | E   |
| TSKS13          | Wireless Communications              | 6       | A1F   | 4                | E   |
| TSRT07          | Industrial Control Systems           | 6       | A1X   | 2                | E   |
| TSRT09          | Control Theory                       | 6       | A1X   | 3                | E   |
| <b>Period 2</b> |                                      |         |       |                  |     |
| TSBK02          | Image and Audio Coding               | 6       | A1X   | 4                | E   |
| TSBK07          | Computer Graphics                    | 6*      | A1X   | 1                | E   |
| TSFS06          | Diagnosis and Supervision            | 6       | A1N   | 1                | E   |
| TSKS14          | Multiple Antenna Communications      | 6       | A1X   | 2                | E   |
| TSKS16          | Signal Processing for Communications | 6       | A1X   | 1                | E   |
| TSRT14          | Sensor Fusion                        | 6       | A1X   | 2                | E   |

*Specialisation: Specialization Energy Engineering*

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

*Specialisation: Specialization Mechanical Engineering*

| Course code     | Course name                  | Credits | Level | Timetable module | ECV |
|-----------------|------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                              |         |       |                  |     |
| 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   |
| <b>Period 2</b> |                              |         |       |                  |     |
| 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 |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TAMS39          | Multivariate Statistical Methods                                      | 6       | A1X   | 4                | E   |
| TATM38          | Mathematical Models in Biology  | 6       | A1X   | 3                | E   |
| 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                | E   |
| TDEI72          | Strategy and Digitisation - Technology, Standards and Network Effects | 6       | A1X   | 4                | E   |
| TEAE12          | Strategic Analysis and Methods for Strategic Change                   | 12*     | A1F   | 2                | E   |
| TEIM04          | Industrial Market and Technology Strategies                           | 12*     | A1X   | 2                | E   |
| TEIO89          | Innovation and Entrepreneurship - Project Course                      | 12*     | A1X   | 4                | E   |
| TETS38          | Logistics Project   | 12*     | A1X   | 4                | E   |
| TKMJ31          | Biofuels for Transportation   | 6       | A1N   | 1                | E   |
| TMMV01          | Aerodynamics  | 6       | A1X   | 2                | E   |
| TMMV12          | Gas Turbine Engines   | 6       | A1X   | 4                | 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   |
| TMQU27          | Quality Management - Project Course                                  | 12*     | A1X   | 2                | E   |
| TPPE53          | Financial Valuation Methodology                                      | 6       | A1X   | 2                | E   |
| TPPE66          | Investment Valuation   | 6*      | A1X   | 4                | E   |
| TPPE73          | Operations Management - Project Course                               | 12*     | A1X   | 4                | E   |
| TPPE99          | Simulation in Production and Logistics                               | 6       | A1X   | 3                | E   |
| TSFS12          | Autonomous Vehicles - Planning, Control, and Learning Systems        | 6       | A1X   | 1                | E   |
| TSIT03          | Cryptography   | 6       | A1X   | 2                | E   |
| TSKS12          | Modern Channel Coding, Inference and Learning                        | 6       | A1X   | 1                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| 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*     | A1F   | 2                | E   |
| TEIM04          | Industrial Market and Technology Strategies                          | 12*     | A1X   | 2                | E   |
| TEIM10          | Industrial Service Development                                       | 6       | A1X   | 2                | E   |
| TEIO89          | Innovation and Entrepreneurship - Project Course                     | 12*     | A1X   | 4                | E   |
| TETS31          | Logistics Strategies   | 6       | A1X   | 4                | E   |
| TETS38          | Logistics Project  | 12*     | A1X   | 2                | E   |
| 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                | E   |
| 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                | E   |
| 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 Automatic Control*

| Course code     | Course name     | Credits | Level | Timetable module | ECV |
|-----------------|-----------------|---------|-------|------------------|-----|
| <b>Period 2</b> |                 |         |       |                  |     |
| TSRT08          | Optimal Control | 6       | A1X   | 3                | E   |

*Specialisation: Master Profile Computer Science and Engineering*

| Course code     | Course name                      | Credits | Level | Timetable module | ECV |
|-----------------|----------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                  |         |       |                  |     |
| TDDD04          | Software Testing                 | 6       | A1X   | 2                | C   |
| TDDE45          | Software Design and Construction | 6       | A1X   | 4                | C   |
| <b>Period 2</b> |                                  |         |       |                  |     |
| TDDD89          | Scientific Method                | 6       | A1X   | 3                | C   |

*Specialisation: Master Profile Digitisation and Management*

| Course code     | Course name  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TDDC34          | Technical, Economic and Societal Evaluation of IT-products | 6       | A1X   | 3                | E   |



*Specialisation: Master Profile Energy Engineering*

| Course code     | Course name                                  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| 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   |
| <b>Period 2</b> |  |         |       |                  |     |
| TMPE01          | Project Course Advanced - Energy Engineering | 12*     | A1X   | -                | E   |

*Specialisation: Master Profile Finance*

| Course code     | Course name                     | Credits | Level | Timetable module | ECV |
|-----------------|---------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                 |         |       |                  |     |
| TPPE53          | Financial Valuation Methodology | 6       | A1X   | 2                | E   |
| TPPE66          | Investment Valuation            | 6*      | A1X   | 4                | E   |
| <b>Period 2</b> |                                 |         |       |                  |     |
| 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 |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TEIM04          | Industrial Market and Technology Strategies | 12*     | A1X   | 2                | C   |
| <b>Period 2</b> |   |         |       |                  |     |
| TEIM04          | Industrial Market and Technology Strategies | 12*     | A1X   | 2                | C   |

*Specialisation: Master Profile Logistics Management*

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

*Specialisation: Master Profile Manufacturing*

| Course code     | Course name   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TMPM08          | Project Course Advanced - Manufacturing Engineering | 12*     | A1X   | -                | C   |
| <b>Period 2</b> |   |         |       |                  |     |
| TMPM08          | Project Course Advanced - Manufacturing Engineering | 12*     | A1X   | -                | C   |

*Specialisation: Master Profile Operations Management*

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

*Specialisation: Master Profile Product Development*

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

*Specialisation: Master Profile Project, Innovation and Entrepreneurship*

| Course code     | Course name                                      | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TEIO89          | Innovation and Entrepreneurship - Project Course | 12*     | A1X   | 4                | C   |
| <b>Period 2</b> |  |         |       |                  |     |
| TEIO89          | Innovation and Entrepreneurship - Project Course | 12*     | A1X   | 4                | C   |

*Specialisation: Master Profile Quality Technology and Management*

| Course code     | Course name                         | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                     |         |       |                  |     |
| TMQU27          | Quality Management - Project Course | 12*     | A1X   | 2                | C   |
| <b>Period 2</b> |                                     |         |       |                  |     |
| TMQU27          | Quality Management - Project Course | 12*     | A1X   | 4                | C   |

*Specialisation: Master Profile Strategic Management and Control*

| Course code     | Course name   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TEAE12          | Strategic Analysis and Methods for Strategic Change                   | 12*     | A1F   | 2                | C   |
| TDEI72          | Strategy and Digitisation - Technology, Standards and Network Effects | 6       | A1X   | 4                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TEAE12          | Strategic Analysis and Methods for Strategic Change                   | 12*     | A1F   | 2                | C   |
| TEIM10          | Industrial Service Development  | 6       | A1X   | 2                | E   |
| TMQU12          | Lean Production   | 6       | A1X   | 2                | E   |

*Specialisation: Master Profile Telecommunication*

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

*Specialisation: Specialization Biotechnical Engineering*

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

*Specialisation: Specialization Computer Science and Engineering*

| Course code     | Course name   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| 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 |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| 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   |
| <b>Period 2</b> |   |         |       |                  |     |
| TSRT08          | Optimal Control   | 6       | A1X   | 3                | E   |

*Specialisation: Specialization Energy Engineering*

| Course code     | Course name                                  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| 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   |
| <b>Period 2</b> |  |         |       |                  |     |
| TMPE01          | Project Course Advanced - Energy Engineering | 12*     | A1X   | -                | E   |

*Specialisation: Specialization Mechanical Engineering*

| Course code     | Course name  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| 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   |
| <b>Period 2</b> |  |         |       |                  |     |
| 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 |
|-----------------|----------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                  |         |       |                  |     |
| TQXX33          | Degree project - Master's Thesis | 30*     | A1X   | -                | C   |
| <b>Period 2</b> |                                  |         |       |                  |     |
| TQXX33          | Degree project - Master's Thesis | 30*     | A1X   | -                | C   |

ECV = Elective / Compulsory / Voluntary

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