

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

300 credits

Civilingenjör i industriell ekonomi - internationell

6CIEI

Valid from: 2017 Spring semester

**Determined by**

Board of Studies for Industrial  
Engineering and Logistics

**Date determined**

2017-01-25

## Entry requirements

### Degree in Swedish

Civilingenjör 300 hp och Teknologie master 120 hp

## Curriculum

### Semester 1 (Autumn 2017)

| Course code     | Course name                      | Credits | Level | Timetable module | ECV |
|-----------------|----------------------------------|---------|-------|------------------|-----|
| <b>Period 0</b> |                                  |         |       |                  |     |
| TATM79          | Foundation Course in Mathematics | 6*      | G1X   | -                | C   |
| <b>Period 1</b> |                                  |         |       |                  |     |
| TATA31          | Linear Algebra                   | 8*      | G1N   | 2                | C   |
| TATM79          | Foundation Course in Mathematics | 6*      | G1X   | 2                | C   |
| TEIE17          | Industrial Economics             | 10*     | G1X   | 4                | C   |
| TEIK21          | Chinese for Engineers I, Part 1  | 2*      | G1X   | 3                | C   |
| <b>Period 2</b> |                                  |         |       |                  |     |
| TATA31          | Linear Algebra                   | 8*      | G1N   | 2                | C   |
| TATA41          | Calculus in One Variable 1       | 6       | G1F   | 3                | C   |
| TEIE17          | Industrial Economics             | 10*     | G1X   | 4                | C   |
| TEIK21          | Chinese for Engineers I, Part 1  | 2*      | G1X   | 1                | C   |

### Semester 2 (Spring 2018)

| Course code     | Course name                         | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                     |         |       |                  |     |
| TATA42          | Calculus in One Variable 2          | 6       | G1F   | 2                | C   |
| TDDD11          | Introduction to Programming         | 8*      | G1X   | 4                | C   |
| TEIK22          | Chinese for Engineers I, Part 2     | 6*      | G1F   | 3                | C   |
| <b>Period 2</b> |                                     |         |       |                  |     |
| TAOP52          | Introduction to Operations Research | 4       | G1F   | 3                | C   |
| TATA69          | Calculus in Several Variables       | 6       | G1F   | 2                | C   |
| TDDD11          | Introduction to Programming         | 8*      | G1X   | 4                | C   |
| TEIK22          | Chinese for Engineers I, Part 2     | 6*      | G1F   | 1                | C   |

### Semester 3 (Autumn 2018)

| Course code     | Course name                           | Credits | Level | Timetable module | ECV |
|-----------------|---------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                       |         |       |                  |     |
| TEIK41          | Chinese for Engineers II, Part 1      | 6*      | G1N   | 4                | C   |
| TKMJ51          | Corporate Sustainability Management   | 6       | G1F   | 2                | C   |
| TMME27          | Engineering Mechanics                 | 10*     | G1X   | 3                | C   |
| <b>Period 2</b> |                                       |         |       |                  |     |
| TAMS79          | Mathematical Statistics, First Course | 4       | G1F   | 3                | C   |
| TEIK41          | Chinese for Engineers II, Part 1      | 6*      | G1N   | 4                | C   |
| TMME27          | Engineering Mechanics                 | 10*     | G1X   | 1                | C   |
| TPPE98          | Economic Analysis: Economic Theory    | 4       | G2X   | 2                | C   |

### Semester 4 (Spring 2019)

| Course code     | Course name  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TAMS65          | Mathematical Statistics, second course                 | 6*      | G2F   | 4                | C   |
| TAOP62          | Operations Research, Extended Course                   | 6       | G2F   | 3                | C   |
| TEIK42          | Chinese for Engineers II, Part 2                       | 2*      | G1F   | -                | C   |
| TDDE10          | Object Oriented Programming in Java                    | 6       | G2F   | 1                | E   |
| TEIO61          | Industrial Management                                  | 6       | G2X   | 1                | E   |
| TFBI11          | Genetics and Evolution                                 | 6       | G1N   | 2                | E   |
| TMMV04          | Engineering Thermodynamics                             | 6       | G1X   | 2                | E   |
| TMPT07          | Manufacturing Technology                               | 6       | G2X   | 2                | E   |
| TSEA22          | Switching Theory and Logical Design                    | 6       | G1N   | 2                | E   |
| TSRT04          | Introduction in Matlab                                 | 2       | G1X   | 2                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TAMS65          | Mathematical Statistics, second course                 | 6*      | G2F   | 2                | C   |
| TEIK42          | Chinese for Engineers II, Part 2                       | 2*      | G1F   | 4                | C   |
| TPPE24          | Economic Analysis: Decision- and Financial Methodology | 6       | G2X   | 3                | C   |
| TATA82          | Discrete Mathematics                                   | 6       | G1F   | 1                | E   |
| TFKE52          | Fundamentals of Chemistry                              | 6       | G1X   | 1                | E   |
| TMES44          | Energy Systems - Supply and Demand                     | 6       | G2F   | 1                | E   |
| TMKT14          | CAD and Machine Elements                               | 6       | G2X   | 1                | E   |
| TSEA82          | Computer Hardware and Architecture                     | 4       | G1X   | 4                | E   |
| TSRT04          | Introduction in Matlab                                 | 2       | 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       | G1N   | 2                | C   |
| <b>Period 2</b> |                           |         |       |                  |     |
| TFKE52          | Fundamentals of 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       | G2F   | 1                | C   |
| <b>Period 2</b> |                                     |         |       |                  |     |
| TATA82          | Discrete Mathematics                | 6       | G1F   | 1                | C   |

*Specialisation: Specialization Electrical Engineering*

| Course code     | Course name                         | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                     |         |       |                  |     |
| TSEA22          | Switching Theory and Logical Design | 6       | G1N   | 2                | C   |
| <b>Period 2</b> |                                     |         |       |                  |     |
| TSEA82          | Computer Hardware and Architecture  | 4       | G1X   | 4                | 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       | G2F   | 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 2019)**

| 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   |
| TDDE18          | Programming C++                            | 6*      | G2F   | 2                | E   |
| TDDE22          | Data Structures and Algorithms             | 6       | G2F   | 3                | E   |
| TEIO91          | Project Management                         | 6*      | G2X   | -                | E   |
| TFBI22          | Cell Biology and Microbial Processes       | 6       | G1F   | 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   |
| TSDT84          | Signals and Systems, and Transform Theory  | 8*      | G2X   | 4                | E   |
| TSEA52          | Switching Theory and Logical Design        | 6*      | G1X   | 2                | E   |
| TSTE95          | Electronics                                | 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   |
| TDDE18          | Programming C++                            | 6*      | G2F   | 1                | E   |
| TDTS10          | Computer Architecture                      | 6       | G1F   | 3                | E   |
| TEIM03          | Intercultural Communication                | 4       | G1X   | 4                | E   |
| TEIO91          | Project Management                         | 6*      | G2X   | -                | E   |
| TKMJ35          | Industrial Ecology                         | 6       | G2F   | 3                | E   |
| TKMJ39          | Resource Efficient Products and Production | 6       | G2F   | 1                | E   |
| TMKM86          | Engineering Materials                      | 6*      | G2X   | 4                | E   |
| TMMI46          | Industrial Automation                      | 6       | G2F   | 3                | E   |
| TMMV57          | Applied Energy Engineering                 | 6*      | G2X   | 3                | E   |
| TSDT84          | Signals and Systems, and Transform Theory  | 8*      | 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       | G1F   | 3                | C   |
| <b>Period 2</b> |                                      |         |       |                  |     |
| NBIB45          | Principles in Physiology and Ethics  | 6       | G1F   | 1                | C   |
| 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> |                                     |         |       |                  |     |
| TSEA52          | Switching Theory and Logical Design | 6*      | G1X   | 2                | C   |
| TDDE22          | Data Structures and Algorithms      | 6       | G2F   | 3                | E   |
| <b>Period 2</b> |                                     |         |       |                  |     |
| TDTS10          | Computer Architecture               | 6       | G1F   | 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> |   |         |       |                  |     |
| TDDE18          | Programming C++                           | 6*      | G2F   | 2                | C   |
| TSDT84          | Signals and Systems, and Transform Theory | 8*      | G2X   | 4                | C   |
| TSTE95          | Electronics                               | 4       | G1X   | 3                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TDDE18          | Programming C++                           | 6*      | G2F   | 1                | C   |
| TSDT84          | Signals and Systems, and Transform Theory | 8*      | G2X   | 3                | 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       | G2F   | 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       | G2F   | 3                | E   |

**Semester 6 (Spring 2020)**

| Course code     | Course name  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TEIM32          | Industrial Marketing   | 6       | G2X   | 4                | C   |
| TDDD81          | Database Technology  | 6*      | G2F   | 2                | E   |
| TDDD83          | Computer Engineering - Bachelor Project                        | 18*     | G2E   | 1/3              | E   |
| TFBI23          | Ecology and the Environment                                    | 6       | G1N   | 3                | E   |
| TFBI24          | Biotechnology - Bachelor Project                               | 18*     | G2E   | 2                | 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   |
| TSBB18          | Embedded Perception Systems                                    | 6       | G2X   | 3                | E   |
| TSEA56          | Electronics Engineering - Bachelor Project                     | 16*     | G2X   | 2                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TDDD12          | Database Technology  | 6       | G2F   | 4                | E   |
| TDDD81          | Database Technology  | 6*      | G2F   | 4                | E   |
| TDDD83          | Computer Engineering - Bachelor Project                        | 18*     | G2E   | 1/3              | E   |
| TFBI24          | Biotechnology - Bachelor Project                               | 18*     | G2E   | 2/3/4            | 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   |
| TPTE06          | Industrial Placement   | 6       | G1X   | -                | V   |

*Specialisation: Specialization Biotechnical Engineering*

| Course code     | Course name                      | Credits | Level | Timetable module | ECV |
|-----------------|----------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                  |         |       |                  |     |
| TFBI23          | Ecology and the Environment      | 6       | G1N   | 3                | C   |
| TFBI24          | Biotechnology - Bachelor Project | 18*     | G2E   | 2                | E   |
| <b>Period 2</b> |                                  |         |       |                  |     |
| TFBI24          | Biotechnology - Bachelor Project | 18*     | G2E   | 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*      | G2F   | 2                | E   |
| TDDD83          | Computer Engineering - Bachelor Project | 18*     | G2E   | 1/3              | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TDDD12          | Database Technology                     | 6       | G2F   | 4                | C   |
| TDDD81          | Database Technology                     | 6*      | G2F   | 4                | E   |
| TDDD83          | Computer Engineering - Bachelor Project | 18*     | G2E   | 1/3              | E   |

*Specialisation: Specialization Electrical Engineering*

| Course code     | Course name                                | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TSBB18          | Embedded Perception Systems                | 6       | G2X   | 3                | 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 2020)**

| Course code     | Course name   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TEIK18          | Chinese for Engineers III   | 6*      | G2F   | -                | C   |
| TAMS32          | Stochastic Processes  | 6       | A1N   | 1                | E   |
| TAMS46          | Probability Theory, Second Course                                     | 6       | A1N   | 3                | E   |
| TANA21          | Scientific Computing  | 6       | G1F   | 3                | E   |
| TAOP34          | Large Scale Optimization  | 6       | A1N   | 3                | E   |
| TATA34          | Real Analysis, Honours Course   | 6*      | G2F   | 4                | E   |
| TATA44          | Vector Analysis   | 4       | G1F   | 1                | E   |
| TATM38          | Mathematical Models in Biology  | 6       | A1N   | 3                | E   |
| TDDC17          | Artificial Intelligence   | 6       | G2F   | 3                | E   |
| TDDC88          | Software Engineering  | 12*     | A1N   | 1                | E   |
| TDDD23          | Design and Programming of Computer Games                              | 6       | A1N   | 2                | E   |
| TDDD38          | Advanced Programming in C++   | 6*      | A1N   | 2                | E   |
| TDDD43          | Advanced Data Models and Databases                                    | 6*      | A1N   | 2                | E   |
| TDDE18          | Programming C++   | 6*      | G2F   | 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       | A1N   | 2                | E   |
| TETS23          | Purchasing  | 6       | A1N   | 2                | E   |

| Course code     | Course name                                  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| TETS37          | Basics in Logistics Management               | 6       | G2X   | 4                | E   |
| TKMJ14          | Large Technical Systems and the Environment  | 6       | A1X   | 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   | 2                | E   |
| TMES27          | Modelling of Energy Systems                  | 6       | A1N   | 3                | E   |
| TMKM16          | Sustainable Material Selection               | 6       | A1X   | 4                | E   |
| TMKT80          | Wood - Material                              | 6       | G2X   | 2                | E   |
| TMMV18          | Fluid Mechanics                              | 6       | A1X   | 1                | E   |
| TMPS33          | Virtual Manufacturing                        | 6       | A1N   | 4                | E   |
| TMPS35          | Emerging Factory Technologies                | 6       | A1N   | 3                | E   |
| TMPT03          | Production Engineering - Continuing Course   | 6       | G2F   | 2                | 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   |
| TSRT92          | Modelling and Learning for Dynamical Systems | 6       | A1X   | 3                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TEIK18          | Chinese for Engineers III                    | 6*      | G2F   | -                | C   |
| NBID31          | Modelling of Biological Systems              | 6       | A1N   | 3/4              | E   |
| TAOP04          | Mathematical Optimization                    | 6       | A1N   | 2                | E   |
| TATA34          | Real Analysis, Honours Course                | 6*      | G2F   | 4                | E   |
| TATA45          | Complex Analysis                             | 6       | G2F   | 1                | E   |
| TDDC88          | Software Engineering                         | 12*     | A1N   | 1                | E   |
| TDDD07          | Real Time Systems                            | 6       | A1N   | 4                | E   |
| TDDD38          | Advanced Programming in C++                  | 6*      | A1N   | -                | E   |
| TDDD43          | Advanced Data Models and Databases           | 6*      | A1N   | 2                | E   |

| Course code | Course name  | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|------------------|-----|
| TDDE01      | Machine Learning   | 6       | A1N   | 1                | E   |
| TDDE18      | Programming C++  | 6*      | G2F   | 1                | E   |
| TDEI19      | Management Control   | 6       | A1X   | 2                | E   |
| TDEI21      | Strategic Organisational Application of IT - Workflow and Knowledge Management | 6       | A1X   | 4                | E   |
| TEIE42      | Industrial Sales Management  | 6       | A1X   | 4                | E   |
| TEIM10      | Industrial Service Development   | 6       | A1X   | 2                | E   |
| TETS27      | Supply Chain Logistics   | 6       | A1X   | 2                | E   |
| TFBI17      | Advanced Project Course in Ecosystem Service Valuation                         | 6       | A1X   | -                | E   |
| TFYA96      | The physics behind technology  | 6       | G2F   | 4                | E   |
| TKMJ35      | Industrial Ecology   | 6       | G2F   | 3                | E   |
| TKMJ49      | Environmentally Driven Business Development                                    | 6*      | A1N   | 3                | E   |
| TMES17      | Building Energy Systems  | 6       | A1N   | 3                | E   |
| TMES45      | Energy Planning and Modelling of Communities                                   | 6       | A1F   | 4                | E   |
| TMHP03      | Engineering Systems Design   | 6       | A1X   | 4                | E   |
| TMKM90      | Engineering Materials - Deformation and Fracture                               | 6       | A1X   | 2                | E   |
| TMKT71      | Affective Engineering  | 6       | A1X   | 2                | E   |
| TMKU02      | Wood - Realisation   | 6       | G2X   | 1                | E   |
| TMPS22      | Assembly Technology  | 6       | A1N   | 3                | E   |
| TMPS31      | Sustainable Manufacturing  | 6       | A1X   | 1                | E   |
| TMQU12      | Lean Production  | 6       | A1X   | 2                | E   |
| TPPE29      | Financial Markets and Instruments  | 6       | A1N   | 2                | E   |
| TPPE76      | Operations Planning and Control  | 6       | A1N   | 4                | E   |
| 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       | G2F   | 2                | E   |
| TSKS01      | Digital Communication  | 6*      | A1X   | 4                | E   |
| TSKS33      | Complex networks and big data  | 6       | A1X   | 3                | E   |
| TSRT78      | Digital Signal Processing  | 6       | A1X   | 2                | E   |

*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 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       | A1N   | 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 and Supply Chain 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 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       | A1N   | 4                | 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       | A1N   | 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 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       | A1N   | 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: Specialization Biotechnical Engineering*

| Course code     | Course name  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TATM38          | Mathematical Models in Biology                         | 6       | A1N   | 3                | E   |
| TKMJ31          | Biofuels for Transportation                            | 6       | A1N   | 1                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| NBID31          | Modelling of Biological Systems                        | 6       | A1N   | 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*     | A1N   | 1                | C   |
| TDDC17          | Artificial Intelligence                  | 6       | G2F   | 3                | E   |
| TDDD23          | Design and Programming of Computer Games | 6       | A1N   | 2                | E   |
| TDDD38          | Advanced Programming in C++              | 6*      | A1N   | 2                | E   |
| TDDE18          | Programming C++                          | 6*      | G2F   | 2                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TDDC88          | Software Engineering                     | 12*     | A1N   | 1                | C   |
| TDDD38          | Advanced Programming in C++              | 6*      | A1N   | -                | E   |
| TDDE01          | Machine Learning                         | 6       | A1N   | 1                | E   |
| TDDE18          | Programming C++                          | 6*      | G2F   | 1                | E   |
| TSIT02          | Computer Security                        | 6       | G2F   | 2                | E   |
| TSKS33          | Complex networks and big data            | 6       | A1X   | 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   |
| TSRT92          | Modelling and Learning for Dynamical Systems | 6       | A1X   | 3                | 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       | G2F   | 2                | E   |
| TSKS01          | Digital Communication                        | 6*      | A1X   | 4                | E   |
| TSKS33          | Complex networks and big data                | 6       | A1X   | 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> |  |         |       |                  |     |
| TKMJ14          | Large Technical Systems and the Environment  | 6       | A1X   | 4                | E   |
| TMES09          | Industrial Energy Systems                    | 6       | A1X   | 2                | E   |
| TMES27          | Modelling of Energy Systems                  | 6       | A1N   | 3                | E   |
| TMMV18          | Fluid Mechanics                              | 6       | A1X   | 1                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TMES17          | Building Energy Systems                      | 6       | A1N   | 3                | E   |
| TMES45          | Energy Planning and Modelling of Communities | 6       | A1F   | 4                | E   |

*Specialisation: Specialization Mechanical Engineering*

| Course code     | Course name                                      | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TANA21          | Scientific Computing                             | 6       | G1F   | 3                | E   |
| TMKM16          | Sustainable Material Selection                   | 6       | A1X   | 4                | E   |
| TMKT80          | Wood - Material                                  | 6       | G2X   | 2                | E   |
| TMPS33          | Virtual Manufacturing                            | 6       | A1N   | 4                | E   |
| TMPS35          | Emerging Factory Technologies                    | 6       | A1N   | 3                | E   |
| TMPT03          | Production Engineering - Continuing Course       | 6       | G2F   | 2                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TMHP03          | Engineering Systems Design                       | 6       | A1X   | 4                | E   |
| TMKM90          | Engineering Materials - Deformation and Fracture | 6       | A1X   | 2                | E   |
| TMKT71          | Affective Engineering                            | 6       | A1X   | 2                | E   |
| TMKU02          | Wood - Realisation                               | 6       | G2X   | 1                | E   |
| TMPS22          | Assembly Technology                              | 6       | A1N   | 3                | E   |
| TMPS31          | Sustainable Manufacturing                        | 6       | A1X   | 1                | E   |

**Semester 8 (Spring 2021)**

| Course code     | Course name | Credits | Level | Timetable module | ECV |
|-----------------|-------------|---------|-------|------------------|-----|
| <b>Period 1</b> |             |         |       |                  |     |

| Course code | Course name  | Credits | Level | Timetable module | ECV |
|-------------|--|---------|-------|------------------|-----|
| TEIE06      | Corporate Planning   | 6*      | A1X   | -                | C   |
| NBIB35      | Environmental Management   | 6       | G2F   | 2/3/4            | E   |
| TAMS29      | Stochastic Processes Applied to Financial Models                           | 6       | A1F   | 3                | E   |
| TATA53      | Linear Algebra, Honours Course   | 6*      | G2F   | -                | E   |
| TBMI26      | Neural Networks and Learning Systems                                       | 6       | A1N   | 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       | A1N   | 3                | E   |
| TDDD38      | Advanced Programming in C++  | 6*      | A1N   | 2                | E   |
| TDDD41      | Data Mining - Clustering and Association Analysis                          | 6       | A1N   | 3                | E   |
| TDDD57      | Physical Interaction and Game Programming                                  | 6       | A1N   | 1                | E   |
| TDDD75      | Effect-Driven Development and Human-Centered Design of Interactive Systems | 6       | G2X   | 3                | E   |
| TDDD97      | Web Programming  | 6       | G2F   | 3                | E   |
| TDDE46      | Software Quality   | 6*      | A1N   | 2                | E   |
| TDEI71      | Digitisation, Business Ecologies and Business Models                       | 6       | A1N   | 4                | E   |
| TDS04       | Computer Networks and Distributed Systems                                  | 8       | G2F   | 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   |
| TGTU91      | Oral and Written Communication   | 6       | G1F   | 2                | E   |
| TGTU94      | Technology and Ethics  | 6       | G1F   | 1                | E   |
| TKMJ10      | Industrial Ecology   | 6       | A1X   | 1                | E   |
| TKMJ47      | Environmental Systems Analysis   | 6*      | A1N   | 3                | E   |

| Course code     | Course name   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| TMES43          | Analysis and Modelling of Industrial Energy Systems       | 6       | A1F   | 1                | E   |
| TMKA04          | Wood - Innovation   | 6       | A1X   | 1                | E   |
| TMKT48          | Design Optimization                                       | 6       | A1X   | 3                | E   |
| TMKT74          | Advanced CAD  | 6       | A1X   | 4                | E   |
| TMMS21          | Mechatronics  | 6       | G2F   | 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       | A1N   | 2                | E   |
| TSKS13          | Wireless Communications                                   | 6       | A1F   | 4                | E   |
| TSRT07          | Industrial Control Systems                                | 6       | A1N   | 2                | E   |
| TSRT09          | Control Theory  | 6       | A1N   | 3                | E   |
| TSTE27          | Analog and Discrete-Time Integrated Circuits              | 6       | A1F   | 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*      | G2F   | -                | E   |
| TDDC78          | Programming of Parallel Computers - Methods and Tools     | 6       | A1X   | 3                | E   |
| TDDD17          | Information Security, Second Course                       | 6*      | A1X   | 4                | E   |
| TDDD27          | Advanced Web Programming                                  | 6       | A1N   | 3                | E   |
| TDDD38          | Advanced Programming in C++                               | 6*      | A1N   | -                | E   |
| TDDE07          | Bayesian Learning   | 6       | A1F   | 2                | E   |
| TDDE31          | Big Data Analytics  | 6       | A1F   | 3                | E   |
| TDDE41          | Software Architectures                                    | 6       | A1N   | 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   |

| Course code | Course name   | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|------------------|-----|
| 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   | 2                | E   |
| TFYA45      | Biotechnology Project                               | 6*      | A1X   | -                | E   |
| TGTU95      | Philosophy of Science and Technology                | 6       | G1F   | 4                | E   |
| TKMJ47      | Environmental Systems Analysis                      | 6*      | A1N   | 2                | E   |
| TMES21      | Industrial Energy Systems                           | 6       | A1F   | 3                | E   |
| TMES41      | Strategic Development of Sustainable Energy Systems | 6       | A1F   | 2                | E   |
| TMHL24      | Solid Mechanics - Design Criteria                   | 6       | G2X   | 1                | E   |
| TMKT57      | Product Modelling                                   | 6       | A1X   | 3                | E   |
| TMKT77      | System Safety                                       | 6       | A1X   | 4                | 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   |
| 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       | A1F   | 3                | E   |
| TSKS16      | Signal Processing for Communications                | 6       | A1N   | 1                | E   |
| TSRT14      | Sensor Fusion                                       | 6       | A1N   | 2                | E   |

*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 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 and Supply Chain 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   | 2                | E   |

*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 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   | 2                | 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: Specialization Biotechnical Engineering*

| Course code     | Course name                                       | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| NBIB35          | Environmental Management                          | 6       | G2F   | 2/3/4            | E   |
| TFYA45          | Biotechnology Project                             | 6*      | A1X   | -                | E   |
| TFYA85          | Alternative Energy Sources and their Applications | 6       | G2X   | 4                | E   |
| TKMJ47          | Environmental Systems Analysis                    | 6*      | A1N   | 3                | 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       | A1N   | 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       | A1N   | 3                | E   |
| TDDD38          | Advanced Programming in C++  | 6*      | A1N   | 2                | E   |
| TDDD41          | Data Mining - Clustering and Association Analysis                          | 6       | A1N   | 3                | E   |
| TDDD75          | Effect-Driven Development and Human-Centered Design of Interactive Systems | 6       | G2X   | 3                | E   |
| TDTS04          | Computer Networks and Distributed Systems                                  | 8       | G2F   | 2                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| TDDD17          | Information Security, Second Course  | 6*      | A1X   | 4                | E   |
| TDDD27          | Advanced Web Programming   | 6       | A1N   | 3                | E   |
| TDDD38          | Advanced Programming in C++  | 6*      | A1N   | -                | E   |
| TDDE07          | Bayesian Learning  | 6       | A1F   | 2                | E   |
| TDDE31          | Big Data Analytics   | 6       | A1F   | 3                | E   |
| TDDE41          | Software Architectures   | 6       | A1N   | 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       | A1N   | 2                | E   |
| TSBK07          | Computer Graphics                    | 6*      | A1X   | 4                | E   |
| TSBK08          | Data Compression                     | 6       | A1N   | 2                | E   |
| TSKS13          | Wireless Communications              | 6       | A1F   | 4                | E   |
| TSRT07          | Industrial Control Systems           | 6       | A1N   | 2                | E   |
| TSRT09          | Control Theory                       | 6       | A1N   | 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       | A1F   | 3                | E   |
| TSKS16          | Signal Processing for Communications | 6       | A1N   | 1                | E   |
| TSRT14          | Sensor Fusion                        | 6       | A1N   | 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   |
| TMES43          | Analysis and Modelling of Industrial Energy Systems | 6       | A1F   | 1                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TMES21          | Industrial Energy Systems                           | 6       | A1F   | 3                | E   |
| TMES41          | Strategic Development of Sustainable Energy Systems | 6       | A1F   | 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   |
| TMKT74          | Advanced CAD                      | 6       | A1X   | 4                | E   |
| TMMS21          | Mechatronics                      | 6       | G2F   | 1                | E   |
| TMPS42          | Production System Automation      | 6       | A1X   | 1                | E   |
| <b>Period 2</b> |                                   |         |       |                  |     |
| TMHL24          | Solid Mechanics - Design Criteria | 6       | G2X   | 1                | E   |
| TMKT57          | Product Modelling                 | 6       | A1X   | 3                | E   |
| TMKT77          | System Safety                     | 6       | A1X   | 4                | E   |
| TMME11          | Road Vehicle Dynamics             | 6       | A1X   | 1                | E   |
| TMPS27          | Production Systems                | 6       | A1X   | 3                | E   |

**Semester 9 (Autumn 2021)**

| Course code     | Course name   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TAMS39          | Multivariate Statistical Methods                                      | 6       | A1N   | 4                | E   |
| TATM38          | Mathematical Models in Biology  | 6       | A1N   | 3                | E   |
| TDDD04          | Software Testing  | 6       | A1N   | 2                | E   |
| TDDE15          | Advanced Machine Learning   | 6       | A1F   | 1                | E   |
| TDDE45          | Software Design and Construction                                      | 6       | A1N   | 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   |
| TMKT79          | Collaborative Multidisciplinary Design Optimization                   | 6       | A1X   | 2                | E   |

| Course code     | Course name   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| TMPE10          | Project Course Advanced - Sustainability Engineering and Management | 12*     | A1F   | -                | E   |
| TMPM08          | Project Course Advanced - Manufacturing Engineering                 | 12*     | A1F   | -                | E   |
| TMQU27          | Quality Management - Project Course                                 | 12*     | A1X   | 2                | E   |
| TMQU47          | Quality Engineering and Design                                      | 6       | A1X   | 4                | 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          | Cryptology  | 6       | A1X   | 2                | E   |
| TSKS12          | Modern Channel Coding, Inference and Learning                       | 6       | A1N   | 1                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| NBID79          | Ecosystem Services in CSR and Conservation                          | 6       | A1F   | 1                | E   |
| TAOP18          | Supply Chain Optimization   | 6       | A1F   | 1                | E   |
| Tddb44          | Compiler Construction   | 6       | A1X   | 1                | E   |
| TDDC34          | Technical, Economic and Societal Evaluation of IT-products          | 6       | A1X   | 4                | E   |
| TDDC90          | Software Security   | 6       | A1N   | 1                | E   |
| TEAE12          | Strategic Analysis and Methods for Strategic Change                 | 12*     | A1F   | 2                | E   |
| TEAE18          | Sustainable Value Chain Strategies                                  | 6       | A1X   | 4                | 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   |
| TKMJ32          | Integrated Product Service Engineering                              | 6       | A1N   | 3                | E   |
| TMES51          | International Energy Markets  | 6       | A1N   | 1                | E   |
| TMKA03          | Industrial Design   | 6       | G2X   | 1                | E   |

| Course code | Course name   | Credits | Level | Timetable module | ECV |
|-------------|---|---------|-------|------------------|-----|
| TMKA11      | Model-based System-of-Systems Engineering                           | 6       | A1X   | 3                | E   |
| TMPE10      | Project Course Advanced - Sustainability Engineering and Management | 12*     | A1F   | -                | E   |
| TMPM08      | Project Course Advanced - Manufacturing Engineering                 | 12*     | A1F   | -                | 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 Digitisation and Management*

| Course code     | Course name  | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 2</b> |  |         |       |                  |     |
| TDDC34          | Technical, Economic and Societal Evaluation of IT-products | 6       | A1X   | 4                | 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 and Supply Chain 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 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 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   |
| TMQU47          | Quality Engineering and Design      | 6       | A1X   | 4                | E   |
| <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   |
| TEAE18          | Sustainable Value Chain Strategies                                    | 6       | A1X   | 4                | E   |
| TEIM10          | Industrial Service Development  | 6       | A1X   | 2                | E   |
| TMQU12          | Lean Production   | 6       | A1X   | 2                | E   |

*Specialisation: Specialization Biotechnical Engineering*

| Course code     | Course name                                | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TATM38          | Mathematical Models in Biology             | 6       | A1N   | 3                | E   |
| <b>Period 2</b> |  |         |       |                  |     |
| NBID79          | Ecosystem Services in CSR and Conservation | 6       | A1F   | 1                | E   |

*Specialisation: Specialization Computer Science and Engineering*

| Course code     | Course name   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TDDD04          | Software Testing  | 6       | A1N   | 2                | E   |
| TDDE15          | Advanced Machine Learning                                     | 6       | A1F   | 1                | E   |
| TDDE45          | Software Design and Construction                              | 6       | A1N   | 4                | E   |
| TSFS12          | Autonomous Vehicles - Planning, Control, and Learning Systems | 6       | A1X   | 1                | E   |
| TSIT03          | Cryptology  | 6       | A1X   | 2                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TMKA11          | Model-based System-of-Systems Engineering                     | 6       | A1X   | 3                | 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       | A1N   | 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   |
| TMPE10          | Project Course Advanced - Sustainability Engineering and Management | 12*     | A1F   | -                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TMPE10          | Project Course Advanced - Sustainability Engineering and Management | 12*     | A1F   | -                | E   |

*Specialisation: Specialization Mechanical Engineering*

| Course code     | Course name   | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TMKT79          | Collaborative Multidisciplinary Design Optimization | 6       | A1X   | 2                | E   |
| TMPM08          | Project Course Advanced - Manufacturing Engineering | 12*     | A1F   | -                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TKMJ32          | Integrated Product Service Engineering              | 6       | A1N   | 3                | E   |
| TMKA03          | Industrial Design                                   | 6       | G2X   | 1                | E   |
| TMPM08          | Project Course Advanced - Manufacturing Engineering | 12*     | A1F   | -                | E   |

## Semester 10 (Spring 2022)

| 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

## Common rules

### Structure and organisation of study programmes

The contents and design of the programmes are to be continuously revised such that new knowledge is integrated into courses and specialisations. Within one programme, several study specialisations or profiles may be available. The identities of the study specialisations or profiles and the regulations governing how these may be selected are given in the syllabus and curriculum for the particular field of study and programmes.

The structure and organisation of the programmes are to follow specified criteria that are summarised in the syllabus for each programme.

- The syllabus defines the aims of the study programme.
- The curriculum, which constitutes one part of the syllabus for the field of study, gives details of the terms in which the various courses have been timetabled, and their scheduling through the academic year.
- The course syllabus specifies, among other things, the aim and contents of the course, and the prior knowledge that a student must have in order to be able to benefit from the course.

### Qualification requirements

The qualification requirements specified in the Higher Education Ordinance 2007 apply to students admitted after 1 July 2007. A student who has completed components of a programme after 1 July 2007 has the right to be assessed with respect to the qualification requirements specified by the Higher Education Ordinance 2007. In addition, local regulations laid down by the faculty boards and university board apply, see <http://styrdokument.liu.se/Regelsamling/VisaBeslut/622693>.

Higher Education Act Chapter 1, Section 8:

First-cycle courses and study programmes are to develop:

- the ability to make independent and critical assessments
- the ability to identify, formulate and solve problems autonomously, and
- the preparedness to deal with changes in working life.

In addition to knowledge and skills in their field of study, students shall develop the ability to:

- gather and interpret information at a scholarly level
- stay abreast of the development of knowledge, and
- communicate their knowledge to others, including those who lack specialist knowledge in the field.

### Qualifications within a study programme

Qualification requirements that are specific to a study programme are given in the syllabus for that programme.

### **Matriculation and postponement of matriculation**

A person who has been accepted for a study programme is to start their studies (matriculate) in the term that is specified in the decision about admission. The date and location of the compulsory matriculation procedure will be communicated to those admitted to the first term of the programme.

At any one admission occasion, it is possible to be admitted to only one place on a study programme. A student who has been granted a place on a study programme and who is offered and accepts a place on another study programme during a supplementary round of admission will lose the place offered for the first study programme.

Regulations concerning postponement of matriculation have been laid down in the admission regulations for Linköping University,  
<http://stydokument.liu.se/Regelsamling/VisaBeslut/622645>.

A person who has been granted postponement must present to the admitting authority, before the term in which the studies are to be started and before the date of application, a renewed registration for the programme and a copy of the decision granting postponement.

### **Admission to a later part of a programme**

Admission to a part of a study programme is used here to refer to admission with the purpose of completing the programme and taking a degree. Admission to a later part of a programme may take place only if sufficient resources and space on the programme are available. Furthermore, the applicant must satisfy the entry requirements for the relevant term of the programme, as specified in  
[http://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva/Tekniska\\_fakulteten](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva/Tekniska_fakulteten).

### **Interruption in studies**

Notification of an interruption in studies is to be made through the Student Portal. If such a notification is not made and if the student does not register for the first term during which the interruption is to take place, the interruption will be considered to be a withdrawal. An interruption in studies must cover a complete term, and notification of interruptions can be given for a maximum of two consecutive terms. Notification of resumption of studies is to take place at the term registration for the term that follows the interruption. If the student does not register at the term registration, this will be regarded as withdrawal from studies.

A student who is taking an interruption in studies may during this period retake examinations if he or she has re-registered for the most recent study term of the programme. A student who wishes to take another course during the interruption in studies must apply for this separately. The student is responsible that

registration for courses is carried out at the correct times in preparation for the resumption of studies.

### **Withdrawal from a study programme**

A student who wishes to withdraw from a study programme must notify the study guidance counsellor. A student who leaves the studies without giving notification of an interruption in study and who fails to register for the immediately subsequent term is considered to have withdrawn. A student who has withdrawn may return to the study programme if a vacancy is available that is not required for students returning after an interruption in study, and not required for students who are changing their location of study and/or study programme.

### **Interrupting a course**

The vice-chancellor's decision concerning regulations for registration, deregistration and reporting results (Dnr LiU-2015-01241) states that interruptions in study are to be recorded in Ladok. Thus, all students who do not participate in a course for which they have registered must record the interruption, such that the registration on the course can be removed. Deregistration from a course is carried out using a web-based form: [www.lith.liu.se/for-studenter/kurskomplettering?l=sv](http://www.lith.liu.se/for-studenter/kurskomplettering?l=sv).

### **Courses within a study programme**

The curriculum for the various years of a study programme specify which courses are compulsory (o), elective (v) and voluntary (f). If a student wishes to study a different combination than the one specified in the curriculum, an application must be made to the board of studies.

### **Registration for programme courses**

Registration for courses that are given as part of a study programme must be made during the specified period, which has been preliminarily set to 1-10 April for the autumn term, and 1-10 October for the spring term. Information about course registration is published on a webpage, sent to students by email, and disseminated at scheduled information meetings.

### **Registration for programme courses as single-subject courses**

Admission to a programme course as a single-subject subject course may take place only if sufficient resources and space on the course are available. Furthermore, the applicant must satisfy the entry requirements for the relevant course.

### **Cancelled courses**

Courses with few participants (fewer than 10) may be cancelled or organised in a

manner that differs from that stated in the course syllabus. The board of studies is to deliberate and decide whether a course is to be cancelled or changed from the course syllabus.

## Timetabling

Courses are timetabled after a decision has been made concerning the assignment of the course to a study period. A central timetable is not drawn up for courses with fewer than five participants. Most project courses do not have a central timetable.

## Study planning

Students who require support in planning their continued studies can contact the study guidance counsellor of the programme. Study planning involves the student and the study guidance counsellor together drawing up an individual plan for studies during the subsequent term. The individual plan may allow the student to deviate from the general curriculum.

Completed first-cycle courses are a precondition for successful studies at more advanced levels. For this reason, study planning is based on giving priority to courses from earlier years of study that have not been completed. If further capacity is available, new courses may be taken.

Study planning takes place on a regular basis if the student:

- does not satisfy the requirements for progression to later terms. In order for a student to be able to participate in courses from later years in such cases, a decision of exemption is required.
- does not satisfy the requirements for starting a degree project.

Other situations in which study planning may be required:

- A student has fallen behind during the early part of a study programme and has failed to complete several courses.
- A student has not satisfied the entry requirements for a degree project before term 6 of an engineering degree.
- A student has applied for admission to a later part of a programme.
- Studies have been carried out abroad.
- A study programme is to be resumed after an interruption.

In these cases the study guidance counsellor supports the student in planning the continued studies, also in situations in which the student can register for the relevant courses without the need for a special decision for the continued studies.

## Part of education abroad

Students can exchange study at LiTH for study at an institute of higher education abroad, and/or work on a degree project abroad.

In the event that study (courses) at LiTH are exchanged for study abroad, the

relevant board of studies (faculty programme director) is responsible for a decision about an individual study plan, which is to be drawn up in advance, and about the final course approval and its inclusion in the qualification requirements. For this reason, students who plan to participate in an exchange should contact the faculty programme director (or equivalent) at the Dean's Office of the Institute of Technology.

Regulations for entry requirements, ranking and nomination for study abroad through LiTH's exchange agreements are specified in:  
<http://stydokument.liu.se/Regelsamling/VisaBeslut/622362>. Special regulations apply for the compulsory study abroad within Ii (Industrial Engineering and Management – International) and Yi (Applied Physics and Electrical Engineering – International).

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at [http://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva).