

# Communication and Transportation Engineering, M Sc in Engineering

300 credits

Civilingenjör i kommunikation, transport och  
samhälle

6CKTS

Valid from: 2014 Spring semester

**Determined by**  
Board of Studies for Industrial  
Engineering and Logistics

**Date determined**

## Entry requirements

### Degree in Swedish

Civilingenjör 300 hp och Teknologie master 120 hp

## Curriculum

### Semester 6 (Spring 2017)

| Course code     | Course name                                                         | Credits | Level | Timetable module | ECV |
|-----------------|---------------------------------------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                                                     |         |       |                  |     |
| TNG041          | Scientific Methodology, Criticism of the Sources and Report Writing | 2       | G2X   | 4                | C   |
| TNK089          | Discrete-Event Simulation                                           | 6       | G2X   | 2                | C   |
| TNK093          | Mobile Communication                                                | 6*      | G2X   | 1                | C   |
| TNK111          | Communication and Transportation - project                          | 16*     | G2X   | 3                | C   |
| <b>Period 2</b> |                                                                     |         |       |                  |     |
| TNK093          | Mobile Communication                                                | 6*      | G2X   | 4                | C   |
| TNK111          | Communication and Transportation - project                          | 16*     | G2X   | 1                | C   |

### Semester 7 (Autumn 2017)

| Course code     | Course name                               | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                           |         |       |                  |     |
| TEIO87          | Project Management                        | 6*      | G2X   | 1                | C   |
| TNK106          | Positioning Systems                       | 6       | A1X   | 2                | C   |
| TGTU01          | Technology and Ethics                     | 6       | G1X   | 4                | E   |
| THEN09          | Advanced English                          | 6*      | G2X   | 4                | E   |
| TNK051          | Planning of Air Traffic                   | 6       | A1X   | 3                | E   |
| TNK091          | Traffic Safety Management                 | 6       | A1X   | 3                | E   |
| TNK104          | Applied Optimization I                    | 6       | A1X   | 4                | E   |
| <b>Period 2</b> |                                           |         |       |                  |     |
| TDDC28          | Applications of Discrete-Event Simulation | 6       | A1X   | 3                | C   |
| TEIO87          | Project Management                        | 6*      | G2X   | 1                | C   |
| THEN09          | Advanced English                          | 6*      | G2X   | 4                | E   |
| TMQU08          | Quality and Business Development          | 6       | G2X   | 2                | E   |
| TNG033          | Programming in C++                        | 6       | G2X   | 3                | E   |
| TNK105          | Applied Optimization II                   | 6       | A1X   | 3                | E   |
| TNK115          | Smart Cities                              | 6       | A1X   | 4                | E   |

*Specialisation: Master Profile Quantitative Logistics*

| Course code     | Course name            | Credits | Level | Timetable module | ECV |
|-----------------|------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                        |         |       |                  |     |
| TNK104          | Applied Optimization I | 6       | A1X   | 4                | C   |

**Semester 8 (Spring 2018)**

| Course code     | Course name                                          | Credits | Level | Timetable module | ECV |
|-----------------|------------------------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                                      |         |       |                  |     |
| TEIO05          | Basic Entrepreneurship and Idea Feasibility Analysis | 6*      | G2F   | 2                | E   |
| TNK087          | Data Communication and the Internet                  | 6       | A1X   | 4                | E   |
| TNK095          | Traffic Planning and Simulation                      | 6       | A1X   | 2                | E   |
| TNK099          | Logistics Networks and Transports                    | 6       | A1X   | 3                | E   |
| TNKA08          | Rhetoric                                             | 6       | G1X   | 1                | E   |
| <b>Period 2</b> |                                                      |         |       |                  |     |
| TEIO05          | Basic Entrepreneurship and Idea Feasibility Analysis | 6*      | G2F   | 3                | E   |
| TNG016          | Engineering Applications Using Matlab                | 6       | A1X   | 4                | E   |
| TNK080          | Wireless Communication Systems                       | 6       | A1X   | 1                | E   |
| TNK096          | Traffic Demand Modelling                             | 6       | A1X   | 2                | E   |
| TNK100          | Logistics Resource Planning                          | 6       | A1X   | 3                | E   |

*Specialisation: Master Profile Data- and Telecommunication*

| Course code     | Course name                         | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                     |         |       |                  |     |
| TNK087          | Data Communication and the Internet | 6       | A1X   | 4                | C   |
| <b>Period 2</b> |                                     |         |       |                  |     |
| TNK080          | Wireless Communication Systems      | 6       | A1X   | 1                | C   |

*Specialisation: Master Profile Quantitative Logistics*

| Course code     | Course name                       | Credits | Level | Timetable module | ECV |
|-----------------|-----------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                   |         |       |                  |     |
| TNK099          | Logistics Networks and Transports | 6       | A1X   | 3                | C   |
| <b>Period 2</b> |                                   |         |       |                  |     |
| TNK100          | Logistics Resource Planning       | 6       | A1X   | 3                | C   |

*Specialisation: Master Profile Traffic Informatics*

| Course code     | Course name                     | Credits | Level | Timetable module | ECV |
|-----------------|---------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                 |         |       |                  |     |
| TNK095          | Traffic Planning and Simulation | 6       | A1X   | 2                | C   |
| <b>Period 2</b> |                                 |         |       |                  |     |
| TNK096          | Traffic Demand Modelling        | 6       | A1X   | 2                | C   |

**Semester 9 (Autumn 2018)**

| Course code     | Course name                                           | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                                       |         |       |                  |     |
| TNK051          | Planning of Air Traffic                               | 6       | A1X   | 3                | E   |
| TNK092          | Network Simulation                                    | 6       | A1X   | 3                | E   |
| TNK101          | Traffic Engineering and Control                       | 6       | A1X   | 1                | E   |
| TNK104          | Applied Optimization I                                | 6       | A1X   | 4                | E   |
| TNSL15          | Logistics and Sustainable Development                 | 6       | G2X   | 2                | E   |
| <b>Period 2</b> |                                                       |         |       |                  |     |
| TNK103          | Analysis of Communication and Transport Systems       | 6       | A1X   | 1                | C   |
| TNK098          | Planning of Public Transportation and Railway Traffic | 6       | A1X   | 4                | E   |
| TNK105          | Applied Optimization II                               | 6       | A1X   | 3                | E   |
| TNK114          | Logistics in Supply Chains                            | 6       | A1X   | 2                | E   |

*Specialisation: Master Profile Data- and Telecommunication*

| Course code     | Course name                                     | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                                 |         |       |                  |     |
| TNK092          | Network Simulation                              | 6       | A1X   | 3                | C   |
| <b>Period 2</b> |                                                 |         |       |                  |     |
| TNK103          | Analysis of Communication and Transport Systems | 6       | A1X   | 1                | C   |

*Specialisation: Master Profile Quantitative Logistics*

| Course code     | Course name                                     | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------------------|---------|-------|------------------|-----|
| <b>Period 2</b> |                                                 |         |       |                  |     |
| TNK103          | Analysis of Communication and Transport Systems | 6       | A1X   | 1                | C   |

*Specialisation: Master Profile Traffic Informatics*

| Course code     | Course name                                     | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                                 |         |       |                  |     |
| TNK101          | Traffic Engineering and Control                 | 6       | A1X   | 1                | C   |
| <b>Period 2</b> |                                                 |         |       |                  |     |
| TNK103          | Analysis of Communication and Transport Systems | 6       | A1X   | 1                | C   |

**Semester 10 (Spring 2019)**

| 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