

# Engineering Electronics

180 credits

Högskoleingenjör i elektronik

6IELK

Valid from: 2015 Spring semester

**Determined by**

Board of Studies for Electrical Engineering,  
Physics and Mathematics

**Date determined**

## Degree in Swedish

Högskoleingenjör och Teknologie kandidat, 180 hp

## Curriculum

### Semester 4 (Spring 2017)

| Course code     | Course name                            | Credits | Level | Timetable module | ECV |
|-----------------|--|---------|-------|------------------|-----|
| <b>Period 1</b> |  |         |       |                  |     |
| TBMT32          | Perspectives on Biomedical Engineering | 2*      | G1X   | 3                | E   |
| TDIU11          | Operating Systems                      | 6       | G2X   | 3                | E   |
| TMEI01          | Electrical Engineering                 | 6       | G1X   | 3                | E   |
| TSEI10          | Filters                                | 6       | G2X   | 2                | E   |
| TSIU04          | Automatic Control, Advanced Course     | 4       | G2X   | 4                | E   |
| TSTE93          | Analog Circuits                        | 6*      | G2X   | 1                | C   |
| <b>Period 2</b> |  |         |       |                  |     |
| TBMT32          | Perspectives on Biomedical Engineering | 2*      | G1X   | 3                | E   |
| TDDI11          | Embedded Software                      | 6       | G2X   | 2                | E   |
| TFEI02          | Wave Physics                           | 4       | G1X   | 4                | E   |
| THIU01          | English                                | 4       | G1X   | 1                | E   |
| TMIU02          | Man, Technology and Organization       | 4       | G1X   | 2                | E   |
| TPTE06          | Industrial Placement                   | 6       | G1X   | -                | E   |
| TSEI07          | Digital Filters                        | 6       | G2X   | 3                | E   |
| TSTE93          | Analog Circuits                        | 6*      | G2X   | 1                | C   |

#### *Specialisation: Biomedical Engineering*

| Course code     | Course name  | Credits | Level | Timetable module | ECV |
|-----------------|--------------|---------|-------|------------------|-----|
| <b>Period 1</b> |              |         |       |                  |     |
| TSEI10          | Filters      | 6       | G2X   | 2                | E   |
| <b>Period 2</b> |              |         |       |                  |     |
| TFEI02          | Wave Physics | 4       | G1X   | 4                | E   |

*Specialisation: Electronic Design*

| Course code     | Course name     | Credits | Level | Timetable module | ECV |
|-----------------|-----------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                 |         |       |                  |     |
| TSEI10          | Filters         | 6       | G2X   | 2                | E   |
| <b>Period 2</b> |                 |         |       |                  |     |
| TSEI07          | Digital Filters | 6       | G2X   | 3                | E   |

*Specialisation: Electronics and Energy*

| Course code     | Course name                        | Credits | Level | Timetable module | ECV |
|-----------------|------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                    |         |       |                  |     |
| TMEI01          | Electrical Engineering             | 6       | G1X   | 3                | E   |
| TSIU04          | Automatic Control, Advanced Course | 4       | G2X   | 4                | E   |

*Specialisation: Embedded Systems*

| Course code     | Course name                        | Credits | Level | Timetable module | ECV |
|-----------------|------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                    |         |       |                  |     |
| TDIU11          | Operating Systems                  | 6       | G2X   | 3                | E   |
| TSIU04          | Automatic Control, Advanced Course | 4       | G2X   | 4                | E   |
| <b>Period 2</b> |                                    |         |       |                  |     |
| TDDI11          | Embedded Software                  | 6       | G2X   | 2                | E   |

## Semester 5 (Autumn 2017)

| Course code     | Course name                                       | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TADI02          | Numerical Algorithms                              | 6       | G2X   | 2                | E   |
| TAIU08          | Calculus in Several Variables                     | 6       | G1X   | 3                | E   |
| TBME04          | Anatomy and Physiology                            | 6       | G2X   | 3                | E   |
| TMMI44          | Thermodynamics                                    | 6       | G1X   | 2                | E   |
| TMMI69          | Fluid Mechanics and Heat Transfer                 | 6       | G1X   | 3                | E   |
| TSEA29          | Microcomputer, Project Laboratory                 | 8*      | G2X   | 3                | E   |
| TSEI03          | Digital Circuits                                  | 4       | G2X   | 2                | E   |
| TSIU03          | System Design                                     | 8       | G2X   | 4                | C   |
| TSKS02          | Telecommunication                                 | 6*      | G2X   | 1                | E   |
| TSTE25          | Power Electronics                                 | 6       | A1X   | 3                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TAMS11          | Probability and Statistics, first course          | 6       | G2X   | 4                | E   |
| TBME03          | Biochemistry and Cell Biology                     | 6       | G2X   | 2                | E   |
| TDDI07          | Distributed Embedded Software and Networks        | 4       | G2X   | 1                | E   |
| TEIO29          | Leadership and Organisation                       | 6       | G1X   | 4                | E   |
| TGTU49          | History of Technology                             | 6       | G1X   | 3                | E   |
| TKMJ24          | Environmental Engineering                         | 6       | G1X   | 3                | E   |
| TSEA29          | Microcomputer, Project Laboratory                 | 8*      | G2X   | -                | E   |
| TSKS02          | Telecommunication                                 | 6*      | G2X   | 2                | E   |
| TSTE26          | Powergrid and Technology for Renewable Production | 6       | A1X   | 3                | E   |

### *Specialisation: Biomedical Engineering*

| Course code     | Course name                   | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                               |         |       |                  |     |
| TBME04          | Anatomy and Physiology        | 6       | G2X   | 3                | E   |
| <b>Period 2</b> |                               |         |       |                  |     |
| TBME03          | Biochemistry and Cell Biology | 6       | G2X   | 2                | E   |

*Specialisation: Electronic Design*

| Course code     | Course name                                       | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TSEI03          | Digital Circuits                                  | 4       | G2X   | 2                | E   |
| TSTE25          | Power Electronics                                 | 6       | A1X   | 3                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TSTE26          | Powergrid and Technology for Renewable Production | 6       | A1X   | 3                | E   |

*Specialisation: Electronics and Energy*

| Course code     | Course name                                       | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TMMI44          | Thermodynamics                                    | 6       | G1X   | 2                | E   |
| TMMI69          | Fluid Mechanics and Heat Transfer                 | 6       | G1X   | 3                | E   |
| TSTE25          | Power Electronics                                 | 6       | A1X   | 3                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TSTE26          | Powergrid and Technology for Renewable Production | 6       | A1X   | 3                | E   |

*Specialisation: Embedded Systems*

| Course code     | Course name                                       | Credits | Level | Timetable module | ECV |
|-----------------|---|---------|-------|------------------|-----|
| <b>Period 1</b> |   |         |       |                  |     |
| TSEA29          | Microcomputer, Project Laboratory                 | 8*      | G2X   | 3                | E   |
| TSKS02          | Telecommunication                                 | 6*      | G2X   | 1                | E   |
| TSTE25          | Power Electronics                                 | 6       | A1X   | 3                | E   |
| <b>Period 2</b> |   |         |       |                  |     |
| TDDI07          | Distributed Embedded Software and Networks        | 4       | G2X   | 1                | E   |
| TSEA29          | Microcomputer, Project Laboratory                 | 8*      | G2X   | -                | E   |
| TSKS02          | Telecommunication                                 | 6*      | G2X   | 2                | E   |
| TSTE26          | Powergrid and Technology for Renewable Production | 6       | A1X   | 3                | E   |

## Semester 6 (Spring 2018)

| Course code     | Course name                         | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                     |         |       |                  |     |
| TATA83          | Calculus, several variables         | 6       | G1X   | 1                | E   |
| TBMT02          | Medical Imaging                     | 6       | A1X   | 3                | E   |
| TBMT09          | Physiological Pressures and Flows   | 6       | A1X   | 1                | E   |
| TDDI08          | Embedded Systems Design             | 4       | G2X   | 1                | E   |
| TGTU01          | Technology and Ethics               | 6       | G1X   | 1                | E   |
| TKMJ15          | Environmental Management Strategies | 6       | G1X   | 3                | E   |
| TSEI12          | Analog Circuits, second course      | 6       | G2X   | 3                | E   |
| TSFS04          | Electrical Drives                   | 6       | G2X   | 4                | E   |
| TSIU09          | Introduction to Bachelor Thesis     | 4       | G2X   | 2                | C   |
| <b>Period 2</b> |                                     |         |       |                  |     |
| TQXX11          | Degree project - Bachelor's Thesis  | 16      | G2X   | -                | C   |

### *Specialisation: Biomedical Engineering*

| Course code     | Course name                       | Credits | Level | Timetable module | ECV |
|-----------------|-----------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                   |         |       |                  |     |
| TBMT02          | Medical Imaging                   | 6       | A1X   | 3                | E   |
| TBMT09          | Physiological Pressures and Flows | 6       | A1X   | 1                | E   |

### *Specialisation: Electronic Design*

| Course code     | Course name                    | Credits | Level | Timetable module | ECV |
|-----------------|--------------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                                |         |       |                  |     |
| TSEI12          | Analog Circuits, second course | 6       | G2X   | 3                | E   |
| TSFS04          | Electrical Drives              | 6       | G2X   | 4                | E   |

### *Specialisation: Electronics and Energy*

| Course code     | Course name       | Credits | Level | Timetable module | ECV |
|-----------------|-------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                   |         |       |                  |     |
| TSFS04          | Electrical Drives | 6       | G2X   | 4                | E   |

*Specialisation: Embedded Systems*

| Course code     | Course name             | Credits | Level | Timetable module | ECV |
|-----------------|-------------------------|---------|-------|------------------|-----|
| <b>Period 1</b> |                         |         |       |                  |     |
| TDDI08          | Embedded Systems Design | 4       | G2X   | 1                | E   |

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