

Faculty of Engineering and Architecture

Bridging Programme Master of Science in Mechanical and Electrical Systems Engineering

Language of instruction: English

Programme version 1

## 1 General Courses 90 credits

| Nr | Course                                                                                                                                                                              | CRDT | Ref  | MT1 | Session | Study |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-----|---------|-------|
| 1  | E001161 <b>Mathematic Models</b><br><i>Karel Van Acoleyen -- Department of Electronics and Information Systems</i>                                                                  | 6    | BRUG | 1   | A:1     | 180   |
| 2  | E005020 <b>Analysis of Systems and Signals [nl]</b><br><i>Gert De Cooman -- Department of Electronics and Information Systems</i>                                                   | 3    | BRUG | 1   | B:1     | 90    |
| 3  | E036500 <b>Electrical Machines [nl]</b><br><i>Luc Dupré -- Department of Electromechanical, Systems and Metal Engineering</i>                                                       | 3    | BRUG | 1   | B:1     | 90    |
| 4  | E048300 <b>Kinematics and Dynamics of Mechanisms</b><br><i>Magd Abdel Wahab -- Department of Electromechanical, Systems and Metal Engineering</i>                                   | 6    |      | 1   | A:1     | 180   |
| 5  | E048400 <b>Numerical Modelling and Design of Electrical and Mechanical Systems</b><br><i>Guillaume Crevecoeur -- Department of Electromechanical, Systems and Metal Engineering</i> | 6    |      | 1   | A:1     | 180   |
| 6  | E037020 <b>Heat and Flow Engineering [nl]</b><br><i>Wim Beyne -- Department of Electromechanical, Systems and Metal Engineering</i>                                                 | 6    | BRUG | 1   | A:2     | 180   |
| 7  | E030530 <b>Power Electronic Supplies [nl]</b><br><i>Frederik De Belie -- Department of Electromechanical, Systems and Metal Engineering</i>                                         | 3    | BRUG | 1   | A:2     | 90    |
| 8  | E048600 <b>Vibrations and Signals</b><br><i>Mia Loccuffier -- Department of Electromechanical, Systems and Metal Engineering</i>                                                    | 6    |      | 1   | A:2     | 180   |
| 9  | E048800 <b>Construction Techniques and Engineering Maintenance</b><br><i>Wim De Waele -- Department of Electromechanical, Systems and Metal Engineering</i>                         | 6    |      | 1   | A:2     | 180   |
| 10 | E048900 <b>Multidisciplinary Design</b><br><i>Steven Lecompte -- Department of Electromechanical, Systems and Metal Engineering</i>                                                 | 6    |      | 1   | A:2     | 180   |
| 11 | E007130 <b>Modelling and Simulation of Dynamical Systems [nl]</b><br><i>Guillaume Crevecoeur -- Department of Electromechanical, Systems and Metal Engineering</i>                  | 3    | BRUG | 2   | B:2     | 90    |
| 12 | E048100 <b>Fluid Machines</b><br><i>Joris Degroote -- Department of Electromechanical, Systems and Metal Engineering</i>                                                            | 6    |      | 2   | A:1     | 180   |
| 13 | E005220 <b>Linear Systems</b><br><i>Gert De Cooman -- Department of Electronics and Information Systems</i>                                                                         | 6    |      | 2   | A:1     | 180   |
| 14 | E048200 <b>Electrical Drives</b><br><i>Frederik De Belie -- Department of Electromechanical, Systems and Metal Engineering</i>                                                      | 6    |      | 2   | A:1     | 180   |
| 15 | E029800 <b>Domain-Specific Research Skills</b><br><i>Michel De Paepe -- Department of Electromechanical, Systems and Metal Engineering</i>                                          | 3    |      | 2   | A:1     | 90    |
| 16 | E029700 <b>General Research Skills</b><br><i>Michel De Paepe -- Department of Electromechanical, Systems and Metal Engineering</i>                                                  | 3    |      | 2   | A:1     | 90    |
| 17 | E048500 <b>Thermal Machines</b><br><i>Sebastian Verhelst -- Department of Electromechanical, Systems and Metal Engineering</i>                                                      | 6    |      | 2   | A:2     | 180   |
| 18 | E048700 <b>Electrical Power and Energy Systems</b><br><i>Lieven Vandevelde -- Department of Electromechanical, Systems and Metal Engineering</i>                                    | 6    |      | 2   | A:2     | 180   |

## 2 Elective Courses 6 credits

Subscribe to 6 credit units from the elective course lists in the Master of Science in Mechanical and Electrical Systems Engineering.  
Subject to approval by the faculty.

### 3 Master's Dissertation

24 credits

| Nr | Course                             | CRDT | Ref | MT1 | Session | Study |
|----|------------------------------------|------|-----|-----|---------|-------|
| 1  | E091103 Master's Dissertation [nl] | 24   |     | 2   | A:J     | 720   |

#### Teaching

When a course is not taught (solely) in the programme's language of instruction, the effectively used languages are indicated in square brackets following the course name, using the following ISO codes:

|               |             |             |               |                |                      |             |
|---------------|-------------|-------------|---------------|----------------|----------------------|-------------|
| bg: Bulgarian | de: German  | es: Spanish | ja: Japanese  | pl: Polish     | sh: Croatian/Serbian | zh: Chinese |
| cs: Czech     | el: Greek   | fr: French  | nl: Dutch     | pt: Portuguese | sl: Slovene          |             |
| da: Danish    | en: English | it: Italian | no: Norwegian | ru: Russian    | sv: Swedish          |             |

#### Semester

Semesters are indicated by their number (1 or 2); semester 3 represents the summer period and J indicates a course spanning semesters 1 and 2. When a capital letter precedes a semester number, the course has multiple offerings. The letter indicates the offering concerned.

When a semester is shown in brackets, the course is not offered this year in the specific offering.

The offering frequency and first year of offering are indicated by the following codes:

|                 |                                 |                                 |                                 |
|-----------------|---------------------------------|---------------------------------|---------------------------------|
| a: bi-annually  | c: annually, from 2028-2029     | f: annually, from 2029-2030     | i: annually, from 2030-2031     |
| b: tri-annually | d: bi-annually, from 2028-2029  | g: bi-annually, from 2029-2030  | j: bi-annually, from 2030-2031  |
|                 | e: tri-annually, from 2028-2029 | h: tri-annually, from 2029-2030 | k: tri-annually, from 2030-2031 |