

Faculty of Engineering and Architecture

Bridging Programme Master of Science in Sustainable Materials Engineering

Language of instruction: English

Programme version 3

## 1 General Courses 78 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E001161 <b>Mathematic Models</b> <i>Karel Van Acoleyen -- Department of Electronics and Information Systems</i>	6	BRUG	1	A:1	180
2	E078310 <b>Sustainable Use of Materials: Metals [nI]</b> <i>Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering</i>	3	BRUG	1	A:1	90
3	E068900 <b>Structure and Dynamics of Polymers</b> <i>Karen De Clerck -- Department of Materials, Textiles and Chemical Engineering</i>	6		1	B:1	180
4	E069041 <b>Bio-based and Synthetic Fibres</b> <i>Karen De Clerck -- Department of Materials, Textiles and Chemical Engineering</i>	6		1	A:1	180
5	E065340 <b>Micro-analysis and Structure Determination in Materials Science</b> <i>Hossein Beladi -- Department of Electromechanical, Systems and Metal Engineering</i>	6		1	A:2	180
6	E078320 <b>Sustainable Use of Materials: Plastics and Derived Materials [nI]</b> <i>Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering</i>	3	BRUG	1	A:2	90
7	E065472 <b>Metal Extraction and Recycling</b> <i>Inge Bellemans -- Department of Materials, Textiles and Chemical Engineering</i>	6		1	A:2	180
8	E071400 <b>Computer Aided Materials Engineering</b> <i>Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering</i>	6		1	A:1	180
9	E064221 <b>Design and Manufacturing of Textile Structures</b> <i>Lieva Van Langenhove -- Department of Materials, Textiles and Chemical Engineering</i>	6		1	A:2	180
10	E066662 <b>Environmentally Assisted Degradation of Materials</b> <i>Kim Verbeken -- Department of Materials, Textiles and Chemical Engineering</i>	6		1	A:2	180
11	E042740 <b>Fracture and Deformation Behaviour of Materials</b> <i>Leo Kestens -- Department of Electromechanical, Systems and Metal Engineering</i>	6		2	B:1	180
12	E900069 <b>Composites</b> <i>Wim Van Paeppegem -- Department of Materials, Textiles and Chemical Engineering</i>	6		2	A:1	180
13	E066230 <b>Microstructure-Property Control of Metals</b> <i>Hossein Beladi -- Department of Electromechanical, Systems and Metal Engineering</i>	6		2	A:2	180

### 1.1 General Courses for Metal Science and Engineering 6 credits

[Subscribe to the general courses below when Major Metal Science and Engineering is chosen.](#)

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E066020 <b>Microstructure of Materials [nI]</b> <i>Marcel Sluiter -- Department of Electromechanical, Systems and Metal Engineering</i>	6	BRUG	1	A:2	180

### 1.2 General Courses for Polymers and Fibre Structures 6 credits

[Subscribe to the general courses below when Major Polymers and Fibre Structures is chosen.](#)

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E069110 <b>Advanced Fibres and Derived Materials [nI]</b> <i>Lode Daelemans -- Department of Materials, Textiles and Chemical Engineering</i>	6	BRUG	1	A:2	180

## 2 Majors 18 credits

[Subscribe to 1 major from the following list. Subject to approval by the faculty.](#)

### 2.1 Major Metal Science and Engineering 18 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
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1	E066270	Metal Processing and Technology <i>Leo Kestens -- Department of Electromechanical, Systems and Metal Engineering</i>	6	2	A:2	180
2	E066170	Physical Materials Science <i>Leo Kestens -- Department of Electromechanical, Systems and Metal Engineering</i>	6	2	C:1	180
3	E024122	Computational Materials Physics <i>Stefaan Cottenier -- Department of Electromechanical, Systems and Metal Engineering</i>	6	2	A:2	180

## 2.2 Major Polymer and Fibre Engineering

18 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E064761 Textile Functionalization <i>Karen De Clerck -- Department of Materials, Textiles and Chemical Engineering</i>	6		2	A:2	180
2	E064201 Technical Textiles <i>Lieva Van Langenhove -- Department of Materials, Textiles and Chemical Engineering</i>	6		2	A:1	180
3	E064961 Polymer Processing and Circularity <i>Dagmar D'hooge -- Department of Materials, Textiles and Chemical Engineering</i>	6		2	A:2	180

## 3 Master's Dissertation

24 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E091103 Master's Dissertation	24		2	B: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 2027-2028	f: annually, from 2028-2029	i: annually, from 2029-2030
b: tri-annually	d: bi-annually, from 2027-2028	g: bi-annually, from 2028-2029	j: bi-annually, from 2029-2030
	e: tri-annually, from 2027-2028	h: tri-annually, from 2028-2029	k: tri-annually, from 2029-2030