

Study Programme

Academic year 2018-2019

EMSHEI10.1 General Courses

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Unit Operations in Chemical Industry	Geraldine Heynderickx TW11	6		1	1	60	180	
2	Chemistry of Industrial Processes	Maarten Sabbe TW11	6		1	2	60	180	
3	Sustainable Chemical Production Processes	Kevin Van Geem TW11	6		1	1	60	180	
4	Structure and Dynamics of Polymers	Karen De Clerck TW11	6		1	1	60	180	
5	Polymer Reaction Engineering	Dagmar D'hooge TW11	6		1	2	60	180	
6	Chemical Process Design	Philip De Smedt TW11	6		1	2	75	180	
7	Kinetic Modelling and Simulation	Joris Thybaut TW11	6		1	1	60	180	
8	Computational Fluid Dynamics in Chemical Technology	Geraldine Heynderickx TW11	3		1	2	30	90	
9	Thermal Installations	Michel De Paepe TW03	6		1	1	75	180	
10	Chemical Reactors: Fundamentals and Applications	Guy Marin TW11	6		2	1	60	180	
11	Computer Control of Industrial Processes	Clara-Mihaela Ionescu TW08	6		2	1	60	180	
12	Safety, Health and Environmental Management	Paul Van Steenberge TW11	3		2	2	30	90	
13	Industrial Project	Philip De Smedt TW11	6		2	1	67.5	180	

EMSHEI10.2 Elective Courses

Subscribe to 24 credit units from 1 path from the following list. Subject to approval by the faculty.

- 9 course units in year 1;
- 15 course units in year 2

EMSHEI10.2.1 Elective Courses: Path 1

Subscribe to 24 credit units from no less than 2 and no more than 3 modules from the following list. Subject to approval by the faculty.

The student chooses at least 6 credit units from the module of Elective Social Courses

EMSHEI10.2.1.1 Clusters

Subscribe to at most 18 credit units from the courses from the following list. Subject to approval by the faculty.

The student is free to choose the electives across the different clusters.

EMSHEI10.2.1.1.1 Cluster Economic Aspects

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Operations Research Models and Methods [en]	El-Houssaine Aghezzaf TW18	6			1	60	180	
2	Manufacturing Planning and Control [en]	Birger Raa TW18	6			1	60	180	
3	Project Management [en]	Mario Vanhoucke EB24	6			2	45	180	
4	Engineering Economy [en]	Sofie Verbrugge TW05	4			1	30	120	
5	Business Skills [nl, en]	Mieke Audenaert EB23	4			2	30	120	

EMSHEI10.2.1.1.2 Cluster Chemistry

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Chemistry of Nanostructures [en]	Zeger Hens WE06	3			1	30	90	
2	Chemical Modification of Renewable Resources [en]	Sven Mangelinckx LA24	3			2	30	90	
3	Electrochemistry	Katrien Strubbe WE06	3			2	30	90	

4	Advanced Instrumental Techniques for Chemical Analysis [en]	Laszlo Vincze WE06	3	1	15	90
5	Advanced Polymer Chemistry [en]	Filip Du Prez WE07	3	1	15	75
6	Advanced X-ray Spectroscopic Techniques for Chemical Analysis [en]	Laszlo Vincze WE06	3	1	15	75
7	Environmental Chemistry: Anorganic Polluents	Filip Tack LA24	3	1	37.5	75
8	Environmental Chemistry: Organic Polluents	Christophe Walgraeve LA24	3	1	37.5	75
9	Solid State Chemistry [en]	Pascal Van Der Voort WE06	6	2	57	150

EMSHEI10.2.1.1.3 Cluster Fundamental Techniques

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Bioprocess Control	Ingmar Nopens LA26	5			1	60	135	
2	Experimental Design [en]	Karel Vermeulen LA26	3			2	30	75	
3	Linear Systems [en]	Gert De Cooman TW06	6			2	60	180	
4	Modeling and Control of Waste Water Treatment Plants [en]	Ingmar Nopens LA26	3			1	30	75	
5	Modelling and Simulation of Dynamical Systems [en]	Guillaume Crevecoeur TW08	6			2	60	180	
6	Molecular Modelling of Industrial Processes	Veronique Van Speybroeck TW17	6			2	60	180	
7	Analysis of High Dimensional Data [en]	Olivier Thas LA26	3			2	30	75	
8	Fluid Mechanics [en]	Joris Degroote TW03	6			2	60	180	
9	Mathematical Methods in Chemical Technology	Denis Constaes TW16	6			1	60	180	
10	Technical Thermodynamics	Michel De Paepe TW03	6			2	60	180	

EMSHEI10.2.1.1.4 Cluster Materials

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Polymer Processing [en]	Dagmar D'hooge TW11	6			2	60	180	
2	Mass Spectrometry & Isotopic Analysis [en]	Pascal Boeckx LA24	6			2	57	153	
3	Micro-analysis and Structure Determination in Materials Science [en]	Roumen Petrov TW08	6			1	60	180	
4	Nanoporous Materials [en]	Pascal Van Der Voort WE06	3			1	15	75	
5	Surface Analysis [en]	Mieke Adriaens WE06	6			2	47	152	
6	Physical Materials Science [en]	Leo Kestens TW08	6			2	60	180	
7	Rational Use of Materials [en]	Kim Verbeken TW11	5			1	45	150	
8	Superconducting Materials [en]	Isabel Van Driessche WE06	3			1	15	75	

EMSHEI10.2.1.1.5 Cluster Technology

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Chemical and Physical Textile Technology	Paul Kiekens TW11	6			2	67.5	180	
2	Clean Technology [en]	Jo Dewulf LA24	5			1	60	135	
3	Sustainable Energy and Rational Use of Energy [en]	Jeroen Beeckman TW06	4			2	45	120	
4	Ecotechnology [en]	Karel De Schampheleere LA22	5			2	60	135	
5	Environmental Constructions [en]	Eveline Volcke LA24	5			1	60	135	
6	Environmental Technology: Soil and Solid Waste	Frederik Ronsse LA24	5			1	60	135	
7	Environmental Technology: Air	Christophe Walgraeve LA24	5			1	60	135	
8	Process Engineering 2	Paul Van der Meeren LA24	5			1	60	135	
9	Technology of Vegetable Products [en]	Koen Dewettinck LA23	5			2	60	135	
10	Thermochemical conversion of biomass	Frederik Ronsse LA24	4			2	45	120	
11	Metal Extraction and Recycling [en]	Stephanie Vervynckt TW11	3			2	30	90	
12	Process Safety: Reactor Technology, Intrinsic Hazards and Process Safety Hazard Analysis		3				30	90	

EMSHEI10.2.1.2 Elective Social Courses

Subscribe to no less than 6 credit units from the following list. Subject to approval by the faculty.

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Safety of Electrical and Mechanical Installations	Alex Van den Bossche TW08	3			2		30	90
2	The Information Society and ICT [en]	Chris Develder TW05	3			1		15	90
3	Principles of Law and Construction Law	Jelle Laverge TW01	3			1		15	90
4	Ethics, Engineering and Society	Guido Pennings LW01	3			2		15	90
5	Commercial Law	Diederik Bruloot RE21	3			1		30	90
6	Introduction to Psychology	Wim Notebaert PP02	3			1		30	90
7	Rational Use of Materials [en]	Kim Verbeken TW11	5			1		45	150
8	Technology and Environment [nl, en]	Carlos De Wagter GE38	3				A:11, B:	15	90
9	Philosophy and Science	Maarten Van Dyck LW01	3			1		15	90
10	Introduction to Entrepreneurship [en]	Petra Andries EB23	3			1		15	90
11	Dare to Venture [en]	Johan Verrue EB23	4			2		30	120
12	Dare to Start [en]	Frank Gielen TW05	3			2		36	90
13	Movement and Sports: Now and Later	Matthieu Lenoir GE25	3			2		30	90
14	Powerful Learning Environments	Bram De Wever PP06	6			1		40	180
15	Classroom Management and Reflection	Martin Valcke PP06	6			2		40	180
16	The Teacher within School and Society	Emmelien Merchie PP06	6			1		40	180
17	Psychology of Adolescence	Wim Beyers PP07	4			1		30	120
18	Introduction to Human Resource Management [en]	Alex Vanderstraeten EB23	3			1		30	90
19	Sustainable Energy and Rational Use of Energy [en]	Jeroen Beeckman TW06	4			2		45	120
20	Coaching and Diversity	Geert Van Hove PP10	3			J		25	90
21	Internship 1 [nl, en]	Patrick Segers TW06	3				A:11, B:	7.5	90
22	Internship 2 [nl, en]	Patrick Segers TW06	3				A:11, B:	7.5	90
23	Internship 3 [nl, en]	Patrick Segers TW06	6				A:11, B:	7.5	180
24	International Internship 1 [en]	Patrick Segers TW06	3				A:11, B:	7.5	90
25	International Internship 2 [en]	Patrick Segers TW06	3				A:11, B:	7.5	90
26	International Internship 3 [en]	Patrick Segers TW06	6				A:11, B:	7.5	180

EMSHEI10.2.1.3 Elective Courses Ghent University

Subscribe to no more than 18 credit units from Elective Courses Ghent University. Subject to approval by the faculty.

EMSHEI10.2.2 Elective Courses: Path 2

Subscribe to 24 credit units from 2 modules from the following list. Subject to approval by the faculty.

EMSHEI10.2.2.1 Minors

Subscribe to at most 18 credit units from 1 minor from the following list. Subject to approval by the faculty.

EMSHEI10.2.2.1.1 Minor Operations Management

Subscribe to 18 credit units from the following list, with 12 credit units with reference a. Subject to approval by the faculty.

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Operations Research Models and Methods [en]	El-Houssaine Aghezzaf TW18	6	a		1		60	180
2	Manufacturing Planning and Control [en]	Birger Raa TW18	6	a		1		60	180
3	Quality Engineering and Industrial Statistics [en]	Stijn De Vuyst TW18	6			2		60	180
4	Project Management [en]	Mario Vanhoucke EB24	6			2		45	180
5	Engineering Economy [en]	Sofie Verbrugge TW05	4			1		30	120
6	Business Skills [nl, en]	Mieke Audenaert EB23	4			2		30	120
7	Transport Economics	Christa Sys EB21	6			2		45	180

EMSHEI10.2.2.1.2 Minor Biosystems

Subscribe to 18 credit units from the following list, with

- no less than 9 credit units from the courses with reference a,

- no less than 3 credit units from the courses with reference b.

Subject to approval by the faculty.

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Modelling of Physiological Systems [en]	Patrick Segers TW06	6	a			1	67.5	180
2	From Genome to Organism [en]	Fransiska Malfait GE31	6	a			1	60	180
3	Quantitative Cell Biology [en]	Andre Skirtach LA25	3	a			1	30	90
4	Biomaterials [en]	Peter Dubruel WE07	6	b			1	60	180
5	Biomechanics [en]	Patrick Segers TW06	6	b			2	67.5	180
6	Biomedical Imaging [en]	Stefaan Vandenberghe TW06	3	b			1	30	90

EMSHEI10.2.2.1.3 Minor Environment and Sustainable Development

Subscribe to 18 credit units from the following list. Subject to approval by the faculty.

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Environmental Law	Luc Lavrysen RE22	4				J	45	120
2	Sustainability of Materials [en]	Nele De Belie TW14	4				2	30	120
3	Environmental Impact of Radiation and Noise	Klaus Bacher GE38	3				1	15	90
4	Clean Technology [en]	Jo Dewulf LA24	5				1	60	135
5	Introduction to Eco-chemistry [en]	Christophe Walgraeve LA24	3				1	15	90
6	Rational Use of Materials [en]	Kim Verbeken TW11	5				1	45	150
7	Water and Air Quality Engineering [en]	Joris Thybaut TW11	4				2	30	120
8	Sustainable Energy and Rational Use of Energy [en]	Jeroen Beeckman TW06	4				2	45	120
9	Introduction to Eco-toxicology and Risk Assessment [en]	Karel De Schamphelaere LA22	3				1	30	90

EMSHEI10.2.2.2 Elective Social Courses

Subscribe to no less than 6 credit units from the following list. Subject to approval by the faculty.

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Safety of Electrical and Mechanical Installations	Alex Van den Bossche TW08	3				2	30	90
2	The Information Society and ICT [en]	Chris Develder TW05	3				1	15	90
3	Principles of Law and Construction Law	Jelle Laverge TW01	3				1	15	90
4	Ethics, Engineering and Society	Guido Pennings LW01	3				2	15	90
5	Commercial Law	Diederik Bruloot RE21	3				1	30	90
6	Introduction to Psychology	Wim Notebaert PP02	3				1	30	90
7	Rational Use of Materials [en]	Kim Verbeken TW11	5				1	45	150
8	Technology and Environment [nl, en]	Carlos De Wagter GE38	3				A:11, B:	15	90
9	Philosophy and Science	Maarten Van Dyck LW01	3				1	15	90
10	Introduction to Entrepreneurship [en]	Petra Andries EB23	3				1	15	90
11	Dare to Venture [en]	Johan Verrue EB23	4				2	30	120
12	Dare to Start [en]	Frank Gielen TW05	3				2	36	90
13	Movement and Sports: Now and Later	Matthieu Lenoir GE25	3				2	30	90
14	Powerful Learning Environments	Bram De Wever PP06	6				1	40	180
15	Classroom Management and Reflection	Martin Valcke PP06	6				2	40	180
16	The Teacher within School and Society	Emmelien Merchie PP06	6				1	40	180
17	Psychology of Adolescence	Wim Beyers PP07	4				1	30	120
18	Introduction to Human Resource Management [en]	Alex Vanderstraeten EB23	3				1	30	90
19	Sustainable Energy and Rational Use of Energy [en]	Jeroen Beeckman TW06	4				2	45	120
20	Coaching and Diversity	Geert Van Hove PP10	3				J	25	90
21	Internship 1 [nl, en]	Patrick Segers TW06	3				A:11, B:	7.5	90
22	Internship 2 [nl, en]	Patrick Segers TW06	3				A:11, B:	7.5	90
23	Internship 3 [nl, en]	Patrick Segers TW06	6				A:11, B:	7.5	180
24	International Internship 1 [en]	Patrick Segers TW06	3				A:11, B:	7.5	90
25	International Internship 2 [en]	Patrick Segers TW06	3				A:11, B:	7.5	90

EMSHEI10.3 Master's Dissertation

No.	Course name	Lecturer (dept.)	CRDT	Ref	MT1	MT2	Semester	Contact	Study
1	Master's Dissertation		24		2	4	J	60	720

Teaching languages

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 2019-2020	f: annually, from 2020-2021	i: annually, from 2021-2022
b: tri-annually	d: bi-annually, from 2019-2020	g: bi-annually, from 2020-2021	j: bi-annually, from 2021-2022
	e: tri-annually, from 2019-2020	h: tri-annually, from 2020-2021	k: tri-annually, from 2021-2022