

Academic Programme 2016-2017

Biological and Food Engineering

Semester 5

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 5.0 Upgrading course							20		
Upgrading course							18		7110020
-> Biology	4		6	8		18			7110021
-> Mathematics for Engineers			18			18			7110022
Hygiene and Safety			2			2	2		7110010
Unit 5.1 Biochemistry and Process Engineering 1							109	9	
Introduction to Chemical engineering	12		20			32	32	3	711101
Biochemistry and Nutrition 1	20		6	45	6	77	77	6	711102
Unit 5.2 Bio-and Food Engineering 1							94	7	
Fundamentals of Microbiology	16		4	30		50	50	4	711202
Ecology and Biodiversity	28		16			44	44	3	711203
Unit 5-3 Industrial Engineering and Computing 1							84	7	
Statistics		10	20	18		48	48	4,5	711301
Automation	10		14	8		32	32	2,5	711302
Computers and Networks			2	2		4	4		711304
Unit 5-4 Soft Skills 1							58	4	
Social and Environment Ethics	2		2			4	4	0,75	711401
Career Planning			10			10	10	0,75	711402
Sport					22	22	22	0,75	711403
Project 1 : Initiation to Academic Research				4	18	22	22	1,75	711404
Unit 5.5 Languages 1							44	3	
English			24			24	24	2	711501
Language 2									
-> German			20			20		1	711511
-> Spanish			20			20		1	711512
-> French			20			20		1	711513
Total :							409	30	

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Note :
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the personal work of the student for all the Units of the semester
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Semester 6

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 6.1 Biochemistry and Process Engineering 2							117	9	
Chemical engineering : heat and mass transfer, separation and extraction	32		36			68	68	5	712101
Process Engineering : mechanical separations and Extraction	10		12			22	22	1,75	712102
Matter Transfer and Applications	22		24			46	46	3,25	712103
Biochemistry and Nutrition 2	26		4		19	49	49	4	712104
Unit 6.2 Bio-and Food Engineering 2							110	8	
Molecular and Plant Biotechnology, Bioinformatics	20		2	18		40	40	3,5	712201
Animal AgroResources	32		8			40	40	2,5	712202
Uses of Plant Biomass	30					30	30	2	712203
Unit 6-3 Industrial Engineering and Computing 2							73	6	
Mathematics		8	16			24	24	2	712301
Programming	10		16	12		38	38	3	712302
Experimental design	5		6			11	11	1	712303
Unit 6-4 Soft Skills 2							64	4	
Communication Tools			10			10	10	0,75	712401
Public Speaking			10			10	10	0,75	712402
Sport					22	22	22	0,75	712403
Fundamentals of Management	10					10	10	0,75	712404
Project 2 (critical project)					12	12	12	1	712405
Unit 6.5 Languages 2							44	3	
English Language2			24			24	24	2	712501
-> German			20			20		1	712511
-> Spanish			20			20		1	712512
-> French			20			20		1	712513
Total :							408	30	

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Semester 7

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 7.1 Process Engineering 3							83	6	
Chemical and Bioreaction engineering	10		10			20	20	1,5	713101
Microorganisms control	5		6	12		23	23	1,5	713102
Drying technology	10		10	20		40	40	3	713103
Unit 7.2 Bio- and food engineering 3							100	8	
Sensory Analysis	6			8		14	14	1	713201
Food Physico-Chemistry	12		14	15		41	41	3,5	713202
Food Microbiology	12		12	21		45	45	3,5	713203
Unit 7-3 Industrial Engineering and Computing 3							80	6	
Process Control Engineering	10		14	16		40	40	3	713301
Numerical Analysis	4		6	8		18	18	1	713302
Data Mining	10			6	6	22	22	2	713303
Unit 7-4 Soft Skills 3							94	7	
Quality Control	20		2			22	22	1,5	713401
Work placement debriefing			10			10	10	0,75	713402
Project Management	8		4			12	12	0,75	713403
Project 3: design of an agro-food plant or product (group of 3 students)					50	50	50	4	713404
Unit 7.5 Languages 3							52	3	
English			26			26	26	2	713501
Language 2									
-> German			26			26		1	713512
-> Spanish			26			26		1	713513
-> French			26			26		1	713514
Total :							409	30	

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Semester 8

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 8-1 Industrial and Environmental Engineering							36	3	
Material and Production planning	8			8		16	16	1,5	714101
Industrial Microbiology and Enzymology	8		4	8		20	20	1,5	714103
Unit 8-2 Specialization Modules							80	6	
Session 1 (one course to be chosen)							40	3	714201
-> Food and Biological Production Management	40					40		3	714210
-> Food Innovation	18		16	6		40		3	714211
Session 2 (one course to be chosen)							40	3	714202
-> Hygiene-Safety-Quality-Environment Management	20		20			40		3	714220
-> Biotechnology Engineering in Food, Health And Environment	20		4	16		40		3	714221
Unit 8-3-Soft Skills 4							86	6	
Law, Regulations, Audit	18		4			22	22	1,25	714301
Cost Accounting	6		10			16	16	1,25	714302
Team Management	8		16			24	24	1,75	714303
Economic environment and Strategic Management In Food Industries	18		6			24	24	1,75	714304
Unit 8-4 Languages 4							32	3	
English			18			18	18	2	714401
Language 2									
-> German			14			14		1	714412
-> Spanish			14			14		1	714413
-> French			14			14		1	714414
Remedial English (TOEIC training)			18			18			714403
Unit 8-5 Assistant Engineer Placement (from mid-April to the end of July)							168	12	
Assistant Engineer Placement							168	12	714560
Total :							402	30	

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Semester 9

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code	
Unit 9-1 Quality Management and Environment							88	7		
Sustainable Development	12		4			16	16	1,5	715101	
Water technology	8		16			24	24	2	715102	
Quality Management, Environment	12		8			20	20	1,5	715103	
Green processes, innovation processes	20			8		28	28	2	715104	
Unit 9-2 Industrial Food Engineering							60	5		
Agro-Food Plant Engineering	12		14			26	24	3	715201	
Cold-chain Management	10		6			16	16	1	715202	
Packaging	6					6	6	0,5	715203	
Supply chain	12					12	12	0,5	715204	
Unit 9-2 Languages 5							52	3		
English			20			20	20	1,75	715301	
Project language			12			12	12	0,5	715302	
Language 2										
-> German			20			20		0,75	715312	
-> Spanish			20			20		0,75	715313	
-> French			20			20		0,75	715314	
Unit 9-4 Soft Skills 5							114	8		
Corporate Management	8		26			34	34	2,5	715401	
Marketing	20					20	20	2,5	715402	
To Succeed in a Job Interview			12			12	12		715403	
<i>Cross-Disciplinary modules - 2 courses to be chosen from the following list :</i>								50	3	925500
-> Life Cycle Assessment (LCA) and eco-design			24			24		1,5	925510	
-> Intercultural management	24					24		1,5	925511	
-> Co-design in Polytech Lille's fablab			24			24		1,5	925517	
-> Marketing B to B	12		12			24		1,5	925518	
-> High tech innovation management and Business intelligence	24					24		1,5	925523	
-> Discover the internet of things	12			12		24		1,5	925530	
-> Industrial waste management in France	24					24		1,5	925540	
-> Renewable energy	16			8		24		1,5	925571	
-> Mobilizing the collective intelligence: a key resource in the team work	24					24		1,5	925580	
-> Introduction to digital art technologies	24					24		1,5	925592	
-> Economy, geopolitics and international geostrategy	24					24		1,5	925595	
-> Fundamentals of project engineering and Commercial negotiation	24					24		1,5	925598	
-> Production management	16			8		24		1,5	925599	
-> Symbolic computation and introduction to Scientific documents typesetting							24	1,5	925619	
Unit 9-4 Industrial Project							90	7		
Final year project (deliverable) : In a group of 6 students with industrial funding and collaboration										
Industrial project: individual evaluation					60	60	60	4,5	715501	
					30	30	30	2,5	715502	
Total :							404	30		

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Semester 10

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 10.1 Industrial Project							100	6	
Industrial Project					100	100		6	716101
International mobility					100	100		6	716102
Unit 10.2 Engineer Placement							300	24	
Engineer industrial placement (from February to the end of August)							300	24	716201
Total :							400	30	

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