



Academic Programme 2016-2017
Software Engineering and Statistics

Semester 5

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 5-1 - Fundamental of Mathematics							114	8	
Mathematical Structures	24		22			46	46	3,5	111110
Probabilities 1	20		24	4		48	48	3,5	111220
Mathematics		20				20	20	1	111230
Unit 5-2 - Fundamentals of Computing 1							146	12	
Algorithmics and Programming	14		22	20	8	64	64	5,25	111120
Computer architecture	10		10			20	20	1,5	111190
Databases and Data modelling	16		10	14		40	40	4	111320
Database project				22		22	22	1,5	111321
new module name					24	24			111331
Unit 5-3 - Economics, Soft Skills							96	7	
Sport					22	22	22	1	111023
Career Planning			10			10	10	1	111051
Management accounting	14					14	14	1,25	111054
Economic Environment	12		8			20	20	1,5	111160
Marketing	10		10			20	20	1,5	111170
Corporate Communication			10			10	10	0,75	112052
Unit 5-4 Languages							44	3	
Second language									
-> German			20			20		1	111012
-> Spanish			20			20		1	111013
-> French			20			20		1	111014
English			24			24	24	2	111011
Total :							400	30	

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Note :
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the personal work of the student for all the UEs 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 - Applied Mathematics							162	12	
Statistical Inference	22		14	12		48	48	3,5	112240
Probabilities 2	10		10	4		24	24	1,75	112250
Numerical calculus	20		10		10	40	40	3	112260
Graph theory and Combinatorial Analysis	16		14			30	30	2,25	112310
Linear regression	8			12		20	20	1,5	112911
Mathematics - Remedial course		24				24			112921
Unit 6-2 -Computing							140	11	
Graph Programming Project Work				14		14	14	1,25	112150
Data Structures	12		16	18		46	46	3,5	112180
Operating Systems	12			12		24	24	2	112270
Introduction to Data Networks	6			20		26	26	2	112290
Languages and Translators	12		6	6	6	30	30	2,25	112300
Unit 6-3 - Soft Skills							58	4	
Communication			10			10	10	0,75	111942
Sports					22	22	22	1	112023
Communication Skills and Team management			10			10	10	0,75	112053
General Accounting			16			16	16	1,5	112230
Unit 6-4 Languages							44	3	
Second language									
-> German			20			20		1	112012
-> Spanish			20			20		1	112013
-> French			20			20		1	112014
English			24			24	24	2	112011
Remedial English			18			18			112961
Total :							404	30	

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Semester 7

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 7-1 - Advanced Statistics							136	10	
Exploratory statistics	20			18		38	38	2,75	113330
Statistical Modelling	8			10		18	18	1,25	113350
Operational Research	18		10		12	40	40	3	113360
Numerical Calculus	12			8		20	20	1,5	113420
Markov Chains	10		10			20	20	1,5	113911
Unit 7-2 - Software Engineering							138	11	
Data Networks	6			20		26	26	2	113370
C and Advanced Systems	12			12		24	24	2	113380
Object-oriented Programming	18			14		32	32	2,25	113390
Database Management Systems (DBMS)	12			6		18	18	1,5	113400
Object oriented Programming Project					18	18	18	1,75	113921
Object-Oriented Information Systems (UML, OR)	6		6	8		20	20	1,5	113922
Unit 7-3 - Soft Skills							86	6	
Work placement debriefing					10	10	10	0,75	113310
Financial Management	10		10			20	20	1,5	113340
Management	12		12			24	24	1,5	113430
Introduction to Research			10			10	10	0,75	113941
Labour Law	12					12	12	0,75	113943
Quality - Hygiene - Safety	10					10	10	0,75	113944
Unit 7-4 - Languages							42	3	
Second Language									
-> German			20			20		1	113012
-> Spanish			20			20		1	113013
-> French			20			20		1	113014
English			22			22	22	2	113011
Remedial English			18			18			113961
Total :							402	30	

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Semester 8

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 8-1 - Probabilistic Modelling and Random Processes							81	7	
Stochastic Processes	12		10			22	22	2	114460
Advanced Statistical Modelling	16			12		28	28	2	114470
Statistics Project					15	15	15	1,5	114520
Stochastic Processes - Project					16	16	16	1,5	114821
Unit 8-2 - Software Systems							68	6	
Software Architecture	11			13		24	24	2	114500
Logic and Semantic Web	10		10	10		30	30	2,5	114540
Software Architecture Project					14	14	14	1,5	114921
Unit 8-3 - Information Systems Management							120	7	
Management Control	10		10			20	20	1,25	114450
Software Engineering	12		12			24	24	1,5	114530
Information System Project					48	48	48	3,5	114610
To Succeed in a Job Interview			12			12	12		114952
Contract negotiation	12					12	12	0,75	114953
Social and Environmental Responsibility			4			4	4		114954
Unit 8-4 - Assistant Engineer Placement : Starting in mid-May (10-13 weeks)							95	7	
Assistant Engineer Placement					95	95	95	7	114640
Unit 8-5							42	3	
Second Language									
-> German			20			20		1	114012
-> Spanish			20			20		1	114013
-> French			20			20		1	114014
English			22			22	22	2	114011
Total :							406	30	

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Semester 9

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code	
Unit 9-1 - Specialisation courses							90	8		
Distributed Computing Systems	12			10		22	22	2	115015	
Advanced Optimization Methods	12			10		22	22	2	115017	
Time Series	10			14		24	24	2	115018	
Big Data	10			12		22	22	2	115034	
Unit 9-2 - Elective Modules : 4 courses to be chosen from the following list							88	8		
<i>Elective Modules : 4 courses to be chosen from the following list</i>								88	8	115030
-> Financial Engineering	12		10			22		2	115019	
-> Data mining	12			10		22		2	115023	
-> High performance Calculation	14			8		22		2	115027	
-> Performance of Financial Markets	10		12			22		2	115028	
-> Statistical Methods for Marketing	10			12		22		2	115029	
-> Software Engineering	12			10		22		2	115031	
-> Biostatistics	12		10			22		2	115032	
-> Test	10			12		22	22	2	115033	
Unit 9-3 - Accounting, Management, Communication 3							72	4		
Management Simulation			24			24	24	1	115020	
<i>Elective modules</i>	24		24			48			115030	
-> 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 - Final year Project							100	7		
Final year Project					100	100	100	7	115100	
Unit 9-5 Languages (English + a second language)							52	3		
Second Language										
-> German			20			20		0,75	115012	
-> Spanish			20			20		0,75	115013	
-> French			20			20		0,75	115014	
English			20			20	20	1,75	115011	
Remedial English or professional language			12			12	12	0,5	115841	
Total :							402	30		

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Semester 10

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 10-2 Engineer Placement : 5 months starting in February							300	23	
Engineer Placement					300	300	300	23	116030
Unit 10-1 Final Year Project							100	7	
Final Year Project			100			100	100	7	116020
Total :							400	30	

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