POLYTECH LILLE

Academic Programme 2016-2017

Department Measurement Systems and Applied Business

Semester 5

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 5.1 Mathematics, Information Technology (IT) and Measurement issues						**120**		**9**	
Mathematics	22		26			48	48	3,5	411110
Information Technology	14		16			30	30	2	411120
Practicals in Information Technology (Lab)				18		18	18	1,5	411130
Experimental data measurement basics	12		12			24	24	2	411140
Unit 5.2 Electronics and Systems						**74**		**7**	
Fundamentals of electronic circuits	4		6			10	10	0,75	411210
Electronic circuits (Lab)				16		16	16	1,5	411220
Amplifiers, Linear circuits and Closed loop systems	12		12			24	24	2,25	411230
Fundamentals of modulation and demodulation	12		12			24	24	2,5	411240
Unit 5.3 Physics and Chemistry						**65**		**5**	
Chemistry - Basics	4		6			10	10	0,75	411310
Chemistry (Practical)				24		24	24	1,5	411320
Geometrical Optics	4		6			10	10	0,75	411330
Interaction of radiation with matter	11		10			21	21	2	411340
Unit 5.4 Business, Marketing and Human Sciences						**96**		**6**	
Sports			22			22	22	0,75	411410
Marketing	12					12	12	0,75	411420
Communication tools fundamentals			10			10	10	0,75	411430
Building your own career plans			10			10	10	0,75	411440
Bases in Management	10					10	10	0,75	411450
Efficient report writing			14			14	14	1	411460
Economical environment	12		6			18	18	1,25	411470
Unit 5.5 Languages						**44**		**3**	
English			24			24	24	2	411510
-> German								1	411521
-> Spanish								1	411522
-> French								1	411523
Remedial English			14			14	14		411530
						Total : 399		**30**	

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Note :
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POLYTECH LILLE®

Academic Programme 2016-2017

Department Measurement Systems and Applied Business

Semester 6

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 6.1 Optics & Quantitative Sciences							**118**	**9**	
Fundamental Optics	12		12			24	24	2	412110
Optics (Practicals)				20		20	20	1,25	412120
Quantitative Spectroscopy	12		12			24	24	2	412130
Renewable energies using modern Chemistry	12		8			20	20	1,5	412140
Chromatography	8		6			14	14	1,25	412150
Practicals in Chemistry (Labs)				16		16	16	1	412160
Unit 6.2 Analog and Digital Electronics							**116**	**9**	
Digital electronics - Introduction		10	18			28	28	2	412210
Analog to Digital / Digital analog conversion			24			24	24	2	412220
Semi-conductor fundamental devices	14		14			28	28	2,25	412230
Signal Filtering - Fundamentals	12		12			24	24	2	412240
Practicals in Analog Electronics (Labs)				12		12	12	0,75	412250
Unit 6.3 Marketing and Business Issues							**126**	**9**	
Enhanced Communication			26			26	26	2,25	412310
Sales techniques	24					24	24	2	412320
Sports			22			22	22	0,75	412330
Business Management	14		16			30	30	2	412340
B to B Marketing (Business to Business)	12		12			24	24	2	412350
Unit 6.4 Languages							**44**	**3**	
English			24			24	24	2	412420
-> German								1	412431
-> Spanish								1	412432
-> French								1	412433
Remedial English			18			18	18		412440
Total :							404	30	

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Academic Programme 2016-2017

Department Measurement Systems and Applied Business

Semester 7

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 7.1 Languages							**42**	**3**	
English			22			22	22	2	413110
-> German								1	413121
-> Spanish								1	413122
-> French								1	413123
Remedial English			18			18	18		413130
Unit 7.2 Steering Management , Negotiation							**46**	**3**	
Feedback on third year Placement			10			10	10	0,75	413210
Management and changes in organizations	12		12			24	24	1,5	413220
Project Management	12					12	12	0,75	413230
Unit 7.3 Business Engineering							**123**	**8**	
Writing an efficient data-sheet for Marketing	10					10	10	0,5	413310
Database fundamentals	4			8		12	12	1	413320
Knowing yourself and understanding your colleagues			14			14	14	1	413330
Intellectual property and patents	9					9	9	0,5	413340
How to do a business report?	20					20	20	1,5	413350
Specific and complex business issues	14					14	14	1	413360
Business in English			30			30	30	1,5	413370
Marketing project : specifications					14	14	14	1	413380
Unit 7.4 Scientific project and Molecular spectroscopy							**114**	**9**	
Spectroscopic devices and systems	24					24	24	2	413410
Spectroscopic instrumentation (Practical)				16		16	16	1	413420
Photonic-based spectroscopy	16		8			24	24	2	413430
Nuclear Magnetic Resonance Spectrocopy (NMRS)	16		8			24	24	2	413440
Research and Data analysis	2			10	14	26	26	2	413450
Unit 7.5 Electronics, Instrumentation and Measurement							**89**	**7**	
Digital signal processing	10		10			20	20	1,5	413510
Electronics and measurement (Lab)				16		16	16	1,25	413520
Radiofrequency instrumentation (Lab)				16		16	16	1,25	413530
From semi-conductor single devices to circuits	12		4			16	16	1,5	413540
Signal conditionning, sensors, Labview	9		4	8		21	21	1,5	413550
						Total :	**414**	**30**	

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Academic Programme 2016-2017

Department Measurement Systems and Applied Business

Semester 8

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 8.1 Languages							**42**	**3**	
English			22			22	22	2	414110
-> German								1	414121
-> Spanish								1	414122
-> French								1	414123
Remedial English							18		414130
Unit 8.2 Lasers, Photonics							**78**	**6**	
Instrumental Optics and Lasers	12		12			24	24	2	414210
Digital transmissions, fiber optics	22		8			30	30	2	414220
Practicals in Photonics and Lasers (Labs)				24		24	24	2	414230
Unit 8.3 Measurement, Data and Image signal Processing							**70**	**6**	
Noise in measurements	12		10			22	22	2	414310
Metrology and calibration	16					16	16	2	414320
Fiber optic/measurement project				32		32	32	2	414330
Unit 8.4 Placement							**100**	**7**	
Fourth-year placement (Assistant Engineer)			100			100	100	7	414410
Unit 8.5 Project and applied Marketing							**116**	**8**	
Global economy	12					12	12	1	414510
Financial Management	10		10			20	20	1,5	414520
E-marketing - Web marketing	6				14	20	20	1,5	414530
Marketing project - Execution					64	64	64	4	414540
					Total :		**406**	**30**	

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Academic Programme 2016-2017

Department Measurement Systems and Applied Business

Semester 9

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 9.1 Languages							**52**	**3**	
-> German								0,75	415111
-> Spanish								0,75	415112
-> French								0,75	415113
English			20			20	20	1,75	415120
Project language			12			12	12	0,5	415130
Unit 9.2 Key professional Issues							**106**	**7**	
Fundamentals of strategic development	16					16	16	1	415210
Behavioural analysis	16					16	16	1	415220
Introduction: Labour Law	12					12	12	0,75	415230
Advanced financial issues	20					20	20	1,5	415240
Quality, Health and Safety	10					10	10	0,75	415250
Case study and Business plans			24			24	24	1,5	415260
Feedback on internship as Engineering-assistant					4	4	4	0,5	415270
Social and Environmental Responsibility			4			4	4		415280
Unit 9.3 International Business, Engineer project							**130**	**12**	
International Management	24					24	24	1,5	415310
Quantitative Marketing	12		12			24	24	1,5	415320
Cross-cultural differences			10			10	10	1	415330
Sales and international issues	10					10	10	1	415340
Succeed in your job interview	12					12	12		415350
Final project (I)					50	50	50	7	415360
Unit 9.4 Telecom and I.T. Networks, Imaging							**62**	**5**	
Telecom and I.T. networks conferences	4					4	4		415410
Wireless Communication - Electromagnetic compatibility	12					12	12	1	415420
Architecture of wired and IP networks	26					26	26	2	415430
Microwaves and High frequency measurements	24					24	24	2	415440
Surface Imaging	24					24	24	2,5	415450
Advanced Spectroscopy, Bioimaging	26					26	26	2,5	415460
Imaging Conferences	4					4	4		415470
Unit 9.5 Transverse Modules							**48**	**3**	
Transverse Modules							48	3	415510
-> 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 ressource 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
Total :							**398**	**30**	

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Academic Programme 2016-2017

Department Measurement Systems and Applied Business

Semester 10

Course	Lec.	LwT	Tut.	Prac.	Project	Course Hours	Student Hours	ECTS Credits	Code
Unit 10.1 Final Project							**100**	**6**	
Final year Project (at school or in a company)					100	100	100	6	416110
Unit 10.2 Final Placement							**300**	**24**	
Engineer Placement					300	300	300	24	416210
						Total :	**400**	**30**	

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