

	Programm Computer Engineering (Appendix 4)	Réf : GES-IMP-34
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SEMESTER 1

Semester	Teaching Unit	Modules	Nature	Type	Hourly volume					Number of credits awarded		Coefficients		Evaluation method	
					cours	DW	PW	F2F	HW	ECTS	TECTS	AC	TAC	Continuous As- sessment	Blended As- sessment
S1	TU.1: Fundamentals Sciences for Engineer I	Math for engineer I	Fundamental	Face to face	30	15	0	45	35	3	6	3	6		X
		Numerical analysis and optimization	Fundamental	Face to face	15	15	15	45	35	3		3			X
	TU.2:Fundamentals sciences for development 1	Fundamental algorithms 1 & 2 (C)	Fundamental	Face to face	15	15	30	60	46	4	10,5	4	10,5		X
		Computer and scientific computing workshop	Fundamental	Face to face	0	0	30	30	23	2		2			X
		operating systems : Linux	Fundamental	Face to face	15	15	15	45	35	3		3			X
		Tutored Project 1	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		X	
		Logical Systems	Fundamental	Face to face	15	15	0	30	23	2		2		10,5	10,5
	Signal Processing	Fundamental	Face to face	15	15	0	30	23	2	2		X			
	Transmission technology	Fundamental	Face to face	15	15	15	45	35	3	3		X			
	Information Theory	Fundamental	Face to face	15	15	0	30	23	2	2		X			
	Tutored Project 2	Fundamental	Out of class	0	0	22,5	22,5	15	1,5	1,5	X				
	TU.4 : Human Sciences and Engineer Culture1	Initiation and Introduction to economics	Transversal	Face to face	0	22,5	0	22,5	15	1,5	3	1,5	3	X	
		English1	Transversal	Face to face	0	22,5	0	22,5	15	1,5		1,5		X	
Total					135	165	150	450	338	30	30	30	30		

SEMESTER 2

Semester	Teaching Unit	Modules	Nature	Type	Hourly volume					Number of credits awarded		Coefficients		Evaluation method	
					cours	DW	PW	F2F	HW	ECTS	TECTS	AC	TAC	Continuous As- sessment	Blended As- sessment
S2	TU.5:Fundamentals Sciences for Engineer II	Math for engineer II	Fundamental	Face to face	15	15	0	30	23	2	4	2	4		x
		Optimization	Fundamental	Face to face	15	0	15	30	23	2		2			x
	TU.6:Fundamentals sciences for DevelopmentII	Java 1& 2	Fundamental	Face to face	15	15	15	45	35	3	9	3	9		X
		Database	Fundamental	Face to face	15	15	15	45	35	3		3			X
		Coding C++	Fundamental	Face to face	0	0	30	30	23	2		2			X
		Tutored Project 3	Fundamental	Out of class	0	0	15	15	13	1		1		x	
	TU.7 : Fundementals sciences for Network II	Network architecture and protocols (CCNA1)	Fundamental	Face to face	15	15	15	45	35	3	13	3	13		x
		Micro-Proc& Micro-Control	Fundamental	Face to face	15	15	15	45	35	3		3			x
		Artificial intelligence	Fundamental	Face to face	15	0	30	45	35	3		3			x
		Digital and analog electronics	Fundamental	Face to face	15	15	15	45	35	3		3			x
		Tutored Project 4	Fundamental	Out of class	0	0	15	15	13	1		1		x	
	TU.8 : Human Sciences and Engineer Culture II	Communicational techniques	Transversal	Face to face	0	15	0	15	13	1	4	1	4	X	
		English2	Transversal	Face to face	0	22,5	0	22,5	15	1,5		1,5		X	
		Enpreneurial Culture	Transversal	Face to face	0	22,5	0	22,5	15	1,5		1,5		X	
Total					120	150	180	450	348	30	30	30	30		

SEMESTER 3

Semester	Teaching Unit	Modules	Nature	Type	Hourly volume					Number of credits awarded		Coefficients		Evaluation method	
					Cours	DW	PW	F2F	HW	ECTS	TECTS	AC	TAC	Continuous Assessment	Blended Assessment
S3	TU.9 : Fundamentals Sciences for Development III	Python programming	Fundamental	Face to face	0	0	45	45	35	3	9,5	3	9,5	x	
		Web development	Fundamental	Face to face	0	0	45	45	35	3		3		x	
		Programming Mobile	Fundamental	Face to face	0	0	30	30	23	2		2		x	
		Tutored Project 5	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		x	
	TU.10 : Design and Linux	Design Methodology	Fundamental	Face to face	15	15	0	30	23	2	9	2	9		x
		Network Design (CCNA2)	Fundamental	Face to face	15	15	15	45	35	3		3			x
		Embedded C	Fundamental	Face to face	15	0	15	30	23	2		2			x
		Advanced Linux	Fundamental	Face to face	15	0	15	30	23	2		2			x
	TU11:Networks and Telecom Engineering1	Analogue and digital transmission	Fundamental	Face to face	15	15	15	45	35	3	6,5	3	6,5		x
		Antennas and Propagation	Fundamental	Face to face	15	15	0	30	23	2		2			x
		Tutored Project 6	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		X	
	TU.11: Software Engineering1	Software Engineering	Fundamental	Face to face	15	15	15	45	35	3	6,5	3	6,5		x
		Advanced database	Fundamental	Face to face	15	0	15	30	23	2		2			x
		Tutored Project 6	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		x	
	TU.12 Human Sciences and Engineer Culture 3	English 3	Transversal	Face to face	0	22,5	0	22,5	15	1,5	5	1,5	5		x
		Method problem solving	Transversal	Face to face	0	30	0	30	23	2		2			x
		Quality management	Transversal	Face to face	0	22,5	0	22,5	15	1,5		1,5			x
Total					90	120	240	450	338	30	30	30	30		

SEMESTER 4

Semester	Teaching Unit	Modules	Nature	Type	Hourly volume					Number of credits awarded		Coefficients		Evaluation method	
					cours	DW	PW	F2F	HW	ECTS	TECTS	AC	TAC	Continuous Assessment	Blended Assessment
S4	TU.13 : Computer administration and security	Network & System Administration	Fundamental	Face to face	15	15	30	60	46	4	14	4	14		x
		Advanced Web development	Fundamental	Face to face	0	0	30	30	23	2		2			
		Cryptography	Fundamental	Face to face	15	0	15	30	23	2		2			x
		Security	Fundamental	Face to face	15	0	30	45	35	3		3			x
		Image Processing	Fundamental	Face to face	15	0	15	30	23	2		2			
		Tutored Project 7	Fundamental	Out of class	0	0	15	15	13	1		1		x	
	TU.14: Networks and Telecom Engineering2	Mobile communication network 1	Fundamental	Face to face	30	0	0	30	23	2	7	2	7		x
		Access Methods of Networking	Fundamental	Face to face	15	15	0	30	23	2		2			x
		Network Packet (CCNA3)	Fundamental	Face to face	15	15	15	45	35	3		3			x
	TU.14: Software Engineering2	J2EE	Fundamental	Face to face	0	0	30	30	23	2	7	2	7		x
		Data Mining	Fundamental	Face to face	15	0	15	30	23	2		2			x
		Advanced Mobile development	Fundamental	Face to face	15	0	30	45	35	3		3			x
	TU.15:Human Sciences And Engineer Culture 4	Leadership and communications	Transversal	Face to face	0	22,5	0	22,5	15	1,5	3	1,5	3		x
		English 4	Transversal	Face to face	0	22,5	0	22,5	15	1,5		1,5			x
	TU.16:Project	EYP end-of-year project	Fundamental	Out of class	0	90	0	90	70	6	6	6	6	x	
Total					120	180	150	450	344	30	30	30	30		

SEMESTER 5 (Telecommunication Network engineering)

Semester	Teaching Unit	Modules	Nature	Type	Hourly volume					Number of credits awarded		Coefficients		Evaluation method	
					cours	DW	PW	F2F	HW	ECTS	TECTS	AC	TAC	Continuous Assessment	Blended Assessment
S5	T.U.17 : New system	Cloud Computing	Fundamental	Face to face	0	0	30	30	23	2	7,5	2	7.5		x
		Big Data	Fundamental	Face to face	0	0	30	30	23	2		2			x
		IOT	Fundamental	Face to face	0	0	30	30	23	2		2			x
		Tutored Project 8	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		x	
	T.U.18 : Networks and Engineering	Mobile networks 2	Fundamental	Face to face	30	0	0	30	23	2	9,5	2	9.5		x
		Sensor networks	Fundamental	Face to face	15	15	15	45	35	3		3			x
		Optical Networks	Fundamental	Face to face	15	15	15	45	35	3		3			x
		Tutored Project 9	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		x	
	T.U.19: Telecom Engineering	Network planning and metrology	Fundamental	Face to face	15	0	15	30	23	2	8,5	2	8.5		x
		QoS and Wireless communication	Fundamental	Face to face	15	0	15	30	23	2		2			x
		Prepare for Huawei Certification	Fundamental	Face to face	0	0	45	45	35	3		3		x	
		Tutored Project 10	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		x	
	T.U.20 : Human Sciences and Engineer Culture	Labor law	Transversal	Face to face	0	22,5	0	22,5	15	1,5	4,5	1,5	4.5	X	
		Prepare for English certificate B2	Transversal	Face to face	0	22,5	0	22,5	15	1,5		1,5		X	
		Scientific Wrinting	Transversal	Face to face	0	22,5	0	22,5	15	1,5		1,5		X	
Total					90	97,5	262,5	450	333	30	30	30	30		

SEMESTER 5 (Software engineering)

Semester	Teaching Unit	Modules	Nature	Type	Hourly volume					Number of credits awarded		Coefficients		Evaluation method	
					cours	DW	PW	F2F	HW	ECTS	TECTS	AC	TAC	Continuous Assessment	Blended Assessment
S5	T.U.17:New system	CloudComputing	Fundamental	Face to face	0	0	30	30	23	2	7,5	2	7.5		x
		BigData	Fundamental	Face to face	0	0	30	30	23	2		2			x
		IOT	Fundamental	Face to face	0	0	30	30	23	2		2			x
		Tutored Project 8	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		X	
	T.U.18: Advenceddevelopment	Advanced Software engineering	Fundamental	Face to face	15	0	30	45	35	3	9,5	3	9.5		x
		Knowledge engineering	Fundamental	Face to face	15	0	15	30	23	2		2			x
		<u>Prepare for MERN Certification</u>	Fundamental	Face to face	15	0	30	45	35	3		3		X	
		Tutored Project 9	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		X	
	T.U.19:Software Engineering3	Distributed system	Fundamental	Face to face	0	0	30	30	23	2	8,5	2	8.5		x
		Formal development tool	Fundamental	Face to face	15	0	30	45	35	3		3			x
		.net	Fundamental	Face to face	0	0	30	30	23	2		2			x
		Tutored Project 10	Fundamental	Out of class	0	0	22,5	22,5	15	1,5		1,5		X	
	T.U.20 : Human Sciences and Engineer Culture	Labor law	Transversal	Face to face	0	22,5	0	22,5	15	1,5	4,5	1,5	4.5	X	
		Prepare for English certificate B2	Transversal	Face to face	0	22,5	0	22,5	15	1,5		1,5		X	
		Scientific Wrinting	Transversal	Face to face	0	22,5	0	22,5	15	1,5		1,5		X	
Total					60	67,5	322,5	450	333	30	30	30	0		

SEMESTER 6
End-of-studies project

Semester	Teaching Unit	Modules	Nature	Type	Hourly volume				Number of Credits		Allocated Coefficients		Evaluation method	
					Course	DW	PW	Total	ECTS	TECTS	AC	TAC	Continuous Assessment	Blended Assessment
S6	T.U.24	Technician Internship	Fundamental	NOT Presential	0	0	45	45	3	3	3	3	X	
		Ingeneering Intership	Fundamental	NOT Presential	0	0	45	45	3	3	3	3	X	
		End-of-Studies Project	Fundamental	NOT Presential	0	0	360	360	24	24	24	24	X	