



**Programm  
Computer Engineering (Appendix 4)**

Réf : GES-IMP-34

Indice : 01

Date :11/07/2023

Page 1/7

## SEMESTER 1

Semester	Teaching Unit	Modules	Nature	Number of Credits		Allocated Coefficients		Number of Credits	
				ECTS	TECTS	AC	TAC	Continuous control	Regime Mixed
S1	TU.1: Fundamentals Sciences for Engineer I	Math for engineer I	Transversal	3	6	3	6		X
		Numerical analysis and optimization	Transversal	3		3			X
	TU.2:Fundamentals sciences for development 1	Fundamental algorithms 1 & 2 (C)	Fundamental	4	10,5	4	10,5		X
		Computer and scientific computing workshop	Fundamental	2		2			X
		operating systems : Linux	Fundamental	3		3			X
		Mini project 1	Fundamental	1,5		1,5		X	
	TU.3 : fundamentals sciences for Network 1	Logical Systems	Fundamental	2	10,5	2	10,5		X
		Signal Processing	Fundamental	2		2			X
		Transmission technology	Fundamental	3		3			X
		Information Theory	Fundamental	2		2			X
		Mini project 2	Fundamental	1,5		1,5		X	
	TU.4 : Human Sciences and Engineer Culture1	Initiation and Introduction to economics	Transversal	1,5	3	1,5	3	X	
		English1	Transversal	1,5		1,5		X	
	Total				30	30	30	30	



**Programm  
Computer Engineering (Appendix 4)**

Réf : GES-IMP-34

Indice : 01

Date :11/07/2023

Page 2/7

## SEMESTER 2

Semester	Teaching Unit	Modules	Nature	Number of Credits		Allocated Coefficients		Number of Credits		
				ECTS	TECTS	AC	TAC	Continuous control	Regime Mixed	
S2	TU.5:Fundamentals Sciences for Engineer II	Math for engineer II	Transversal	2	4	2	4		x	
		Optimization	Transversal	2		2			x	
	TU.6:Fundamentals sciences for DevelopmentII	Java 1& 2	Fundamental	4	10	4	10		X	
		Database	Fundamental	3		3			X	
		Coding C++	Fundamental	2		2			X	
		Mini project 3	Fundamental	1		1		x		
		Network architecture and protocols (Prepare CCNA1)	Fundamental	3		3			x	
	TU.7 : Fundemantals sciences for Network II	Micro-Proc& Micro-Control	Fundamental	3	13	3	13		x	
		Artificial intelligence	Fundamental	3		3			x	
		Digital and analog electronics	Fundamental	3		3			x	
		Mini project 4	Fundamental	1		1		x		
	TU.8 : Human Sciences and Engineer Culture II	Communicational techniques	Transversal	1	3	1	3	X		
		English2	Transversal	1		1		X		
		Enrepreneurial Culture	Transversal	1		1		X		
					<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>		



**Programm  
Computer Engineering (Appendix 4)**

Réf : GES-IMP-34

Indice : 01

Date :11/07/2023

Page 3/7

## SEMESTER 3

Semester	Teaching Unit	Modules	Nature	Number of Credits		Allocated Coefficients		Number of Credits	
				ECTS	TECTS	AC	TAC	Continuous control	Regime Mixed
S3	TU.9 : Fundamentals Sciences for Development III	Python programming	Fundamental	3	9,5	3	9,5	x	
		Web development	Fundamental	3		3		x	
		Programming Mobile	Fundamental	2		2		x	
		Mini project 5	Fundamental	1,5		1,5		x	
	TU.10 : Design and Linux	Design Methodology	Fundamental	2	9	2	9		x
		Network Design (Prepare CCNA2)	Fundamental	3		3			x
		Embedded C	Fundamental	2		2			x
		Advanced Linux	Fundamental	2		2			x
	TU11:Networks and Telecom Engineering1	Analogue and digital transmission	Fundamental	3	6,5	3	6,5		x
		Antennas and Propagation	Fundamental	2		2			x
		Mini project 6	Fundamental	1,5		1,5		x	
	TU.11: Software Engineering1	Software Engineering 1	Fundamental	3	6,5	3	6,5		x
		Advanced database	Fundamental	2		2			x
		Mini Project 6	Fundamental	1,5		1,5		x	
	TU.12 Human Sciences and Engineer Culture 3	English 3	Transversal	1,5	5	1,5	5		x
		Method problem solving	Transversal	2		2			x
		Quality management	Transversal	1,5		1,5			x
				30	30	30	30		



**Programm  
Computer Engineering (Appendix 4)**

Réf : GES-IMP-34

Indice : 01

Date :11/07/2023

Page 4/7

## SEMESTER 4

Semester	Teaching Unit	Modules	Nature	Number of Credits		Allocated Coefficients		Number of Credits		
				ECTS	TECTS	AC	TAC	Continuous control	Regime Mixed	
S4	TU.13 : Computer administration and security	Network & System Administration	Fundamental	4	12	4	12		x	
		Advanced Web development	Fundamental	2		2				
		Cryptography	Fundamental	2		2			x	
		Security	Fundamental	3		3			x	
		Mini project 7	Fundamental	1		1		x		
	TU.14: Networks and Telecom Engineering2	Mobile communication network 1	Fundamental	2	7	2	7		x	
		Access Methods of Networking	Fundamental	2		2			x	
		Network Packet (Prepare CCNA3)	Fundamental	3		3			x	
	TU.14: Software Engineering2	J2EE	Fundamental	2	7	2	7		x	
		Data Mining	Fundamental	2		2			x	
		Advanced Mobile development	Fundamental	3		3			x	
	TU.15:Human Sciences And Engineer Culture 4	Leadership and communications	Transversal	1,5	3	1,5	3		x	
		English 4	Transversal	1,5		1,5			x	
	TU.16:Project	EYP end-of-year project	Fundamental	8	8	8	8	x		
					30	30	30	30		



**Programm  
Computer Engineering (Appendix 4)**

Réf : GES-IMP-34

Indice : 01

Date :11/07/2023

Page 5/7

## SEMESTER 5 (Telecommunication Network engineering)

Semester	Teaching Unit	Modules	Nature	Number of Credits		Allocated Coefficients		Number of Credits	
				ECTS	TECTS	AC	TAC	Continuous control	Regime Mixed
S5	T.U.17 : New system	Cloud Computing	Fundamental	2	7,5	2	7.5		x
		Big Data	Fundamental	2		2			x
		IOT	Fundamental	2		2			x
		Mini-project 8	Fundamental	1,5		1,5		x	
	T.U.18 : Networks and Engineering	Mobile networks 2	Fundamental	2	9,5	2	9.5		x
		Sensor networks	Fundamental	3		3			x
		Optical Networks	Fundamental	3		3			x
		Mini project 9	Fundamental	1,5		1,5		x	
	T.U.19: Telecom Engineering	Network planning and metrology	Fundamental	2	8,5	2	8.5		x
		QoS and Wireless communication	Fundamental	2		2			x
		Prepare for Huawei Certification	Fundamental	3		3		x	
		Mini project 10	Fundamental	1,5		1,5		x	
	T.U.20 : Human Sciences and Engineer Culture	Labor law	Transversal	1,5	4,5	1,5	4.5	X	
		Prepare for English certificate B2	Transversal	1,5		1,5		X	
		Business creation	Transversal	1,5		1,5		X	
					30	30	30	30	

## SEMESTER 5 (Software engineering)

Semester	Teaching Unit	Modules	Nature	Number of Credits		Allocated Coefficients		Number of Credits		
				ECTS	TECTS	AC	TAC	Continuous control	Regime Mixed	
S5	T.U.17:New system	CloudComputing	Fundamental	2	7.5	2	7.5		x	
		BigData	Fundamental	2		2			x	
		IOT	Fundamental	2		2			x	
		Mini project 8	Fundamental	1,5		1,5		X		
	T.U.18: Advenceddevelopment	Software engineering 2	Fundamental	3	9.5	3	9.5		x	
		Knowledge engineering	Fundamental	2		2			x	
		<u>Prepare for MERN Certification</u>	Fundamental	3		3		X		
		Mini- project 9	Fundamental	1,5		1,5		X		
	T.U.19:Software Engineering3	Distributed system	Fundamental	2	8.5	2	8.5		x	
		Formal development tool	Fundamental	3		3			x	
		.net	Fundamental	2		2			x	
		Mini- project 10	Fundamental	1,5		1,5		X		
	T.U.20 : Human Sciences and Engineer Culture	Labor law	Transversal	1,5	4.5	1,5	4.5	X		
		Prepare for English certificate B2	Transversal	1,5		1,5		X		
		Business creation	Transversal	1,5		1,5		X		
					30	30	30	30		



**Programm**  
**Computer Engineering (Appendix 4)**

Réf : GES-IMP-34

Indice : 01

Date :11/07/2023

Page 7/7

**SEMESTER 6**  
**End-of-studies project**

Semester	Teaching Unit	Modules	Nature	Type	Number of Credits		Allocated Coefficients		Number of Credits	
					ECTS	TECTS	AC	TAC	Continuous control	Regime Mixed
S6	T.U 21	Graduation project	Fundamental		30	30	30	30	X	