

UPES

Faculté Privée des Sciences de Gestion et de  
la Technologie



# Licence in Computer Engineering: Network and Systems Engineering

## Semester 1

	UNIT	COURSE		Teaching Methodology				ECTS		Coefficient		Assessment Mode	
				L	T	P	Total	ECUE	UE	ECUE	UE	CA	MS
Semester 1	UEF110 : Mathematics 1	ECUEF111	Algebra 1	21	21		42	3	6	1,5	3		X
		ECUEF112	Analysis 1	21	21		42	3		1,5			X
Semester 1	UEF120 : Physics 1	ECUEF121	Electricity-Electronics	31,5	10,5	10,5	52,5	4	6	2	3		X
		ECUEF122	Waves and Propagation	21	10,5		31,5	2		1			X
Semester 1	UEF130 : Hardware & Software 1	ECUEF131	Operating systems 1	21		21	42	4	7	2	3,5		X
		ECUEF132	Logic Systems	21	10,5	10,5	42	3		1,5			X
Semester 1	UEF140 : Algorithms & Programming 1	ECUEF141	Algorithms and data structure	21	21		42	4	7	2	3,5		X
		ECUEF142	Programming Workshop 1	10,5		31,5	42	3		1,5		X	
Semester 1	UET110 : Language and Business Culture	ECUET111	English 1		21		21	2	4	1	2	X	
		ECUET112	Communication skills 1		21		21	2		1		X	
	<b>Total</b>			<b>168</b>	<b>136,5</b>	<b>73,5</b>	<b>378</b>	<b>30</b>	<b>30</b>	<b>15</b>	<b>15</b>		

*L: Lecture; T: Tutorial; P: Pratical Work; I: Integrated course; CA: Continuous Assessment; MS: Mixed System*

## Semester 2

	UNIT	COURSE	Teaching Methodology				ECTS		Coefficient		Assessment Mode		
			L	T	P	Total	ECUE	UE	ECUE	UE	CA	MS	
Semester 3	UEF210 : Mathematics 2	ECUEF211	Algebra 2	21	10,5		31,5	2	4	1	2		X
		ECUEF212	Analysis 2	21	10,5		31,5	2		1			X
Semester 2	UEF220 : Physics 2	ECUEF121	Electronic functions	21	10,5		31,5	2	4	1	2		X
		ECUEF222	Introduction to signal processing	21		10,5	31,5	2		1			X
Semester 2	UEF230 : Hardware & Networks	ECUEF231	Computer architecture	21	10,5	10,5	42	4	6	2	3		X
		ECUEF232	Data transmission	21	10,5		31,5	2		1			X
Semester 2	UEF240 : Algorithms & Programming 2	ECUEF241	Algorithmics, Data Structure and Complexity	21	21		42	4	6	2	3		X
		ECUEF242	Programming Workshop 2	10,5		21	31,5	2		1		X	
Semester 2	UEF250 : Operating systems	ECUEF251	Operating systems 2	21		21	42	4	4	2	2		X
Semester 2	UET210 : Language and Digital Culture	ECUET211	English 2		21		21	2	6	1	3	X	
		ECUET212	Communication techniques 2		21		21	2		1		X	
		ECUET213	Digital literacy and skills			21	21	2		1		X	
	<b>Total</b>			<b>178,5</b>	<b>115,5</b>	<b>84</b>	<b>378</b>	<b>30</b>	<b>30</b>	<b>15</b>	<b>15</b>		

## Semester 3

	UNIT	COURSE		Teaching Methodology				ECTS		Coefficient		Assessment Mode	
				L	T	P	Total	ECUE	UE	ECUE	UE	CA	MS
Semester 3	UEF310 :Probability & Optimisation	ECUEF311	Graphs and optimisation	21	10,5		31,5	2	4	1	2		X
		ECUEF312	Probability Statistics	21	10,5		31,5	2		1			X
Semester 3	UEF320 : Local Area Networks & Multimedia Technology	ECUEF321	Local and industrial networks	21	10,5	10,5	42	4	6	2	3		X
		ECUEF322	Multimedia Technologies	21	10,5		31,5	2		1			
Semester 3	UEF330 : Information system	ECUEF331	Software Design Methodology	21	10,5		31,5	2	4	1	2		X
		ECUEF332	Fundamentals of Databases	21		10,5	31,5	2		1			X
Semester 3	UEF340: Programming & computer security	ECUEF341	Object-oriented programming	21		21	42	3	6	1,5	3		X
		ECUEF342	Python programming	21		21	42	3		1,5			X
Semester 3	UET310 : Language and Business Management	ECUET311	English 3		21		21	2	4	1	2	X	
		ECUET312	Business management	21			21	2		1		X	
Semester 3	UEO310 : Optional Units	ECUEO311	Algorithmic complexity	21	10,5		31,5	3	6	1,5	3		X
		ECUEO312	Web marketing and digital communication	21	10,5		31,5	3		1,5			X
	<b>Total</b>			<b>231</b>	<b>105</b>	<b>52,5</b>	<b>388,5</b>	<b>30</b>	<b>30</b>	<b>15</b>	<b>15</b>		

## Semester 4

	UNIT	COURSE		Teaching Methodology				ECTS		Coefficient		Assessment Mode	
				L	T	P	Total	ECUE	UE	ECUE	UE	CA	MS
Semester 4	UEF410 : Administration	ECUEF411	Network administration	10,5		21	31,5	2	6	1	3		X
		ECUEF412	Windows system administration	10,5		21	31,5	2		1			X
		ECUEF413	Unix system administration (LPIC-1)	10,5		21	31,5	2		1			X
Semester 4	UEF420 : Security and virtualisation	ECUEF421	Computer security	21		10,5	31,5	2	4	1	2		X
		ECUEF422	Infrastructure Data Center	21			21	2		1			X
Semester 4	UEF430 : Local Networks	ECUEF431	IP networks	31,5	10,5		42	4	4	2	2		X
Semester 4	UEF440 : Information system	ECUEF441	SOA Architecture and Web service	21		10,5	31,5	2	4	1	2		X
		ECUEF442	Database engineering	10,5		21	31,5	2		1			X
Semestre 4	UET410 : Language and Business Culture	ECUET411	English 4		21		21	2	6	1	3	X	
		ECUET412	IT law, data protection and ethics	21			21	2		1			X
		ECUET413	Federated project (agile method)		21		21	2		1		X	
Semester 4	UO410 : Optional Units	ECUO411	Introduction to distributed systems	21		10,5	31,5	3	6	1,5	3	X	
		ECUO412	Introduction to Big data	21		10,5	31,5	3		1,5		X	
	<b>Total</b>			<b>199,5</b>	<b>52,5</b>	<b>126</b>	<b>378</b>	<b>30</b>	<b>30</b>	<b>15</b>	<b>15</b>		

## Semester 5

	UNIT	COURSE		Teaching Methodology				ECTS		Coefficient		Assessment Mode	
				L	T	P	Total	ECUE	UE	ECUE	UE	CA	MS
Semester 5	UEF510 : Administration BD & Test	ECUEF511	Test (ISTQB Certification)	21	10,5		31,5	2	4	1	2		X
		ECUEF512	Database Administration	10,5		21	31,5	2		1			X
Semester 5	UEF520 :Networks and multimedia	ECUEF521	Wireless networks	21		10,5	31,5	2	4	1	2		X
		ECUEF522	Multimedia networks	21			21	2		1			X
Semester 5	UEF530 : Virtualisation	ECUEF531	Virtualisation and container	21		10,5	31,5	2	4	1	2		X
		ECUEF532	Network virtualisation	21		10,5	31,5	2		1			X
Semester 5	UEF540 : IA & infrastructure	ECUEF541	IA & Machine Learning	21		21	42	3	7	1,5	3,5		X
		ECUEF542	Deployment Cloud services	10,5		21	31,5	2		1			X
		ECUEF543	Network security	21		10,5	31,5	2		1			
Semester 5	UET510 : Language and Entrepreneurship	ECUET511	English 5		21		21	2	6	1	3	X	
		ECUET512	Entrepreneurship	21			21	2		1		X	
		ECUET513	Preparation for the professional environment	21			21	2		1		X	
Semester 5	UEO510 : Optional Units	ECUEO511	Android Development	21		21	42	3	5	1,5	2,5		X
		ECUEO512	IOT	21			21	2		1			X
<b>Total</b>				<b>231</b>	<b>31,5</b>	<b>126</b>	<b>388,5</b>	<b>30</b>	<b>30</b>	<b>15</b>	<b>15</b>		

	UNIT	COURSE	Teaching Methodology				ECTS		Coefficient		Assessment Mode	
			L	T	P	Total	ECUE	UE	ECUE	UE	CA	MS
	Internship	<b>Internship</b>										
					420			30		15		
	<b>Total</b>				420			30		15		