
UPES
Faculté Privée des Sciences de Gestion et de
la Technologie

Professional Master in Computer Science :
Data Sciences

Semester 1

N°	UNIT		COURSE	Teaching Methodology				ECTS		Coefficient		Assessment Mode	
				L	T	P	Total	ECUE	UE	ECUE	UE	CA	MS
1	Mathematics	UE1	Mathematical Fundamentals of Scientific Data	21	10.5		31.5	2	7	1	3.5		X
			Algorithmic complexity	21	10.5		31.5	3		1.5			X
			Workshop Statistics with R			21	21	2		1		X	
2	IT and Big Data	UE2	Introduction to Big Data	21	10,5	10,5	42	4	7	2	3.5		X
			Parallel and distributed computing	21	10,5		31,5	3		1.5			X
3	Database	UE3	No SQL databases	21		10.5	31.5	3	6	1.5	3		X
			PL-SQL database management systems	21		10.5	31.5	3		1.5			X
4	Language & Corporate Culture	UE4	English 1	21			21	2	6	1	3		X
			Communication skills 1	21			21	2		1			X
			Corporate culture	21			21	2		1			X
5	Options	UE5	Object Oriented Programming (Java)	21		10.5	31.5	2	4	1	2		X
			Analytical Database Processing (SAS)	21		10.5	31.5	2		1			X
Total				231	42	73.5	346.5	30	30	15	15		

L: Lecture; T: Tutorial; P: Pratctical Work; CA: Continuous Assessment; MS: Mixed System

Semester 2

N°	UNIT		COURSE	Teaching Methodology				ECTS		Coefficient		Assessment Mode	
				L	T	P	Total	ECUE	UE	ECUE	UE	CA	MS
1	Data Analysis	UE6	Machine Learning 1	21			21	2	7	1	3.5		X
			Data mining	21	10.5		31.5	3		1.5			X
			Data Mining and Machine Learning Workshop			21	21	2		1		X	
2	Data Science	UE7	Advanced Big Data Processing	21		21	42	4	7	2	3.5		X
			Systems Modelling for Big Data	21	10.5		31.5	3		1.5			X
3	Distributed computing	UE8	Distributed Systems for Big Data	21		10.5	31.5	3	6	1.5	3		X
			Decision Support Information System	21		10.5	31.5	3		1.5			X
4	Language & Entrepreneurship	UE10	English 2	21			21	2	6	1	3		X
			Business creation	21			21	2		1			X
			Communication skills 2	21			21	2		1			X
5	Options	UE9	Massive Data Visualisation	21	10.5		31.5	2	4	1	2		X
			Agile Unified Development Process	21	10.5		31.5	2		1			X
Total				231	42	63	366	30	30	15	15		

Semester 3

N°	UNIT		COURSE	Teaching Methodology				ECTS		Coefficient		Assessment Mode	
				L	T	P	Total	ECUE	UE	ECUE	UE	CA	MS
1	Data Analysis	UE10	Machine Learning 2	21			21	2	7	1	3.5		X
			Massive Data Mining	21		10.5	31.5	3		1.5			X
			Machine Learning Project		10.5	21	21	2		1		X	
2	Data Science	UE11	Automatic Natural Language Processing	21		21	42	4	7	2	3.5		X
			Cloud environment for Big Data	21		10.5	31.5	3		1.5			X
3	Programming	UEF	Frameworks Big Data	21		10.5	31.5	3	6	1.5	3		X
			Analysis and Programming with Python	21		10.5	31.5	3		1.5			X
4	Language and corporate culture	TRANS	English 3	21			21	2	6	1	3		X
			Business Management	21			21	2		1			X
			IT law and ethics	21			21	2		1			X
5	Options	OPT	Service-oriented architecture	21		10.5	31.5	2	4	1	2		X
			Internet of things (Iot)	21	10.5		31.5	2		1			X
Total				231	21	94.5	346.5	30	30	15	15		

Semester 4

N°	COURSE	Teaching Methodology			ECTS		Coefficient		Assessment Mode
		L	T	P	ECUE	UE	ECUE	UE	
1	Internship				30	30			
Total					30	30	15	15	