



UPES

Faculté Privée des Sciences de Gestion et de
la Technologie

Computer Engineering Cycle Curriculum

2022-2023

COMMON TRUNK

(S1, S2, S3)

Semester	UNIT	Code	Course	ECTS		Coefficient		Total Workload	Teaching Methodology				Assessment Mode			
				ECUE	UE	ECUE	UE		L	Tt	PrW	PeW	CA	MS	VV	
1	UE1 Maths for Engineering 1	CTMAT11	Mathematics for Engineer	3	6	3	6	42	28	14	0	0		x		
		CTMAT12	Formal Logic and Discrete Mathematics	3		3		42	28	14	0	0		x		
	UE2 Software Development 1	CTSDV11	DataBase	3	6	3	6	42	14	7	14	7		x		
		CTSDV12	Web Development 1	3		3		42	14	7	14	7		x		
	UE3 Communication 1	CTCOM11	Personal Development	2	4	2	4	21	14	0	0	7		x		
		CTCOM12	English 1	2		2		21	14	7	0	0		x		
	UE4 Fundamental Informatics 1	CTINF11	Algorithmic 1	3	6	3	6	42	28	14	0	0		x		
		CTINF12	Language Theory & Compilation	3		3		42	28	14	0	0		x		
	UE5 Architecture & Network	CTARR11	Computer Architecture	3	8	3	8	42	14	14	14	0		x		
		CTARR12	Network & Data Transmission	3		3		42	14	14	14	0		x		
		CTARR13	Preparation for LPIC 1 Certification	2		2		21	7	0	7	7		x		
	Total				30	30	30	30	399	203	105	63	28			

L: Lecture; TT: Tutorial; PrW: Practical Work; CA: Continuous Assessment; MS: Mixed System; VV: Viva Voice

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				ECUE	UE	ECUE	UE		L	Tt	PrW	PeW	CA	MS	VV	
2	UE1 Maths for Engineering 2	CTMAT21	Numerical Analysis	3	6	3	6	42	28	14	0	0		x		
		CTMAT22	Theory & Signal Processing	3		3		42	14	7	14	7		x		
	UE2 Software Development 2	CTSDV21	Database Management Systems	3	6	3	6	63	14	14	21	14		x		
		CTSDV22	Web Development 2	3		3		42	21	0	21	0		x		
	UE3 Communication 2	CTCOM21	Entrepreneurship and Digital Strategy	2	4	2	4	21	14	7	0	0		x		
		CTCOM22	English 2	2		2		21	14	7	0	0		x		
	UE4 Advanced Programming	CTPRA21	Avanced Algorithmics and Complexity	3	7	3	7	42	28	14	0	0		x		
		CTPRA22	Programming Workshop	1		1		21	0	0	21	0		x		
		CTPRA23	Oriented-Object Programming (Java 1)	3		3		42	14	7	21	0		x		
	UE5 Network & Project	CTRPR21	Network and Protocols	3	7	3	7	42	21	7	7	7		x		
		CTRPR22	Preparation for LPIC 2 Certification	2		2		21	0	0	14	7		x		
		CTRPR23	Final Annual Project 1	2		2		21	0	0	6	15			x	
	Total				30	30	30	30	420	168	77	125	50			

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				ECUE	UE	ECUE	UE		L	Tt	PrW	PeW	CA	MS	VV
3	UE1 Advanced Software Development	CTDAL31	Software Engineering	3	7	3	7	42	21	7	7	7		x	
		CTDAL32	Oriented-Object Design of Information System	4		4		63	28	21	7	7		x	
	UE2 Data Sciences	CTDSC31	Big Data	3	7	3	7	42	14	7	14	7		x	
		CTDSC32	Artificial Intelligence	2		2		42	21	14	7	0		x	
		CTDSC33	Cloud Fundamentals	2		2		42	14	7	21	0		x	
	UE3 Programming & Embedded Systems	CTPSE31	Oriented-Object Programming (Java 2)	3	6	3	6	42	21	0	14	7		x	
		CTPSE32	Embedded Systems	3		3		42	21	0	14	7		x	
	UE4 Network and Software Security	CTSRL31	Cryptography and Secure Communication	3	6	3	6	42	21	7	14	0		x	
		CTSRL32	Service Oriented Application (SOA)	3		3		42	28	0	0	14		x	
	UE5 English & Leadership	CTALE31	Management and Leadership	2	4	2	4	21	14	0	0	7		x	
		CTALE32	TOEIC 1	2		2		21	14	7	0	0		x	
	Total				30	30	30	30	441	217	70	98	56		

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INDUSTRIAL COMPUTING

(S4, S5, S6)

Semester	UNIT	Code	Course	ECTS		Coefficient		Total Workload	Teaching Methodology				Assessment Mode		
				ECUE	UE	ECUE	UE		L	Tt	PrW	PeW	CA	MS	VV
4	UE1 Embedded Electronics	ICEEM41	Reconfigurable Systems	3	9	3	9	42	21	7	14	0		x	
		ICEEM42	Advanced Processors Architecture	3		3		42	21	7	7	7		x	
		ICEEM43	Microcontrollers and Embedded Processors	3		3		42	21	7	7	7		x	
	UE2 Decision-Making Systems	ICSYD41	Industrial Supervision and Control	3	6	3	6	42	14	14	7	7		x	
		ICSYD42	Production Planning and Scheduling	3		3		42	21	14	7	0		x	
	UE3 Control of Industrial Systems	ICCSI41	Measurement Chain	2	7	2	7	42	21	14	7	0		x	
		ICCSI42	Automated Systems Control	3		3		42	21	14	7	0		x	
		ICCSI43	Industrial Networks and PLC	2		2		42	21	7	7	7		X	
	UE4 Innovative Project	CSPRI41	Project Management	2	4	2	6	42	7	0	21	14		x	
		CSPRI43	Final Annual Project 2	2		2		21	0	0	6	15			x
	UE5 Communication Techniques	CTTCO41	TOEIC 2	2	4	2	4	21	14	0	0	7		x	
CTTCO42		Personal Branding	2	2		21		14	7	0	0		x		
Total				30	30	30	30	441	196	91	90	64			

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				ECUE	UE	ECUE	UE		L	Tt	PrW	PeW	CA	MS	VV
5	UE1 Robotics & Applied Informatics	ICRIA51	Real-Time Systems	3		3		42	21	7	7	7		x	
		ICRIA52	Robotics and Industrial Vision	2	7	2	7	42	21	14	7	0		x	
		ICRIA53	Acquisition and Interfacing Technology	2		2		42	14	14	7	7		x	
	UE2 Advanced Industrial Systems	ICSIA51	Elective Course 1 by 3: IoT / Mecatronics / Supply Chain Management	2		2		42	14	0	21	7		x	
		ICSIA52	Gestion de la Production Assistée par Ordinateur	3	5	3	5	42	21	7	7	7		x	
	UE3 Advanced Control	ICCAV51	Control Theory	3		3		42	21	7	7	7		x	
		ICCAV52	Electrical Machines Control	3	9	3	9	42	21	14	7	0		x	
		ICCAV53	Soft Computing	3		3		42	21	7	14	0		x	
	UE4 Quality Systems	ICSYQ51	Reliability Engineering	2		2		21	14	7	0	0		x	
		ICSYQ52	Quality Management and Industrial Performance	3	5	3	5	42	21	14	7	0		x	
	UE5 Communication & Job	CTCOE51	Specific English	2		2		21	14	0	7	0		x	
CT COE52		Innovation and Intellectual Property	2	4	2	4	21	7	0	7	7		x		
Total				30	30	30	30	441	210	91	98	42			

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				ECUE	UE	ECUE	UE		L	Tt	PrW	PeW	CA	MS	VV
6	Final Project	FGP11	Final Graduation Project	30	30	-	-	450	0	0	0	450			x
Total				30	30			450	0	0	0	450			

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