



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		
	<b>Total</b>				<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>399</b>	<b>203</b>	<b>105</b>	<b>63</b>	<b>28</b>			

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	
	<b>Total</b>				<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>420</b>	<b>168</b>	<b>77</b>	<b>125</b>	<b>50</b>			

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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	
	<b>Total</b>				<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>441</b>	<b>217</b>	<b>70</b>	<b>98</b>	<b>56</b>		

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# **COMPUTER SCIENCE**

**(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 Software Development & Security 3	CSDLS41	DB Administration	4	7	4	7	63	28	14	14	7		x	
		CSDLS42	Cyber Security	3		3		42	21	7	14	0		x	
	UE2 Decision-Making Systems	CSSDC41	Business Intelligence	4	7	4	7	63	28	14	14	7		x	
		CSSDC42	Machine Learning	3		3		42	21	0	14	7		x	
	UE3 Architecture & Integral Management	CSAGI41	Advanced Mobile Development	3	6	3	6	42	14	0	14	14		x	
		CSAGI42	Client-side Framework	3		3		42	14	0	14	14		x	
	UE4 Innovative Project	CSPRI41	Project Management	2	6	2	6	42	7	0	21	14		x	
		CSPRI42	Enterprise Resource Planning (ERP)	2		2		21	0	0	21	0		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	
	<b>Total</b>				<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>420</b>	<b>161</b>	<b>42</b>	<b>132</b>	<b>85</b>		

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				ECUE	UE	ECUE	UE		L	Tt	PrW	PeW	CA	MS	VV
5	UE1 Certifications	CSCER51	Preparation for ISTQB Certification	3	6	3	6	21	7	0	7	7		x	
		CSCER52	Preparation for SCRUM Certification	3		3		21	7	0	7	7		x	
	UE2 Distributed Systems	CSSYR51	Elective Course 1 by 3: IoT / DevOps / Blockchain	2	5	2	5	42	14	0	21	7		x	
		CSSYR52	Distributed Systems and Applications	3		3		42	28	7	7	0		x	
	UE3 Software Development & Security 4	CSDLS51	J2EE : Spring Boot	3	10	3	10	42	21	0	14	7		x	
		CSDLS52	Software Verification, Testing and Quality	3		3		42	28	14	0	0		x	
		CSDLS53	Server-side Framework	4		4		42	21	0	7	14		x	
	UE4 Innovative Project	CSSYI51	Workflow and BPMN	2	5	2	5	42	21	14	7	0		x	
		CSSYI52	Deep Learning and Data Science Project	3		3		21	14	0	7	0		x	
	UE5 Communication & Job	CTCOE51	Specific English	2	4	2	4	21	14	0	7	0		x	
CT COE52		Innovation and Intellectual Property	2	2		21		7	0	7	7		x		
<b>Total</b>				<b>30</b>	<b>30</b>	<b>30</b>	<b>30</b>	<b>357</b>	<b>182</b>	<b>35</b>	<b>91</b>	<b>49</b>			

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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
<b>Total</b>				<b>30</b>	<b>30</b>			<b>450</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>450</b>			

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