

Commun Trunk - Semester 1

Semester	UNIT	Code	Course	ECTS		Coefficient		Total Workload	Teaching methodology				Assessment Mode		
				ECUE	UE	ECUE	UE		L	Tt	PrW	TAW	CA	MS	VV
1	TU1110 Engineering Mathematics	CTMAT11	Mathematics for Engineer	3,5	9	3,5	9	42	27	15	0	0		x	
		CTMAT12	Discrete Mathematics	3		3		31,5	21	10,5	0	0		x	
		CTMAT13	Probability Theory and Stochastic Processes	2,5		2,5		31,5	21	10,5	0	0		x	
	TU1120 Software Development 1	CTSDV11	Database Management Systems	3	7,5	3	7,5	48	24	0	18	6		x	
		CTSDV12	Algorithmics and Programming	3,5		3,5		61,5	24	10,5	18	9		x	
		CTSDV13	Web Programming	1		1		21	0	0	21	0	x		
	TU1130 Systems and Networks 1	CTSNW11	Operating System	2	5	2	5	37,5	21	0	10,5	6		x	
		CTSNW12	Data Communications and Networks	2		2		21	21	0	0	0		x	
		CTSNW13	Preparation for LPIC Certification 101	1		1		21	0	0	21	0	x		
	TU1140 Electronics and Architecture	CTELA11	Electronics for Engineer	2	5,5	2	5,5	21	15	0	6	0		x	
		CTELA12	Computer Systems Architecture	3,5		3,5		63	18	9	15	21		x	
	TU1150 Management and Communication 1	CTMCO11	Economics	1	3	1	3	14	10	4	0	0	x		
		CTMCO12	Business Management	1		1		14	10	4	0	0	x		
		CTMCO13	English for Specific Purposes 1	1		1		21	21	0	0	0	x		
	Total				30	30	30	30	448	233	63,5	109,5	42		

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

Commun Trunk - Semester 2

Semester	UNIT	Code	Course	ECTS		Coefficient		Total Workload	Teaching methodology				Assessment Mode		
				ECUE	UE	ECUE	UE		L	Tt	PrW	TAW	CA	MS	VV
2	TU1210 Applied Mathematics	CTMAT21	Applied Numerical Methods	3,5	9,5	3,5	9,5	51	21	6	15	9		x	
		CTMAT22	Computational Optimization	3,5		3,5		51	21	6	15	9		x	
		CTMAT23	Digital Signal Processing	2,5		2,5		40,5	16,5	0	15	9		x	
	TU1220 Software Development 2	CTSDV21	Object-Oriented Programming	2,5	6,5	2,5	6,5	40,5	16,5	0	15	9		x	
		CTSDV22	Advanced Databases	2,5		2,5		48	27	0	15	6		x	
		CTSDV23	Web Technology	1,5		1,5		30	0	0	21	9	x		
	TU1230 Systems and Networks 2	CTSNW21	Preparation for LPIC Certification 102	1	3	1	3	21	0	0	21	0	x		
		CTSNW22	IP Networks and Protocols	2		2		31,5	16,5	0	15	0		x	
	TU1240 Abstract Programming	CTMAT29	Language Theory and Compilation	3	5,5	3	5,5	42	27	6	9	0		x	
		CTAPR22	Advanced Algorithms and Complexity	2,5		2,5		31,5	22,5	9	0	0		x	
	TU1250 Management and Communication 2	CTMCO21	Entrepreneurship and Digital Strategies	1	5,5	1	5,5	21	21	0	0	0	x		
		CTMCO22	Accountancy for Engineer	1,5		1,5		21	15	6	0	0	x		
		CTMCO23	English for Specific Purposes 2	1		1		21	21	0	0	0	x		
		CTFAP21	Final Annual Project 1	2		2		-	-	-	-	-			x
Total				30	30	30	30	450	225	33	141	51			

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Commun Trunk - Semester 3

Semester	UNIT	Code	Course	ECTS		Coefficient		Total Workload	Teaching methodology				Assessment Mode		
				ECUE	UE	ECUE	UE		L	Tt	PrW	TAW	CA	MS	VV
3	TU2310 Data Sciences	CTDSC31	Big DATA	2,5	7	2,75	7,5	37,5	19,5	0	12	6		x	
		CTDSC32	Artificial Intelligence and Machine Learning	3		3,25		48	21	0	21	6		x	
		CTDSC33	Python for Data Analytics	1,5		1,5		21	0	0	21	0	x		
	TU2320 Software Engineering	CTSEG31	Modern Software Engineering	1,5	6,5	1,5	7	21	15	6	0	0		x	
		CTSEG32	Object Oriented Analysis and Design Patterns	3		3,25		48	27	15	0	6		x	
		CTSEG33	Advanced Object-Oriented Programming	2		2,25		37,5	16,5	0	15	6		x	
	TU2330 Network and Software Security	CTNSS31	Cryptography and Network Security	3	5	3,25	5,5	48	27	0	15	6		x	
		CTNSS32	Cloud Computing	2		2,25		37,5	19,5	0	12	6	x		
	TU2340 Architecture and Embedded Systems	CTNSS33	Software Architecture	1,5	6,5	1,5	7	21	21	0	0	0		x	
		CTAES31	Linear Control Systems	2		2,25		31,5	19,5	0	12	0		x	
		CTAES32	Embedded Systems	3		3,25		48	21	0	21	6		x	
	TU2350 Leadership	CTLES31	Management and Leadership	1	3	1	3	14	10	4	0	0	x		
		CTLES32	Management Control	1		1		14	10	4	0	0	x		
		CTLES33	TOEIC 1	1		1		21	0	0	21	0	x		
	TU2360 Internship	CTINS31	Introductory Internship	2	2	-	-	-	-	-	-	-			x
Total				30	30	30	30	448	227	29	150	42			

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Computer Science - Semester 4

Semester	UNIT	Code	Course	ECTS		Coefficient		Total Workload	Teaching methodology				Assessment Mode			
				ECUE	UE	ECUE	UE		L	Tt	PrW	TAW	CA	MS	VV	
4	TU2411 Frameworks	CSFRA41	Client-Side Frameworks		2,5	7,5	2,5	7,5	40,5	10,5	0	21	9	x		
		CSFRA42	Server-Side Frameworks		2,5		2,5		40,5	10,5	0	21	9	x		
		CSFRA43	Advanced Mobile Programming		2,5		2,5		40,5	10,5	0	21	9	x		
	TU2421 Decision Making Systems	CSDMS41	Business Intelligence		2,5	8,5	2,5	8,5	40,5	19,5	6	6	9		x	
		CSDMS42	Neural Networks and Deep Learning		3		3		48	21	15	6	6		x	
		CSDMS43	Mining Massive Data		3		3		42	21	6	15	0	x		
	TU2431 Databases and Distributed Systems	CSDDS41	Database Administration		2	4,5	2	4,5	24	6	0	15	3		x	
		CNNSE43	Distributed Systems and Applications		2,5		2,5		42	18	12	12	0		x	
	TU2440 Engineering Project	CTEPR41	Project Management for Engineers		2,5	4,5	2,5	4,5	42	15	12	15	0		x	
		CTEPR42	Final Annual Project 2		2		2		-	-	-	-	-			x
	TU2450 Technical Communication	CTTCO41	Design-Thinking		1	2	1	2	21	21	0	0	0	x		
		CTTCO42	TOEIC 2		1		1		21	0	0	21	0	x		
	TU2461* Elective Modules (1/3)	CSFCO41	(*): Financial Computing	Financial Technology		3	3	3	3	48	27	0	15	6		x
CSHCI41		(*) : Human-Computer Interaction	UI/UX Design												x	
CSECO41		(*): Embedded Computing	Real-Time Systems												x	
Total				30	30	30	30	450	180	51	168	51				

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Computer Science - Semester 5

Semester	UNIT	Code	Course		ECTS		Coefficient		Total Workload	Teaching methodology				Assessment Mode				
					ECUE	UE	ECUE	UE		L	Tt	PrW	TAW	CA	MS	VV		
5	TU3511 Software Testing	CSSTE51	Formal Verification		3,5	5	3,5	5	57	21	9	12	15		x			
		CSSTE52	Preparation for ISTQB Certification		1,5		1,5		21	6	0	15	0	x				
	TU3521 Advanced Software Development	CSASD51	DevOps		3,5	8	4	9	57	21	0	21	15		x			
		CSASD52	Java Spring Boot		3		3,5		57	15	0	27	15		x			
		CSASD53	Preparation for SCRUM Certification		1,5		1,5		21	15	0	6	0	x				
	TU3531 Research and Development	CTRDV51	Research Methodology		1,5	6,5	1,75	7,5	21	15	6	0	0	x				
		CTRDV52	Business Protections for Innovation		1,5		1,75		21	15	6	0	0	x				
		CSRDV51	Elective R&D courses (1/3)	Computer Vision			3,5		4	7,5	63	42	0	0	21		x	
		CSRDV52		Multi-Agent Systems													x	
		CSRDV53		Health and Bioinformatics													x	
	TU3540 Law and Communication	CTLCO51	Cyberlaw and Privacy		1,5	4,5	1,5	4,5	21	21	0	0	0	x				
		CTLCO52	English for Employment		1,5		1,5		21	15	0	6	0	x				
		CTLCO53	Personal Branding		1,5		1,5		21	15	0	6	0	x				
	TU3551 Elective modules (2/6)	CSFCO51	(*) : Financial computing	E-Banking		4	4	4	4	63	42	0	21	6		x		
		CSFCO52		Blockchain and Cryptocurrencies												x		
		CSHCI51	(*) : Human-Computer Interaction	Model-Driven Engineering												x		
		CSHCI52		Component-Based Software Engineering												x		
		CSECO51	(*) : Embedded computing	Internet of Things and Applications												x		
		CSECO52		Embedded OS and RTOS												x		
TU3560 Internship	CTINS51	Advanced Internship		2	2	-	-	-	-	-	-	-			x			
Total					30	30	30	30	450	243	21	114	72					

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Computer Science - Semester 6

Semester	UNIT	Code	Course	ECTS		Coefficient		Total Workload	Teaching methodology				Assessment Mode		
				ECUE	UE	ECUE	UE		L	Tt	PrW	TAW	CA	MS	VV
6	TU3610: 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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