Studies Plan

Systèmes de communication 2020-21

Master project

	Courses		Master 1 Master 2		er 2	MP Autumn			MP Spring		Exam Session	Exam	Credit		
Language	e Code	Section	TeacherSpecialization	р	I е	р	1	е	р	1	е р				
E	Engineering in	nternship credited with er in Communication S SC		320h		320h			320h		3	20h	Sum Win	Term pape	er O
	Master projec	t in Communication Sy	rstems												
E	COM-599	SC	Profs divers						900h		9	00h	Sum Win	Oral	30

Group 1

	Courses			Mas	ter 1	Ма	ster	2	Exam Session	Exam	Credit
Language	Code	Section	TeacherSpecial	litatio	an n	1	е	n	Session		
Language	Advanced algo		rodorioropoolar	, Laure	υ, ρ	•		۲			
Е	CS-450	IN	Kapralo (1) (1)			4h	3h		Sum	Written	7
	Advanced pro	bability and application	ns								
E	COM-417	SC	Lévêque 🖰 🕕 🕕			3h	2h		Sum	Written	6
	Cryptography	and security									
E	COM-401	SC	Vauden ₁₀ 📵	4h	2h				Win	Written	7
	Distributed alg	orithms									
E	CS-451	SC	Guerrac@ (3 (6)	3h	2h 1h				Win	Written	6
	Distributed inf	ormation systems									
E	CS-423	SC	Aberer 📵 🔋	2h	1h				Sum Win	Written	4
	Information se	curity and privacy									
E	COM-402	IN	Hubaux 📵 🛈 📴 Oechslin	3h	1h 2h				Win	Written	6
	Information th	eory and coding									
E	COM-404	SC	Telatar 📵 🗓 🕕	4h	2h				Win	Written	7
	Machine learn	ing									
E	CS-433	IÑ	Flamma@ 10 10 Jaggi	4h	2h				Win	Written	7
	Mobile networ	ks									
Ε	COM-405	SC	Hubaux 🕦 📵 🕞			2h	1h		Sum	Written	4
-	Modern digital	communications: a ha	ands-on								
	approach										
E	ĊÓM-430	SC	Rimoldi 📵 📵 🚯	2h	2h				Win	During the semester	6
	Statistical sign through application	nal and data processin cations	g								
E	COM-500	SC	Ridolfi 📵 🕞 🕕			3h	2h		Sum	Written	6
	TCP/IP networ	king									
E	COM-407	sc	Le 0 (3 (6) Boudec (1)	2h	2h 2h				Win	Written	6

Group 2 : Options

Longuage	Courses	Continu	Tanaharenasia	Master 1	Ма	ster	_	Exam Session	Exam	Credit
Languag		Section	TeacherSpecia	iikaiiœi ρ	1	е	р			
	Advanced cor	nputer architecture								
Ε	CS-470	IN	lenne 🛕 🛈 🕞		3h		2h	Sum	Written	6
	Advanced cor	nputer graphics								
E	CS-440	IN	Jakob 🏮		2h	1h		Sum	During the semester	6
	Advanced cry	ptography				·				
E	COM-501	SC	Vauden _®		2h	2h		Sum	Written	4

 Advanced mu	ıltiprocessor architectı	ure							
CS-471	IN	4 0	4h				Wir	During the semester	6
Advanced tor	oics on privacy enhance	ina						3011100101	
technologies	,,	9							
CS-523	IN	González			3h	1h 2	h Sur	n Written	7
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 Amulia d bia at	-ti-ti	110110080							
Applied biost		0 11 1 1			01	01	_	5	_
<i>MATH-4</i> 93	MA	Goldstein			2h	2n	Sur		5
								semester	
Applied data	analysis								
CS-401	SC	West 🙃	2h	2h			Wir	Written	6
Artificial neur	al networks								
CS-456	IN	Gerstner			2h	2h	Sur	n Written	5
 		Gersurer			211	211	Sui	ii vviilleii	J
	eech processing							147.50	_
EE-554	EL	Bourlarc	2h	1 n			Wir	Written	3
Biological mo	deling of neural netwo	orks							
BIO-465	IN	Gerstner			2h	2h	Sur	n Written	4
Biomedical si	ignal processing								
EE-512	EL	Vesin n	4h	2h			Wir	Written	6
		Vesin 🕠 🕞	411	211			VVII	VVIILLEIT	U
	ign for IT services								
CS-490	SC	Wegmann			3h		Sur	n Oral	3
Cellular biolo	gy and biochemistry for	or							
engineers									
BIO-105	SV	<i>Zufferey</i>	2h	2h			Wir	Written	4
		Luncicy	۲۱۱	4 11			VVII	VVIILLEII	7
Computation		_	٠.	41.				5	
CS-524	IN	•	3h	ın			Wir		4
		_						semester	
 Computation	al photography								
CS-413	SC	Süsstrui			2h	2	h Sur	n During the	5
55 .76		Judga al			211		Gui	semester	9
Commuter	ion							3511153161	
Computer vis						4.	_	***	
CS-442	IN	Fua 🏮			2h	1h	Sur	n Written	4
Concurrent a	lgorithms	_							
CS-453	SC	Guerrac@ (6)	∩ 3h	1h 1h			Win	Written	5
		2.3740	J 511	111			***	***************************************	<u> </u>
Database sys		A '1	_		۵.	O			_
CS-422	IN	Ailamak 🗓 🕞	G		3h	2h 2	th Sur	n During the	7
								semester	
Data visualiza	ation								
COM-480	SC	Vuillon 📵			2h	2	h Sur	n During the	4
22.11 100	- -				-"		Gui	semester	•
Docontrolina	systems engineering							3511153151	
Decentralized	ı əvətenis endineerind						14"	147.50	
	, ,	Cord -	O.L.	Oh Ol					_
 CS-438	ÍN	Ford 🕞	2h	2h 2h			Wir	Written	6
CS-438	ÍN	Ford 🕞	2h	2h 2h			VVII	vvritten	6
CS-438 Deep learning	in B			2h 2h	2h	2h			6
CS-438 Deep learning EE-559	iN B EL	Fleuret 0 (3		2h 2h	2h	2h	Sur		
CS-438 Deep learning EE-559 Design techn	IN B EL ologies for integrated s	Fleuret [] [3	•		2h	2h	Sur	n Written	4
CS-438 Deep learning EE-559	iN B EL	Fleuret 10 (2) systems De		2h 2h 2h	2h	2h		n Written	4
CS-438 Deep learning EE-559 Design techn	IN B EL ologies for integrated s	Fleuret [] [3	•		2h	2h	Sur	n Written	4
CS-438 Deep learning EE-559 Design techn CS-472	IN B EL ologies for integrated a	Fleuret 10 (2) systems De	•		2h	2h	Sur	n Written During the	4
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged	IN B EL ologies for integrated a IN pmetry processing	Fleuret 10 (3) systems De (4) Micheli	G 3h	2h	2h	2h	Sur	n Written During the semester	6
CS-438 Deep learning EE-559 Design techn CS-472	IN B EL ologies for integrated a	Fleuret 10 (2) systems De	G 3h		2h	2h	Sur	n Written During the semester During the	6
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D geo CS-446	EL cologies for integrated solution in the second s	Fleuret 1 3 3 Systems De A Micheli	G 3h	2h	2h	2h	Sur	n Written During the semester	6
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat	EL cologies for integrated solution & learning analytic	Fleuret [] [3] systems De [A] Micheli	3h 2h	2h 1h 1h	2h	2h	Sur Wir Wir	During the semester During the semester	<i>4 6 5</i>
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D geo CS-446	EL cologies for integrated solution in the second s	Fleuret 1 3 3 Systems De A Micheli	G 3h	2h	2h	2h	Sur	During the semester During the semester	6
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat	EL cologies for integrated solution & learning analytic	Fleuret [] [3] systems De [A] Micheli	3h 2h	2h 1h 1h	2h	2h	Sur Wir Wir	During the semester During the semester	<i>4 6 5</i>
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat CS-411	IN B EL cologies for integrated s IN cometry processing IN tion & learning analytic	Fleuret ① ③ systems De ③ Micheli substituting the state of the state	3h 2h	2h 1h 1h	2h	2h	Sur Wir Wir	During the semester During the semester	<i>4 6 5</i>
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D geo CS-446 Digital educat CS-411 Distributed in	IN B EL cologies for integrated s IN cometry processing IN tion & learning analytic IN contelligent systems	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann	3h 2h	2h 1h 1h			Sun Win Win	During the semester During the semester Oral	4654
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D geo CS-446 Digital educat CS-411 Distributed in ENG-466	IN B EL cologies for integrated s IN cometry processing IN tion & learning analytic IN citelligent systems SIE	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A)	3h 2h	2h 1h 1h	2h		Sur Wir Wir	During the semester During the semester Oral	<i>4 6 5</i>
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D geo CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy	EL cologies for integrated s IN cometry processing IN tion & learning analytic IN telligent systems SIE estem theory for engine	Fleuret 10 (3) systems De A Micheli CS Dillenbourg Jermann Martinoli Deers	3h 2h 2h	2h 1h 1h 2h			Sur Wir Wir Wir Sur	During the semester During the semester During the semester Oral Oral	46545
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D geo CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502	ologies for integrated sologies for integrated sologie	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A)	3h 2h	2h 1h 1h 2h			Sun Win Win	During the semester During the semester During the semester Oral Oral	4654
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D geo CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy	ologies for integrated sologies for integrated sologie	Fleuret 10 (3) systems De A Micheli CS Dillenbourg Jermann Martinoli Deers	3h 2h 2h	2h 1h 1h 2h			Sur Wir Wir Wir Sur	During the semester During the semester During the semester Oral Oral	46545
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D geo CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502	ologies for integrated sologies for integrated sologie	Fleuret 10 (3) systems De A Micheli SS Dillenbourg Jermann Martinoli Deers Thiran	3h 2h 2h	2h 1h 1h 2h			Sur Wir Wir Wir Sur	During the semester During the semester During the semester Oral Mritten	46545
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D gec CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473	ologies for integrated and ologies for integrate	Fleuret 10 (3) systems De A Micheli SS Dillenbourg Jermann Martinoli Sers Thiran Beuchat	3h 2h 2h 2h	2h 1h 1h 2h			Sur Wir Wir Wir Sur Wir	During the semester During the semester During the semester Oral Mritten	465454
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D gec CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an	ologies for integrated sologies for integrated sologie	Fleuret 10 (3) systems De A Micheli SS Dillenbourg Jermann Martinoli Deers Thiran Beuchat A hitecture	3h 2h 2h 2h	2h 1h 1h 2h	2h		Sur Wir Wir Wir Sur Wir	During the semester During the semester During the semester Oral Written Oral	465444
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491	ologies for integrated sink cometry processing in integr	Fleuret 10 (3) systems De A Micheli SS Dillenbourg Jermann Martinoli Sers Thiran Beuchat	3h 2h 2h 2h	2h 1h 1h 2h			Sur Wir Wir Wir Sur Wir	During the semester During the semester During the semester Oral Written Oral	465454
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience de	ologies for integrated sink cometry processing in integr	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) sers Thiran Beuchat(A) hitecture Wegmann	3h 2h 2h 2h 2h	2h 1h 1h 2h 1h 2h	2h		Sur Wir Wir Sur Wir Sur	During the semester During the semester Oral Oral Written Oral Oral Oral Oral Oral Oral Oral	465446
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491	ologies for integrated sink cometry processing in integr	Fleuret 10 (3) systems De A Micheli SS Dillenbourg Jermann Martinoli Deers Thiran Beuchat A hitecture	3h 2h 2h 2h	2h 1h 1h 2h	2h		Sur Wir Wir Wir Sur Wir	During the semester During the semester During the semester Oral Written Oral Oral Oral Oral Oral Oral	465446
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience de	IN B EL cologies for integrated and an analytic analyt	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) sers Thiran Beuchat(A) hitecture Wegmann	3h 2h 2h 2h 2h	2h 1h 1h 2h 1h 2h	2h		Sur Wir Wir Sur Wir Sur	During the semester During the semester Oral Oral Written Oral Oral During the semester Oral During the semester	465446
Deep learning EE-559 Design techn CS-472 Digital 3D gec CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience dc CS-489	ologies for integrated silving processing in integrated silving processing in integrated silving processing in integrated silving processing in integrated silving processing silving processing in integrated silving processing silving processing in integrated silving processing integrated silving silving processing integrated silving sil	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) sers Thiran Beuchat(A) hitecture Wegmann	3h 2h 2h 2h 2h	2h 1h 1h 2h 1h 2h	2h		Sur Wir Wir Sur Wir Sur	During the semester During the semester Oral Oral Written Oral Oral Oral Oral Oral Oral Oral	465446
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience do CS-489 Formal verific	ologies for integrated silving processing in integrated silving processing in integrated silving processing in integrated silving processing analytic in integrate systems silving scripts so in integrate silving so in integrate silving so in integrate silving sil	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) eers Thiran Beuchat(A) hitecture Wegmann Huang	2h 2h 2h 2h 2h	2h 1h 1h 2h 1h 4h	2h		Sur Wir Wir Sur Wir Sur Wir	During the semester During the semester During the semester Oral Written Oral Oral During the semester Oral	4 6 5 4 5 4 6 6
Deep learning EE-559 Design techn CS-472 Digital 3D gec CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience dc CS-489	ologies for integrated silving processing in integrated silving processing in integrated silving processing in integrated silving processing in integrated silving processing silving processing in integrated silving processing silving processing in integrated silving processing integrated silving silving processing integrated silving sil	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) sers Thiran Beuchat(A) hitecture Wegmann	2h 2h 2h 2h 2h	2h 1h 1h 2h 1h 2h	2h		Sur Wir Wir Sur Wir Sur	During the semester During the semester During the semester Oral Written Oral During the semester Oral During the semester	4 6 5 4 5 4 6 6
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience do CS-489 Formal verific	ologies for integrated silving processing in integrated silving processing in integrated silving processing in integrated silving processing analytic in integrate systems silving scripts so in integrate silving so in integrate silving so in integrate silving sil	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) eers Thiran Beuchat(A) hitecture Wegmann Huang	2h 2h 2h 2h 2h	2h 1h 1h 2h 1h 4h	2h		Sur Wir Wir Sur Wir Sur Wir	During the semester During the semester During the semester Oral Written Oral Oral During the semester Oral	4 6 5 4 5 4 6 6
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D ged CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience de CS-489 Formal verific	IN B EL cologies for integrated and an analytic analytic and an analytic	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) eers Thiran Beuchat(A) hitecture Wegmann Huang	2h 2h 2h 2h 2h	2h 1h 1h 2h 1h 4h	2h		Sur Wir Wir Sur Wir Sur Wir	During the semester During the semester During the semester Oral Written Oral During the semester Oral During the semester	4 6 5 4 5 4 6 6
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D gec CS-446 Digital educal CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience dc CS-489 Formal verific CS-550 Gödel and rec	IN B EL cologies for integrated and an analytic analytic analytic and an analytic and an analytic analytic and an analytic ana	Fleuret 10 (3) systems De A Micheli SS Dillenbourg Jermann Martinoli Ders Thiran Beuchat Megmann Huang Kuncak	2h 2h 2h 2h 2h 2h 2h	2h 1h 1h 2h 1h 2h 4h 2h 2h	2h		Sur Wiri Wiri Sur Wiri Wiri Wiri	During the semester During the semester During the semester Oral Written Oral During the semester During the semester During the semester During the semester	4 6 5 4 5 4 6 6
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D gec CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience dc CS-489 Formal verific CS-550 Gödel and rec MATH-483	IN B EL ologies for integrated and an analytic analy	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) eers Thiran Beuchat(A) hitecture Wegmann Huang	2h 2h 2h 2h 2h	2h 1h 1h 2h 1h 2h 4h 2h 2h	2h		Sur Wir Wir Sur Wir Sur Wir	During the semester During the semester During the semester Oral Written Oral During the semester During the semester During the semester During the semester	4 6 5 4 5 4 6 6
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D gec CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience dc CS-489 Formal verific CS-550 Gödel and rec MATH-483 Image proces	IN B EL ologies for integrated and an analytic analyti	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) sers Thiran Beuchat(A) hitecture Wegmann Huang Kuncak Duparc ()	2h 2h 2h 2h 2h 2h 2h 2h 2h	2h 1h 1h 2h 1h 2h 4h 2h 2h	2h		Sur Wird Wird Sur Wird Wird Wird Wird	During the semester During the semester During the semester Oral Written Oral During the semester Uning the semester Uning the semester During the semester Written	4 6 5 4 5 4 6 6 5
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D gec CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience dc CS-489 Formal verific CS-550 Gödel and rec MATH-483	IN B EL ologies for integrated and an analytic analy	Fleuret 10 (3) systems De Micheli CS Dillenbourg Jermann Martinoli Sers Thiran Beuchata Huang Kuncak Duparc 10 Unser 10	2h 2h 2h 2h 2h 2h 2h	2h 1h 1h 2h 1h 2h 4h 2h 2h	2h		Sur Wiri Wiri Sur Wiri Wiri Wiri	During the semester During the semester During the semester Oral Written Oral During the semester Uning the semester Uning the semester During the semester Written	4 6 5 4 5 4 6 6
CS-438 Deep learning EE-559 Design techn CS-472 Digital 3D gec CS-446 Digital educat CS-411 Distributed in ENG-466 Dynamical sy COM-502 Embedded sy CS-473 Enterprise an CS-491 Experience dc CS-489 Formal verific CS-550 Gödel and rec MATH-483 Image proces	IN B EL ologies for integrated and an analytic analyti	Fleuret () (3) systems De (A) Micheli CS Dillenbourg Jermann Martinol(A) sers Thiran Beuchat(A) hitecture Wegmann Huang Kuncak Duparc ()	2h 2h 2h 2h 2h 2h 2h 2h 2h	2h 1h 1h 2h 1h 2h 4h 2h 2h	2h		Sur Wird Wird Sur Wird Wird Wird Wird	During the semester During the semester During the semester Oral Written Oral During the semester Uning the semester Uning the semester During the semester Written	4 6 5 4 5 4 6 6 5

	Image proces	sing II											
Ε	MICRO-512	MT	Liebling 🕞				;	3h			Sum	Written	3
			Sage										
			Unser										
			Van De Ville										
	Industrial aut	omation	VIIIC										
E	CS-487	SC	Sommer					2h		1h	Sum	Oral	3
			Tournier										
_	Intelligent age		F - 10'		οı.	O.L.					14.00	Description of the c	•
E	CS-430	IN	Faltings	,	311	3h					Win	During the semester	О
	Interaction de	esian										derriedier	
E	CS-486	IN	Pu					2h	1h	1h	Sum	During the	4
			Faltings									semester	
_		o natural language pro			٥.	01					14.0	147.50	
Ε	CS-431	IN	Chappeiß Rajman	r z	2h	2h					Win	Written	4
-	Learning theo	orv	Пајттатт										
E	CS-526	IN	Macris					2h	2h		Sum	Written	4
			Urbanke										
_		ning for behavioral data									_		
E	CS-421	IN	Käser					2h		2h	Sum	Written	4
	Markov chain	s and algorithmic appli	Jacober										
E	COM-516	SC	Lévêque	10	2h	2h					Win	Written	4
_	000		Macris									777711077	•
	Mathematical	foundations of signal											
_	processing	00	5 ·		٥.	01					14.0	147.50	•
Ε	COM-514	SC	Bejar 🌀 Haro		3h	2h					Win	Written	6
			naro Simeoni										
	Networks out	of control	Ollifoorii										
E	COM-512	SC	•	()				2h	1h		Sum	Written	4
	Number theor	y in cryptography											
E	MATH-489	MA	Serban 🕡)				2h	2h		Sum	Written	5
_		for machine learning	- 1					OI.	OI:	41.	0	Modern	_
Ε	CS-439	IN	Flammari Jaggi	on			•	∠n	2h	ın	Sum	Written	5
	Optional proje	ect in communication s											
E	COM-507	SC	Profs				2h			2h	Sum	During the	8
			divers								Win	semester	
_	Performance							OI.	41.	O.L.	0	Modern	7
Ε	COM-503	SC	Le 📵 Boudec	00			;	3h	1h	2h	Sum	Written	7
	Dringinles of	nomputor customs	Boudet 6)									
E	CS-522	computer systems	Argyraki	100	4h						Win	Written	7
_	00 022		Candea	100	•••						••••	· · · · · · · · · · · · · · · · · · ·	•
-		methods in combinator	ics										
E	MATH-467	MA	Marcus 🕕	<u>)</u>	2h	2h					Win	Written	5
		bedded systems	D / :=							01-	0	D	
E	CS-476	IN	Beuchat(A)				2h		2h	Sum	During the semester	4
	Sensors in me	edical instrumentation										3511163161	
E	EE-511	EL	Aminian@) (i				2h	1h		Sum	Written	3
	Set theory												
E	MATH-318	MA	Duparc				:	2h	2h		Sum	Written	5
	Ourt : 11 :	ahualasi -									Win		
E	Smart grids to EE-472	echnologies EL	Le 👩					2h	1h	2h	Sum	Written	5
_	LL-4/2	LL	Le (f) Boudec	,			•	<u> </u>	111	4 11	Juiii	VVIIIIGII	J
			Paolone										
	Social media											_	
E	EE-593	EL	Gillet 🙃	•				1h		1h	Sum	During the	2
	Coffware	ıritı.										semester	
E	Software section CS-412	urity //	Payer 🙃					3h	2h	1h	Sum	During the	6
_										111	Gairi	Daining and	9
	00 412	IIV	r ayer 🕛	•								semester	
		chanics and Gibbs mea										semester	
E	Statistical me	chanics and Gibbs mea						2h			Sum	semester Oral	5
<u>E</u>	Statistical me	chanics and Gibbs mea	asures		4:	2h					Sum Win		5

Student seminar: security	protocols and
applications	

	applications							
Ε	COM-506	SC	Oechslir <mark>n</mark> Vaudenay	2h	Sı	ım	Written	3
	Sublinear al	gorithms for big	data analysis					
Ε	CS-448	IN	0	3h	Sı	ım	During the semester	4
	Technology	ventures in IC						
Ε	CS-410	IN		2h	2h Sι	ım	During the semester	4
	Topics in the	eoretical compute	er science					
E	CS-455	IN	<i>Kapralo</i> ⊚ 		W	ïn	During the semester	4
	Virtual realit	у						
E	CS-444	IN	Boulic 🏮	2h 1h	Sı	ım	During the semester	4

Block "Projects & SHS"

	Courses		Master	r 1	Má	ste	r 2	Exam Session	Exam	Credit
Langua	ge Code	Section	TeacherSpecialization	р	1	е	р			
	Semester pr	oject in communication	on systems							
E	COM-416	SC	Profs divers	2h			2h	Sum Win	During the semester	12
	HSS : Introd	uction to project								
		SHS						Win		3
	HSS : Projec	t								
-		SHS						Sum		3