

Nr. modul	Modul	Tutore	ore predare	ore eval.
0	Basics of telecommunications technologies and standards – main definitions and High Level Architectures	Gabriel Papuc	2	
1	Advanced telecommunication technologies and standard – Radio Access Networks: GSM, UMTS, LTE, WiFi & Fix Access Network: FTTx/GPON	Alex Oprea	12	1
1.1	Architecture of 2G/3G/4G/5G Radio Access Networks. Functions of Network Elements	Codrut SAVULESCU - HUAWEI	9	
1.2	Site - Design and Layout	Codrut SAVULESCU - HUAWEI		
1.3	Power budget	Codrut SAVULESCU - HUAWEI		
1.4	Radio interface in 2G/3G/4G/5G Access Network- description	Codrut SAVULESCU - HUAWEI		
1.5	Procedures, flows, signaling : call setup , handover intra and inter 2G/3G/4G Access Network	Codrut SAVULESCU - HUAWEI		
1.6	Capacity of the 2G/3G/4G/5G Access Networks - voice / data	Codrut SAVULESCU - HUAWEI		
1.7	Indicatorilor de performanta si aplicatii practice in GSM si UMTS/LTE	Codrut SAVULESCU - HUAWEI		
1.8	Arhitecturi de retele Wi-Fi pentru operatori Telecom.	Alex Oprea	3	
1.1	Tests			1
2	Advanced telecommunication technologies and standards – IP, MPLS, SDN & NFD	Horia Gunica	12	1
2.1	Networking - Rounting & Switching	Horia Gunica	3	
2.2	IP/MPLS Networks	Horia Gunica	1	
2.3	Datacenter Networking and Virtualization Technologies	Horia Gunica	2	
2.4	Tehnologii din domeniul securității cibernetice (Firewall, security Gateway)	Horia Gunica	2	
2.5	IP network evolution – SDN and NFV	Nokia	4	
2.6	Tests			1
3	Advanced mobile communication technologies and standards – Core Networks	Lucian ISPAS	12	1
3.1	Circuit Switch Tehnology - Advanced description, procedures, flows, signalling	Lucian ISPAS	3	
3.2	Packet switch	Cristian Panes	3	
3.3	IMS Advanced Voice – VoLTE & VoWiFi	Ionut Liviu CIULEI	3	
3.4	Next generation HLR (SDM): description, functionalities: HLR, EPC HSS, IMS HSS.	ZTE	3	
3.5	Tests			1
4	Advanced telecommunication technologies and standards - Business Intelligent Platforms & Services	Mihai Huică	8	1
4.1	IT activities - Overview	Mihai Dina	4	
4.2	Servicii de billing pentru telco			
4.3				
4.3	Tehnologii de virtualizare	Mihai Huică	4	
4.5	Tests			1
5	Network Planning and network resources management	Gabriel PAPUC	12	1
5.1	General Considerations Regarding Evolution Criteria of The Mobile Networks	Gabriel Papuc	4	
	Dimensioning of Radio Access Networks & Transmission Network. Use case			
5.2	Coverage/ GIS	Marius Dediu	2	
5.3	Future networks - IMT2020 and beyond. General Criteria for Development and Targhets.	Gabriel Papuc	4	
5.4	The evolution of mobile networks: from LTE-advanced to 5G - objectives	Gabriel Papuc	2	

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5.5	Tests			1
6	CyberSecurity	Ioan Constantin	8	1
6.1	Computer Forensics	Ioan Constantin	2	
6.2	Anatomy of a Cyber Attack. Cloud Cyber Security. Mobile Devices Security. - Seminar Q&A	Ioan Constantin	2	
6.3	Securitate Cibernetică Operațională - SOC.	Ioan Constantin	2	
6.4	Artificial Intelligence in Security Operations	Siscale	2	
6.5	Tests			1
7	IT&C New Trends: Technology, Architecture, Services	Gabriel Papuc	14	1
7.1	5G Arhitecture & services. Software Defined Networks, Network Virtualization, Network Slicing. API	Marius Iordache	4	
7.2	Internet of Things si Programabilitate	Bragos Badea - Cisco	2	
7.3	IoT Mobile Network - Seminar Q&A. Lab	Catalin Brezeanu	2	
7.4	Mobile Analytics Platform - Integrity Data Rules	Gabriel Papuc	2	
7.5	New features - 5G networks - Radio	Catalin Taslaoan	2	
7.6	Rolul Wi-Fi in contextul Smart City, respectiv Smart Mobility. Analiza Datelor din retelele Wi-Fi.	Alexandru Oprea	2	
7.7	Tests			1
8	Patents and Inventions & Entrepreneurship	Gabriel PAPUC	6	1
8.1	Patents and Inventions / Case Studies	Gabriel PAPUC	3	
8.2	Entrepreneurship and product creation	Monica OBOGEANU	3	
8.3	Test			1

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