

Week	Module	Topics Covered
Week 1	Telecom Fundamentals	Evolution from 2G to 5G, telecom ecosystem overview, mobile network basics, wireless communication fundamentals, and introduction to telecom protocols.
Week 2	LTE & 5G Fundamentals	LTE architecture overview, transition from LTE to 5G, NSA vs. SA architecture, 5G use cases, and spectrum concepts.
Week 3	5G RAN Architecture	gNB architecture, CU/DU split concepts, RAN interfaces, Massive MIMO basics, beamforming concepts, and O-RAN overview.
Week 4	5G Core Architecture	Service Based Architecture (SBA), AMF/SMF/UPF functions, authentication flows, session management, and network slicing basics.
Week 5	5G Protocols & Signaling	NAS signaling, RRC procedures, registration flow, PDU session establishment, and mobility procedures.
Week 6	Cloud Native Telecom	Containers and Kubernetes basics, CNFs and VNFs, telecom virtualization, cloud native deployments, and edge computing concepts.
Week 7	Hands On Integration Labs	5G Core deployment, CU/DU integration, UE onboarding, traffic generation, monitoring, and troubleshooting in live lab environment.
Week 8	Open RAN & 5G Advanced	O-RAN architecture, Near RT RIC concepts, xApps and rApps overview, AI/ML in telecom, and 5G Advanced evolution.
Week 9	Industry Use Cases & Projects	Private 5G networks, smart manufacturing, robotics and automation, smart city applications, and mini telecom project execution.
Week 10-12	Career Readiness & Assessment	Technical assessments, lab evaluations, mock interviews, resume guidance, telecom career roadmap, and final certification.