5G NETWORKS: PLANNING, DESIGN AND OPTIMISATION

Programme Modules:
- Radio Access 1: Interfaces
- Radio Access 2: Architecture
- Backbone and Core 1: Software Defined Networking
- Backbone and Core 2: Resilience and Flows
- IoT and Edge Computing
- Operation, Control and Management

telecomstechacademy.com/course/5g-network-planning-design-optimisation/

POWERED BY Ovum
2019 will be the year in which we will see the widespread roll-out of fifth-generation (5G) networks

With the technology offering faster speeds and more reliable connections than ever before, ultimately unlocking a diverse set of use cases from the Internet-of-Things (IoT) to mission-critical control, it is easy to understand the reasoning behind the hype. Yet, with the hype come high expectations on operators to deliver and, therefore, it is important that LTE operators contemplating the transition to 5G are prepared.

Through the utilisation of demonstrations, this 3-day programme offers delegates practical insight that will enable them to effectively plan, design and deploy a network to successfully fulfill the requirements set by 5G.

Is the course for you?

Organisations: The course is designed for Operators, Vendors and Regulators looking to upskill their knowledge on 5G Roll-outs.

Job Titles: The course is designed for engineers and other staff involved with the architecture, optimisation, management, monitoring or testing of the 5G network.

“5G will account for a quarter of UK mobile data traffic by 2022”

— Mobile Visual Networking Index (VNI) Cisco
PROGRAMME BENEFITS

This course will be one of the first of its kind to offer delegates an in-depth understanding on what they can do to prepare their network for the roll-out of 5G. Avoiding generalisations, the course provides delegates with skills that can directly be applied to their work.

Benefits for individuals:

- Understand 5G concepts, enablers and key features
- Explore 5G core architecture and the backwards-compatibility of 5G
- Analyse key use cases and their mapping to carriers and applications/services
- Dive into spectrum, interfaces and coding in 5G New Radio
- Learn how to utilise cluster methods for centralized/virtual radio access planning
- Understand SDN, NFV and cloudification, benefits and user/control plane design
- Delve into IoT, radio access, big data, machine learning and edge computing

Benefits for organisations:

- Equip employees with the knowledge to plan, design and optimise a 5G network
- Keep ahead of competitors in offering customers 5G services
- Identify new revenue streams that can be enabled through 5G

COURSE DIRECTOR

Christofer Larsson

Christofer works as an independent consultant in telecommunication network design, traffic engineering and optimization. He holds an M.Sc. degree in engineering physics and has been working at Ericsson with design and roll-out of networks for a large number of tier-1 operators.

Aside from his consultancy work, Christofer is a co-founder of Netonomics, a Swedish telecommunication architect company and has published two books on teletraffic theory and advanced network design (Academic Press, 2014 and 2018).

The Telecoms & Tech Academy have trained companies such as:

- Vodafone
- T-Mobile
- MTN
- Dialog
- Ooredoo
- Batelco
- Digicel
- Saudi Telecom
- BT
- Viva
- Du
- Liberty Global
- Bofinet
- Libyana
- Zain
- Mobily
- Google
- Microsoft
# Programme Agenda

## Day 1
- **Introduction**
  - Expectations on 5G, Enablers and Standardisation, Use Cases, Models, Complexity and Optimisation
- **Radio Access 1: Interfaces**
  - 5G Radio Planning, Radio Supporting features, MIMO and Smart antennas

## Day 2
- **Backbone and Core 1: SDN**
  - 5G Core (5GC) network elements and SDN and NFV
- **Radio Access 2: Architecture**
  - Front-Haul and aggregation layer design
- **Backbone and Core 1: SDN**
  - Data centers, clouds and fog

## Day 3
- **IoT and Edge Computing**
  - Internet of Things, Massive Machine Type Communication and Edge Computing
- **Operation, Control and Management**
  - Service Levels and resource mapping, Network Management
- **Operation, Control and Management**
  - Big Data and Machine Learning Methods, Self-organisation, Network Roll-out
- **Summary, Q&A and Discussion**
  - Network Flows, Elastic Networks, Slicing and Orchestration

### Lunch
- **Radio Access 2: Architecture**
  - Centralised and virtualised radio (C-RAN/vRAN)
- **Backbone and Core 2: Resilience and Flows**
  - Resilience, Robustness, and Topological Design
- **Backbone and Core 2: Resilience and Flows**
  - Network Flows, Elastic Networks, Slicing and Orchestration

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For more information on the course or for help with the booking process, please contact us:

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