

# IP Multimedia Subsystem

## Telephony in Fixed and Mobile Networks

The IP Multimedia Subsystem (IMS) is a major component of Next Generation Networks. IMS offers providers overall access to services via the Internet protocol. 3GPP and ETSI define the servers, switching points, and communication relations and processes. The central protocol is SIP. The IMS standards describe security measures as well as concepts to ensure Quality of Service. This course gives the student a conceptual insight into the IP Multimedia Subsystem. The detailed know-how required to understand and competently evaluate IMS concepts is achieved by means of an exhaustive discussion of the used protocols and processes.

### Course Contents

- The State of the Art: Voice, Data, and more
- IMS Standards of ETSI, 3GPP, and IETF
- Architecture of the NGN: Central Technologies and Components
- The IMS Architecture: Components and Reference Points
- Call Session Control Functions and their Tasks
- Session Border Controller and Media Gateways
- Signaling with SIP in IMS: Examples
- The Diameter Protocol in the IMS
- Login Procedures with RADIUS and Diameter
- Home Subscriber Server and Billing
- Security, Legislation, and Regulatory Measures

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### Target Group

This course is designed for network designers and consultants who are interested in gaining a thorough insight into this concept. In addition to explaining the structure and the most important processes, the course deals with the protocols used and discusses open issues and risks.

### Prerequisites

Knowledge of state-of-the-art WAN technologies and structures in carrier networks, as well as of the functioning of IP-based networks and a basic know-how of the SIP protocol are prerequisites for a successful participation in the course.

### This Course in the Web



You can find the up-to-date information and options for ordering under the following link:

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