**HSUPA** is the next step in the evolution of 3GPP UMTS networks. While HSDPA did offer higher data rates over UMTS networks in downlink, it did not enhance uplink speeds. A new class of applications such as video & image share, file uploads & social networking has required high uplink speeds. HSUPA introduces required enhancements to 3GPP networks to enhance uplink speeds. Additionally, HSUPA offers better QoS than UMTS networks. This course introduces all the enhancements made in HSUPA to support high data rate applications. In particular, the course covers the following important topics (not exhaustive):

- List the major releases of 3GPP technology and its key features
- Sketch network changes required for implementing HSUPA over existing rel 99 networks
- Describe major concepts of HSUPA and how they can offer higher rates
- List and describe functionalities of different channels in HSUPA
- Describe fast scheduling operation in HSUPA
- Sketch call flows for setting up HSUPA service
- Sketch handover operations in HSUPA
- Describe transition between HSUPA and UMTS
- Identify major deployment challenges for HSUPA
- Discuss major features of HSPA+ including MIMO and HOM

At the end of the course, students will be able to describe major features and operations of HSUPA technology.

**Intended Audience**

This is an intermediate level course for HSUPA networks. As such, it is suitable for engineering groups in manufacturers and operators. This course is suitable for the following audience:

This course is suitable for the following audience:

- R&D groups, system and handset architects and test groups involved in design and development and deployment of HSUPA products
- Deployment Groups in operators interested in understanding the evolution path for their current networks

**Duration:**

1 Day (Instructor led)

**Contact:**

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