

# HSPA Explained

COURSE OUTLINE



## COURSE DETAILS

### Target Audience

Mobile Networks RF Engineers  
Mobile Networks Field Engineers  
Mobile Networks Planning and Optimization Engineers  
Mobile Networks Performance Engineers

### Training Objective

- Basic introduction to HSDPA
- Basic introduction to Enhanced Uplink (HSUPA)
- Understand the HSPA Evolution and Features

**Duration of Training: 3 Days (to be determined depending on the contents)**

### Prerequisite

- Basic knowledge of 3G Mobile Networks Architecture
- Basic knowledge of 3G Mobile Networks Air Interface
- Basic knowledge of 3G Mobile Networks Operation (Signalling & Protocols)

## COURSE MODULES

### 1. HSDPA Overview

- Introduction to HSDPA
- HSDPA Specifications
- HSDPA principals
- HSDPA channels
- HSDPA Data Rates
- HSDPA Terminals

### 2. Enhanced Uplink (HSUPA) Overview

- Introduction to HSUPA
- HSDPA Specifications
- HSDPA principals
- HSDPA channel

- HSDPA Data Rates
- HSDPA Terminals

### **3. HSPA Evolution (HSPA+)**

- 64-QAM HSDPA
- 16-QAM HSUPA
- MIMO
- 4TX MIMO
- DC-HSDPA and MIMO
- DB-HSDPA
- DC-HSUPA
- 4C-HSDPA
- 8C-HSDPA
- HS-DSCH in CELL\_FACH

### **4. HSPA Resource Management**

- HSDPA Resource management
- HSUPA Resource management