



**Scandinavian  
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Training Center

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# Course: GSM In\_Building Coverage Solutions

Code	City	hotel	Start	End	price	Language - Hours
435	Taif	Hotel Meeting Room	2025-10-26	2025-10-30	9950 SR	En - 25

## Overview

This course is designed for radio engineers and planners wanting a thorough understanding of the principles of indoor coverage solutions for GSM. The course covers topics from surveying the site to installation of the solution. At the end of the course, delegates will be able to: - Understand how and when to use indoor solutions - Understand the techniques for coverage solutions - Understand the tools that can be used to plan solutions - Understand the issues faced with implementing a solution

## Modules

### Introduction (2 topics)

- Overview of cellular network design
- Overview of In-building coverage solutions

### Overview of In-building coverage solutions (6 topics)

- Why and when to implement a solution
- Understanding the users of indoor solutions
- Architecture of indoor solutions
- Components
- Active vs. passive
- Propagation models

### Step Site Survey (3 topics)



- Overview of site
- Requirement analysis
- Coverage analysis

## **Step Design (17 topics)**

- Analysis of site survey
- Design elements to consider
- Co-axial model
- Leaky feeders
- Amplifiers
- Repeaters
- Others
- Points to consider
- Final draft of plan
- Confirmation of site vs. plan
- Antenna distribution
- Leaky feeder solution
- Fibre solution
- Picocell solution
- Spectrum optimisation
- Hand-over
- RF power control

## **Step Implementation (16 topics)**

- Overview of solutions
- Passive Solutions
- Passive co-axial
- Implementation
- Couplers
- Splitters



- Active Solutions
- Active co-axial
- Implementation
- Amplifiers
- Leaky Feeder Solutions
- Implementation
- Fibre Optic Solutions
- Implementation
- Picocell Solutions
- Implementation

### **Coverage Models (2 topics)**

- Software tools
- Limitations to use



The Scandinavian Academy for Training Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

### **Program Timings:**

- 9:00 AM to 2:00 PM

### **The program includes:**

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.