

## **MRI Site Planning**

The installation of a clinical MRI system requires detailed site planning to ensure adequate safety and optimal system performance. The important considerations of site planning are discussed in this presentation and solutions suggested by various system manufacturers are presented. The goal of this presentation is to provide an overview of a general MRI site planning project as applied for a clinical MRI system installation.

Basic MRI site planning is based upon the consideration of the following entities: (1): Design of the whole MRI facility spaces (examination room, electric power cabins etc), (2): Presence of external RF, AC/DC power interferences, building vibrations, external temperature conditions, (3): RF shielding through Faraday cage design and construction, (4): Static Magnetic field shielding through metal plate positioning, (5): Acoustic noise shielding, (6): Cryogen installation and safety.

The factors affecting each individual MRI site planning entity are presented and discussed.

A practical guide containing an acceptance testing protocol for a clinical MRI site planning is presented.

### **(Learning Objectives)**

1. To present an overview of the role of a qualified Medical Physicist for the acceptance testing of an MRI site planning project.
2. To present a practical acceptance testing protocol for a clinical MRI site planning project.