

13EC509 ANTENNA MEASUREMENTS

SYLLABUS

Antenna Pattern Measurements: Basic Considerations, Pattern Formats, Fresnel Region Measurements, Modeling Techniques, **Antenna Range Design and Evaluation:** Introduction, Electromagnetic Design Consideration, Antenna Range Evaluation. **Antenna Testing:** Introduction, Types of of Ranges: Elevated Ranges, Ground Ranges, Near Field Ranges, Radar Cross Section Ranges. **Far Field Range Design:** Introduction, Designing the Range, Source Design, Receiving Site Design, Ground Ranges. **Far Field Antenna Tests:** Introduction, Pattern Testing, Gain and Directivity, Polarization. **Far Field Pattern Errors:** Introduction, Error Estimates, Error Correction, Antenna Errors. **Compact Ranges:** Introduction, Room Design, Feed Design, Reflector Design. **Near Filed Testing:** Introduction, Planar Near Field Ranges, Errors, Cylindrical and Spherical Scanning

TEXT BOOKS

1. Evans, Gray E, " Antenna measurements techniques", Artech House, Inc
2. J S Hollis, T J Lyon, L Clayton, " Microwave Antenna Measurements" , Scientific Atlants, Inc