SKU-Satellite Communication

The goal of Satellite communication is to provide information about *satellite communication systems* .It develops the concept for Geoststionary satellite,LEO,MEO ,CDMA,Orbital parameter,Iridium Satellite etc . The course is developed as a self-study package with easy-to-navigate interface, introduces the basic concepts of Satellite communication by use of animations, simulation and examples.

Topics covered in SKU-Satellite Communication:

Orbital Mechanism and Launching of Satellite

Topics Covered: Origin and brief history of satellite communication; Elements of a satellite communication link; Current status of satellite communication.Equation of orbit, Describing the orbit, Location the satellite in the orbit, Locating the satellite with respect to earth, Orbital elements, Look angle determination, Elevation and Azimuth calculation, Geostationary and other orbits, Orbital perturbations, Orbit determination, Mechanics of launching a synchronous satellite, Selecting a launch vehicle.

Space Craft

Topics Covered: Satellite subsystems, Altitude and Orbit Control (AOCS), Telemetry, Tracking and Command (TT&C). Communication subsystems, Transponders, Spacecraft antennas, Frequency re-use antennas.

Satellite Channel and Link Design

Topics Covered: Basic transmission theory, Noise temperature, Calculation of system noise temperature, Noise figure, G/T ratio of earth stations, Design of down links and uplinks using C/N ratio, FM improvement factor for multi-channel signals, Link Design for FDM/FM, TV signals and Digital Signals.

Multiple Access Techniques

Topics Covered: Frequency Division Multiple Access (FDMA), FDM/FM/FDMA, Time Division Multiple Access, Frame structure and synchronization, Code Division Multiple Access, Random Access.

Earth Station Technology

Topics Covered: Earth station design, Basic antenna theory, antenna noise temperature; Tracking; Design of small earth station antennas, Low noise amplifiers, High power amplifiers, FDM and TDM systems.

Print shots of SKU-Satellite Communication: