**LESSON PLAN**

**Branch**: IV ECE ‘A’ **Semester**: I I **Subject** : SC

**Acadamic year:2014-15 faculty :A.JAYALAXMI**

|  |  |  |  |  |  |  |
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| Period | Date (Tentative) | Topic | Unit No. | Teaching Methodology | Remarks | Corrective Action upon Review |
|  | **01.12.2014** | **INTRODUCTION [2] :**Origin of Satellite Communications, | I | Black Board |  |  |
|  | **02.12.2014** | Historical Back-ground, Basic | I | B.B |  |  |
|  | **03.12.2014** | Concepts of Satellite Communications,. | I | B.B |  |  |
|  | **08.12.2014** | Concepts of Satellite Communications,. | I | B.B |  |  |
|  | **09.12.2014** | Frequency allocations for Satellite Services, Applications, | I | B.B |  |  |
|  | **10.12.2014** | Future Trends of Satellite Communications. | I | B.B |  |  |
|  | **11.12.2014** | **UNIT II**  **ORBITAL MECHANICS AND LAUNCHERS[1] :** Orbital Mechanics, | II | B.B |  |  |
|  | **12.12.2014** | Orbital Mechanics, | II | B.B |  |  |
|  | **15.12.2014** | Look Angle determination, | II | B.B |  |  |
|  | **16.12.2014** | Look Angle determination, | II | B.B |  |  |
|  | **17.12.2014** | Orbital perturbations, | II | B.B |  |  |
|  | **18.12.2014** | Orbit determination, launches and launch vehicles, | II | B.B |  |  |
|  | **19.12.2014** | Orbit determination, launches and launch vehicles, | II | B.B |  |  |
|  | **22.12.2014** | Orbital effects in communication systems performance | II | B.B |  |  |
|  | **24.12.2014** | Orbital effects in communication systems performance | II | B.B |  |  |
|  | **26.12.2014** | **UNIT III**  **SATELLITE SUBSYSTEMS[1] :** Attitude and orbit control system, | III | B.B |  |  |
|  | **29.12.2014** | telemetry | III | B.B |  |  |
|  | **30.12.2014** | tracking, | III | B.B |  |  |
|  | **02.01.2015** | Command and monitoring, | III | B.B |  |  |
|  | **03.01.2015** | power systems | III | B.B |  |  |
|  | **05.01.2015** | communication subsystems,. | III | B.B |  |  |
|  | **06.01.2015** | communication subsystems,. | III | B.B |  |  |
|  | **07.01.2015** | Satellite antenna Equipment reliability and Space qualification | III | B.B |  |  |
|  | **08.01.2015** | Satellite antenna Equipment reliability and Space qualification | III | B.B |  |  |
|  | **9.01.2015** | **UNIT IV**  **SATELLITE LINK DESIGN[1] :** Basic transmission theory, | IV | B.B |  |  |
|  | **19.01.2015** | system noise temperature and G/T ratio, | IV | B.B |  |  |
|  | **20.01.2015** | system noise temperature and G/T ratio, | IV | B.B |  |  |
|  | **21.01.2015** | Design of down links, up link design, | IV | B.B |  |  |
|  | **22.01.2015** | Design of satellite links for specified C/N, | IV | B.B |  |  |
|  | **23.01.2015** | System design example. | IV | B.B |  |  |
|  | **02.02.2015** | **UNIT V**  **MULTIPLE ACCESS[1][2] :** Frequency division multiple access (FDMA) Intermodulation, Calculation of C/N. | V | B.B |  |  |
|  | **03.02.2015** | Time division Multiple Access (TDMA) | V | B.B |  |  |
|  | **04.02.2015** | Frame structure, Examples. | V | B.B |  |  |
|  | **05.02.2015** | Satellite Switched TDMA Onboard processing, | V | B.B |  |  |
|  | **06.02.2015** | DAMA, | V | B.B |  |  |
|  | **10.02.2015** | Code Division Multiple access (CDMA), | V | B.B |  |  |
|  | **12.02.2015** | Spread spectrum transmission and reception. | V | B.B |  |  |
|  | **16.02.2015** | **UNIT VI**  **EARTH STATION TECHNOLOGY[3] :** Introduction, | VI | B.B |  |  |
|  | **17.02.2015** | Transmitters, | VI | B.B |  |  |
|  | **18.02.2015** | Receivers, | VI | B.B |  |  |
|  | **19.02.2015** | Antennas, | VI | B.B |  |  |
|  | **23.02.2015** | Tracking systems, | VI | B.B |  |  |
|  | **24.02.2015** | Terrestrial interface, | VI | B.B |  |  |
|  | **25.02.2015** | Primary power test methods | VI | B.B |  |  |
|  | **02.03.2015** | **UNIT VII**  **LOW EARTH ORBIT AND GEO-STATIONARY SATELLITE SYSTEMS[1] :** Orbit consideration, | VII | B.B |  |  |
|  | **03.03.2015** | coverage and frequency considerations, | VII | B.B |  |  |
|  | **05.03.2015** | Delay & Throughput considerations, | VII | B.B |  |  |
|  | **06.03.2015** | System considerations, | VII | B.B |  |  |
|  | **09.03.2015** | Operational NGSO constellation Designs | VII | B.B |  |  |
|  | **10.03.2015** | **UNIT VIII**  **SATELLITE NAVIGATION & THE GLOBAL POSITIONING SYSTEM [1] :**Radio and Satellite Navigation, | VII | B.B |  |  |
|  | **11.03.2015** | Radio and Satellite Navigation, | VII | B.B |  |  |
|  | **12.03.2015** | GPS Position Location principles | VII | B.B |  |  |
|  | **13.03.2015** | GPS Position Location principles | VII | B.B |  |  |
|  | **16.03.2015** | GPS Receivers and codes, | VII | B.B |  |  |
|  | **17.03.2015** | Satellite signal acquisition, | VII | B.B |  |  |
| 56. | **18.03.2015** | GPS Navigation Message, | VII | B.B |  |  |
| 57. | **19.03.2015** | GPS signal levels | VII | B.B |  |  |
| 58. | **20.03.2015** | GPS receiver operation, | VIII | B.B |  |  |
| 59. | **23.03.2015** | GPS C/A code accuracy, | VIII | B.B |  |  |
| 60. | **24.03.2015** | Differential GPS | VIII | B.B |  |  |
| 61. | **25.03.2015** | Old Question Papers Discussion | VIII | B.B |  |  |
| 62. | **26.03.2015** | Old Question Papers Discussion | VIII | B.B |  |  |
| 63. | **27.03.2015** | Old Question Papers Discussion | VIII | B.B |  |  |