**LESSON PLAN**

**Subject Code & Name: CMC Branch: E.C.E-C Class / Semester: IV/II**

**Academic Year:2015-16 Faculty: V.Laxmi**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Period** | **Date (Tentative)** | **Topic** | **Unit No.** | **Teaching Methodology** | **Remarks** | **Corrective action upon review** |
|  |  | **CELLULAR MOBILE RADIO SYSTEMS** | **I** |  |  |  |
| 1,2 | 10.12.15&.11.12.15 | Introduction to Cellular Mobile System |  | CB |  |  |
| 3 | 14.12.15 | Performance criteria |  | CB |  |  |
| 4 | 15.12.15 | uniqueness of mobile radio environment |  | CB |  |  |
| 5 | 16.12.15 | operation of cellular systems |  | CB |  |  |
| 6 | 17.12.15 | , Hexagonal shaped cells |  | CB |  |  |
| 7 | 18.12.15 | Analog and Digital Cellular systems |  | CB |  |  |
|  |  | **ELEMENTS OF CELLULAR RADIO SYSTEM DESIGN** | **II** |  |  |  |
| 8 | 21.12.15 | Introduction |  | CB |  |  |
| 9 | 22.12.15 | General description of the problem |  | CB |  |  |
| 10 | 23.12.15 | concept of frequency channels |  | CB |  |  |
| 11 | 24.12.15 | Co-channel Interference Reduction Factor |  | CB |  |  |
| 12 | 28.12.15 | C/I from a normal case in a omni directional Antenna system |  | CB |  |  |
| 13 | 29.12.15 | Cell splitting |  | CB |  |  |
| 14 | 30.12.15 | consideration of the components of Cellular system |  | CB |  |  |
|  |  | **INTERFERENCE** | **III** |  |  |  |
| 15 | 31.12.15 | Introduction |  | CB |  |  |
| 16 | 04.01.16 | Co-Channel Interference |  | CB |  |  |
| 17 | 05.01.16 | real time Co-Channel interference |  | CB |  |  |
| 18 | 05.01.16 | Interference & Co-Channel measurement |  | CB |  |  |
| 19 | 06.01.16 | Design of antenna system |  | CB |  |  |
| 20 | 07.01.16 | Antenna parameters |  | CB |  |  |
| 21 | 08.01.16 | Their effects |  | CB |  |  |
| 22 | 09.01.16 | Diversity receiver |  | CB |  |  |
| 23 | 11.01.16 | non-co channel interference-different types |  | CB |  |  |
|  |  | **CELL COVERAGE FOR SIGNAL AND TRAFFIC** | **IV** |  |  |  |
| 24 | 12.01.16 | Signal reflections in flat and hilly terrain |  | CB |  |  |
| 25 | 18.01.16 | effect of human made structures, phase difference between direct and reflected paths |  | CB |  |  |
| 26 | 19.01.16 | constant standard deviation |  | CB |  |  |
| 27 | 20.01.16 | straight line path loss slope |  | CB |  |  |
| 28 | 21.01.16 & 25.01.16 | general formula for mobile propagation over water and flat open area |  | CB |  |  |
| 29,30 | 27.01.16 & 28.01.16 | near and long distance propagation antenna height gain |  | CB |  |  |
| 31,32 | 29.01.16 | form of a point to point model |  | CB |  |  |
|  |  | **CELL SITE AND MOBILE ANTENNAS** | **V** |  |  |  |
| 33 | 08.02.16 | Sum and difference patterns and their synthesis |  | CB |  |  |
| 34 | 09.02.16 | omni directional antennas |  | CB |  |  |
| 35 | 10.02.16 | directional antennas for interference reduction |  | CB |  |  |
| 36 | 11.02.16 | space diversity antennas |  | CB |  |  |
| 37 | 12.02.16 | umbrella pattern antennas |  | CB |  |  |
| 38 | 15.02.16 | minimum separation of cell site antennas |  | CB |  |  |
| 39 | 16.02.16 | high gain antennas. |  | CB |  |  |
|  |  | **FREQUENCY MANAGEMENT AND CHANNEL ASSIGNMENT** | **VI** |  |  |  |
| 40,41 | 17.02.16, & 18.02.16 | Numbering and grouping |  | CB |  |  |
| 42 | 19.02.16 | setup access and paging channels |  | CB |  |  |
| 43 | 22.02.16 | channel assignments to cell sites and mobile units |  | CB |  |  |
| 44 | 23.02.16 | channel sharing and borrowing |  | CB |  |  |
| 45 | 24.02.16 | Sectorization |  | CB |  |  |
| 46 | 25.02.16 | overlaid cells |  | CB |  |  |
| 47 | 26.02.16 | non fixed channel assignment |  | CB |  |  |
| 48 | 29.02.16 | Handoff, dropped calls and cell splitting | **VII** |  |  |  |
| 49 | 01.03.16 | types of handoff |  | CB |  |  |
| 50 | 02.03.16 | handoff invitation |  | CB |  |  |
| 51 | 04.03.16 | delaying handoff |  | CB |  |  |
| 52 | 07.03.16 | forced handoff |  | CB |  |  |
| 53 | 09.03.16 | mobile assigned handoff |  | CB |  |  |
| 54 | 10.03.16 | Intersystem handoff |  | CB |  |  |
| 55 | 11.03.16 | cell splitting |  | CB |  |  |
| 56 | 14.03.16 | micro cells, |  | CB |  |  |
| 57 | 15.03.16 | vehicle locating methods |  | CB |  |  |
| 58 | 17.03.16 | dropped call rates and their evaluation |  | CB |  |  |
| 59 | 21.03.16 | **DIGITAL CELLULAR NETWORKS** | **VIII** |  |  |  |
| 60 | 24.03.16 | GSM architecture |  | **PPT** |  |  |
| 61 | 28.03.16 | GSM channels |  | **PPT** |  |  |
| 62 | 29.03.16 | multiplex access scheme |  | **PPT** |  |  |
| 63 | 30.03.16 | TDMA |  | **PPT** |  |  |
| 64 | 31.03.16 | CDMA |  | **PPT** |  |  |

**CB: CHALK&BOARD PPT: POWER POINT PRESENTATION**