**Lesson Plan Form**

**Course Title: Digital and Satellite Communication**

**Course Code: ETE-452**

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| **Title:** Low Earth Orbit and Non-Geostationary Satellite Systems. | | | **Ref. No:** ETE 452/20 | |
| **Target Population:** 25 | | | **Duration :** 90 minutes | |
| **Aims/Rationale:** The aim of this course is to introduce the students to the recent trends towards the use of communications satellites in low earth orbits and in other non-geostationary orbits. This lesson is shown why the use of such orbits could offer the possibility of satellite communications from miniature hand-held earth terminals. | | | | |
| **Learning Outcomes:** At the end of the session participant will be able to :   1. Understand the Orbit Considerations. 2. Coverage and Frequency Considerations. | | | | |
| **Content** | **Method or Technique** | **Resource or Aid** | | **Time** |
| **Introduction:** Welcome address  Rapport building  Bridging topic  Layout/ content outline  Attendance  Pre-assessment | Lecture  Q/A | W/B | | 10 minutes |
| **Development:**  **Section-A**  Introduction  Orbit Considerations- Equatorial Orbits, Inclined Orbits, Elliptical Orbits, Molniya Orbit , Radiation Effects, Sun synchronous Orbit.  **Section-B**  Coverage and frequency considerations.  General aspects.  Frequency Band.  Number o Beams per Coverage.  Off-axis Scanning.  **Section-C**  Determination of Optimum Orbital Altitude.  Radiation Safety and satellite Telephones.  . | Lecture  Discussion  Do  Do | W/B  MMP  Video | | 25 minutes  25 minutes  20 minutes  [[ |
| **Conclusion:**  Recap main points  Feedback & answer  Assessment of LOs  Reference  Forward plan | Lecture  Discussion  Q/A |  | | 10 minutes |
| E**quipment & aids:** Optional | | | | |