**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.
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| **Content** | **Method or Technique** | **Resource or Aid** | **Time** |
| **Introduction:** Welcome addressRapport buildingBridging topicLayout/ content outlineAttendancePre-assessment | LectureQ/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.. | LectureDiscussionDoDo | W/BMMPVideo | 25 minutes25 minutes20 minutes[[ |
| **Conclusion:**Recap main pointsFeedback & answerAssessment of LOsReferenceForward plan | LectureDiscussionQ/A |  | 10 minutes |
| E**quipment & aids:** Optional |