**Lesson Plan Form**

**Course Title:** Digital and Satellite Communication

**Course Code:** ETE-452

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| **Title:** System Design Example (KU Band). | | | **Ref. No**: ETE 452/09 | |
| **Target** Population: 25 | | | **Duration:**90 minutes | |
| **Aims/Rationale:** To teach the students about the system design example and also teach the different parameters which are included to design a satellite. The goal of systems design is to build a system that is effective, reliable, and maintainable. A system is effective if is satisfies the defined requirements and constrains. The system also must be accepted by users use it to support the organization’s business objectives. | | | | |
| **Learning Outcomes:** At the end of the session participant will be able to :   1. Understand the importance of System Design. 2. Understand how to design Ku Band Uplink and Downlink system. 3. Rain Effects at Ku band. | | | | |
| **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**  Ku-Satellite parameters  Transmitting and Receiving Ku-Band earth station.  **Section-B**  System Design Example  Ku-Band Uplink Design  Ku-Band Downlink Design  **Section-C**  Rain effects at Ku Band  Summary of Ku-Band link Performance  Personal Communication System Using Low Earth Orbit Satellites. | Lecture  Discussion  Do  Do | W/B  MMP  Video | | 20 minutes  25 minutes  25 minutes |
| **Conclusion:**  Recap main points  Feedback & answer  Assessment of LOs  Reference  Forward plan | Lecture  Discussion  Q/A |  | | 10 minutes |
| **Equipment & aids:** Optional | | | | |