**Lesson Plan Form**

 **Course Title**: Digital Signal Processing

 **Course code:** ETE321

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| Title: **Convolutions of Discrete Time Signal**  | Ref. No: **ETE 321/07** |
| Target Population: **25** | Duration:**90 minutes** |
| Aims/Rationale: **1. To study convolution of discrete-time signals.****2. To learn how to implement the operation using MATLAB.** |
| Learning Outcomes: **At the end of the session participant will be able to :**1. **Understand the Definition and basic functions of convolution of Discreet Time signal.**
2. **Response of LTI Systems to Arbitrary Inputs: The Convolution Sum.**
3. **Draw the Graphical computation of convolution.**
4. **Understand the Properties of Convolution Systems.**
5. **Uses of convolution system.**
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| **Content** | Method or Technique | Resource or Aid | Time |
| **Introduction:****Rapport****Link****Importance/rationale****Pre-assessment****Layout/ content outline** | **Lecture** **Q/A** | **W/B** |  **10 minutes** |
| Development:Section-A**Definition of convolution of discrete time signal.****Equation of convolution function and explanation.**Section-B**Properties of convolution of discrete time signal.**Section-C**Mathematical proved of the Properties of convolution****Graphically representation by using MATLAB.**Section-D**Computation of Correlation Sequences.** |  **Lecture****Discussion** **Do** **Do** **Do** | **W/B****MMP****Video****W/B****MMP** **Video** |  **15 minutes** **25 minutes** **25 minutes** **15 minutes** |
| Conclusion:**Recap main points****Feedback & answer****Assessment of LOs****Reference****Forward plan** | **Lecture****Discussion** **Q/A** |  |  **10 minutes** |
| Equipment & aids: **Optional** |