



Lokmanya Tilak Jankalyan Shikshan Sanstha's
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Innovation in Teaching Learning Process
Department of Electronics & Communication Engineering
Session 2024-25

Title of the Innovation in TL Process: Group Discussion (Participative Learning)

1. Name of the Faculty : Ms. S. S. Dhanvijay
2. Subject : Digital Signal Processing (5th sem)
3. Event venue/Date : Classroom /08-08-2024
4. Group Size : 3-4 students/group
5. Students Participants : 42
6. Relevance to Pos : PO1, PO2, PO9, PO10, PO12, PSO1, PSO2

Description : A group of 4 to 5 students is formed among present students. In this class, students sort digital systems into groups based on five basic rules. Linear systems are simple because their outputs can be added together just like their inputs. Time-invariant systems are reliable because they act the same way today as they will tomorrow. Causal systems are practical for real life because they only use current and past information—they don't "predict" the future. Stable systems are safe because they never let an electronic signal grow out of control. Finally, students learned the difference between systems that have memory (storing old data) and those that are memoryless (reacting only to the present).

Outcome: Students demonstrate the ability to mathematically classify discrete-time systems through collaborative analysis, ensuring they can design stable and reliable filters for real-time engineering applications.



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