



MAHARAJA AGRASEN INSTITUTE OF TECHNOLOGY

Department of Electronics & Communication Engineering

Instructional Methods and Pedagogical Initiatives

S.No.	Pedagogical Tool/ Instructional Method	Faculty Name	Subject(s)	Impact
1.	Self-Video Lectures	Prof. Sunil Kumar (Link) Dr. Nitin Sharma (Link) Dr. Amit Saxena (Link)	MPMC Communication Systems Analog Electronics	Enhances self-paced learning and concept clarity.
2.	Role-play Activities	Prof. M.L. Sharma Ms. Kanika Agarwal Ms. Neeraj Dr. Anubha Goel Dr. Sudarshan Kumar	Digital Communication Signals & Systems DLCD DLCD SSMDA	Enhances Technical understanding, communication, teamwork, and professional readiness
3.	Math Tools – Geogebra (Link), Desmos (Link) Rossman/ Chance Applets (Link)	Ms. Kanika Agarwal Dr. Rajni	PSLP, SNS SSMDA	Helps visualize mathematical concepts better and solve problems interactively.
4.	Blogs	Mr. Vaibhav Nijhawan (Link) Dr. Rajni Gulati (Link)	Pattern Recognition SSMDA	Enhances creativity, technical writing, and research skills.

5.	Research Paper Discussion	Dr. Preeti Goyal (Link) Dr. Swati Sharma (Link) Mr. Rohit Lakhane (Link) Ms. Neeraj (Link)	Introduction to ICT Artificial Intelligence Digital Communication Electronics-II	Improves research aptitude, literature understanding, and analytical skills.
6.	Reuse of NPTEL Lectures	Dr. Swati Sharma (Link) Mr. Rohit Uday Lakhane (Link) Dr. Sumedha Gupta (Link) Dr. Preeti Goyal (Link) Dr. Divya Goyal (Link) Dr. Laxya (Link) Ms. Shalu (Link)	DSP Digital Communication Digital Communication Artificial Intelligence Introduction to IOT Lowpass VLSI Design VLSI Design	Supplements lectures with high-quality expert resources.
7.	Lab Simulations	Dr. Amit Saxena (Virtual TCAD) Dr. S. K. Kundu (Multisim) Ms. Neeraj (LTspice) Mr. Rohit Lakhane (Scilab) Ms. Shalu (Tanner , TCAD)	Fabrication Technology Analog Electronics Electronics-II Digital Communication Low Power VLSI Design	Strengthens practical skills through virtual experiments.
8.	Game-Based & Problem-solving Activity	Dr. Preeti Goyal Dr. Anamika Jain Ms. Neeraj Dr. Neelu Nagpal Ms. Kanika Agarwal	Artificial Intelligence VHDL Programming DLCD Control Systems PSLP	Increases student engagement, fun-based learning, concept retention.
9.	Technical Presentation	Dr. Anubha Goel Mr. Rohit Uday Lakhane Dr. Sumedha Gupta Dr. Swati Sharma Dr. Preeti Goyal	WSN Digital Communication Electronics-II Artificial Intelligence Artificial Intelligence	Develops communication skills and deep understanding.

		Ms. Shalu Jindal	WSN	
10.	Case Study	Mr. Binay Kumar Singh Dr. Amit Saxena Dr. S. K. Kundu Mr. Rohit Uday Lakhane Mr. Vaibhav Nijhawan Dr. Laxya	MPMC Fabrication Technology Microwave Engineering Digital Communication Pattern Recognition Low Power VLSI Design	Improves critical thinking and application of concepts to real-world problems.
11.	Flipped Learning	Dr. Preeti Goyal Dr. Anubha Goel Dr. Swati Sharma Ms. Neeraj Ms. Shalu Dr. Divya Goyal Dr. Sumedha Gupta Dr. Anamika Jain Dr. Laxya	Artificial Intelligence WSN Artificial Intelligence Electronics-II VLSI, WSN Introduction to IOT Digital Communication Semiconductor Devices Low Power VLSI Design	Promotes active learning, pre-class preparation, and critical thinking.
12.	Online Quiz	Dr. Preeti Goyal Mr. B.K. Singh Mr. Vaibhav Nijhawan Dr. Sumedha Gupta Ms. Kanika Agarwal	Artificial Intelligence MPMC Digital Image Processing Digital communication PSLP	Promotes active learning, quick self-assessment, and better retention of concepts.
13.	Group Discussion	Dr. Anubha Goel Ms. Shalu Dr. Swati Sharma	Electronics-II WSN, VLSI DSP	Enhances peer learning, communication, and team collaboration.

