Online FDP on
5G & B5G Wireless Technologies with MATLAB Practice
July 25-August 5, 2022
Program Schedule

	July 23, 2022 (Saturday)
12:00 PM - 12:30 PM	Zoom and MATLAB Test Session
	July 25, 2022 (Monday)
11:00 AM – 11:15PM	Inauguration of the FDP
11:15 AM – 12:45 PM	Lecture 1: Introduction to 5G and B5G Communication Technologies (Dr. Matadeen Bansal)
03:30 PM – 05:30 PM	Lab Session 1: Introduction to MATLAB Programming for Simulation and Analysis of Communication Systems (Dr. Shikha Maurya)
	July 26, 2022 (Tuesday)
02:00 PM – 3:30 PM	Lab Session 2: Introduction to MATLAB Programming for Simulation and Analysis of Communication Systems Continued (Dr. Shikha Maurya)
03:30 PM – 05:00 PM	Lecture 2: Algorithms and applications for Visible Light Communications for B5G (Prof. Vimal Bhatia, IITI)
06:30 PM – 07:00 PM	Quiz-1
	July 27, 2022 (Wednesday)
11:00 AM – 12:30 PM	Lab Session 3: Generation of Random Variables and Channel Fading Modes using MATLAB (Dr. Matadeen Bansal)
03:30 PM – 05:00 PM	Lecture 3: Analysis of Digital Modulation Schemes (Dr. Matadeen Bansal)
	July 28, 2022 (Thursday)
10:00 AM – 11:00 PM	Lab Session 4: MATLAB-Based Analysis of Digital Modulation Schemes (Dr. Matadeen Bansal)
11:00 AM – 12:30 PM	Lecture 4: BER Performance Analysis of N-LoS Visible Light Communication (Dr. Vipul Dixit)
03:30 PM – 05:00 PM	Lab Session 5: MATLAB Based BER Performance Analysis of N-LoS Visible Light Communication (Dr. Vipul Dixit)
	July 29, 2022 (Friday)
11:00 AM – 12:30 PM	Lecture 5: Semantic Communication for 6G (Prof. Neetesh Purohit, IIITA)
03:30 PM – 05:00 PM	Lecture 6: MMSE Channel Estimation (Dr. Matadeen Bansal)
	July 30, 2022 (Saturday)
11:00 AM – 12:30 PM	Lecture 7: Capacity of MIMO channels (Dr. Matadeen Bansal)
03:30 PM – 05:30 PM	Lab Session 6: MATLAB-Based Capacity Analysis of MIMO channels (Dr. Matadeen Bansal)
06:30 PM – 07:00 PM	Quiz-2
	July 31, 2022 (Sunday)
	No Lectures
	August 01, 2022 (Monday)
11:00 AM – 12:30 PM	Lecture 8: Orthogonal Frequency Division Multiplexing (OFDM) Technology (Dr. Matadeen Bansal)
03:30 PM – 05:00 PM	Lab Session 7: OFDM System Design, Simulation and Analysis using MATLAB (Dr. Matadeen Bansal)
06:30 PM – 07:00 PM	Quiz-3
	August 02, 2022 (Tuesday)
11:00 AM – 12:30 PM	Lecture 9: Outage analysis of NOMA-based cooperative relay systems with imperfect SIC (Dr. Matadeen Bansal)
03:30 PM – 05:30 PM	Lab Session 8: MATLAB-Based Simulation and Outage analysis of NOMA-based cooperative relay systems with imperfect SIC (Mr. Shailendra Singh)
	August 03, 2022 (Wednesday)
11:00 AM – 12:30 PM	Lecture 10: Fading Channels for the 5G Networks (Dr. Atul Kumar, IIITDMJ)
03:30 PM – 05:00 PM	Lab Session 9: MATLAB-Based Simulation of Fading Channels for the 5G Networks (Dr. Atul Kumar, IIITDMJ)
	August 04, 2022 (Thursday)

11:00 AM – 12:30 PM	Lecture 11: Physical Layer Security in Future Wireless Communications: Opportunities and Challenges (Dr. Mahendra Shukla, LNMIT Jaipur)
03:30 PM – 05:30 PM	Lab Session 10: NOMA Performance Evaluation using MATLAB (Mr. Shailendra Singh)
06:30 PM – 07:00 PM	Quiz-4
	August 05, 2022 (Friday)
11:00 AM – 12:30 PM	Lecture 12: Wireless Communication Through Intelligent Reflecting Surfaces (Dr. Suneel Yadav, IIITA)
03:30 PM – 05:00 PM	Lab Session 11: Wireless Communication Through Intelligent Reflecting Surfaces (Dr. Suneel Yadav, IIITA)
05:00 PM – 05:15 PM	Valedictory Session