

Maulana Azad National Institute of Technology, Bhopal – 462003
Electronics and Communication Engineering Department

M Tech in Digital Communication

SCHEME OF STUDY (January 2021)

First Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
MTH 101 DC	Computational Techniques	3	-	-	3
DC 102	Digital Signal Processing & It's Applications	3	-	-	3
DC 103	Digital Communication Techniques	3	-	-	3
DC 104	Micro strip Antenna Design	3	-	-	3
	Elective-1 (A)	3	-	-	3
	Elective-2 (B)	3	-	-	3
DC 105	Lab-I (Communication System Design Lab-I)	-	-	2	1
DC 106	Seminar-I	-	-	2	1
DC 107	Communication Skills NPTEL/MOOC	2	-	-	2
Total Hours: 24 Total Credits: 22		Total Semester Credits			22

Second Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
DC 201	Detection and Estimation Theory	3	-	-	3
DC 202	Optical Communication	3	-	-	3
DC 203	Digital Image Processing	3	-	-	3
	Elective-3 (A)	3	-	-	3
	Elective-4 (A)	3	-	-	3
	Elective-5 (C)	3	-	-	3
DC 204	Laboratory – II (Communication System Design Lab-II)	-	-	2	1
DC 205	Research Methodology, Technical Report and Paper Writing	-	2	-	2
DC 206	Seminar-II	-	-	2	1
Total Hours: 24 Total Credits: 44		Total Semester Credits			22

Third Semester:

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
DC 301	Dissertation Phase-I	-	-	32	16
Total Hours: 32 Total Credits: 60		Total Semester Credits			16

Fourth Semester

Course No.	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
DC 401	Dissertation Phase-II	-	-	40	20
Total Hours: 40 Total Credits: 80		Total Semester Credits			20

List of Electives A		List of Electives B	
DC501	Signal Theory	VE102	VLSI Design
DC502	Mobile Communication	VE103	Computer Aided Design of Digital Systems
DC503	Optical Networks	VE104	Embedded Systems
DC504	Video Signal Processing	VE501	Digital System Design
DC505	Statistical Signal processing	VE502	Mixed Signal Design
DC506	Satellite Communication	VE503	Design for Testability
DC507	Modern Telecom Switching Systems	VE504	Design of Semiconductor Memories
DC508	Data Compression & Cryptography	VE505	CMOS Active Filter Design
DC509	Wireless Communication	VE506	Design of Analog IC
DC510	Microwave Communication	VE507	CMOS RF Circuit Design
DC511	Computer vision and pattern recognition	VE508	Device Modeling and Simulation
DC512	Communication Networks	VE509	Physical Design Automation
DC513	Information Theory and Coding	VE510	High Speed System Design
DC514	Multi rate Signal Processing	VE516	Operation Research
DC515	Optimization Techniques	VE517	Wavelet Transforms
DC516	Fuzzy Logic		
DC517	Neural Networks	List of Electives C	
DC518	Queuing Theory	EN202	Solid Waste Management
DC519	Biomedical Signal Processing	GE203	Reinforced Soil Structures
		GI201	Basic Concepts of GIS
		HY201	Characteristics of Hydraulic Machines
		ST203	Theory of Plates & Shells
		TR201	Highway Construction & Maintenance
		WR203	Ground Water Engineering
		ID203	Advanced Product Design
		IT202	Failure Analysis & Prevention
		AM202	Advanced Composite Materials
		SV203	Theory of Vibration II
		TH202	Thermal Environmental Engineering
		PS201	Modern Control Systems
		ED202	Advanced Control Systems
		AC203	Optimization Techniques
		AI202	Deep Learning
		CN203	Graph Theory & Network Algorithm
		IS201	Applied Cryptography
		MS202	Deformation Behavior of Materials
		CH203	Industrial Safety & Hazard Management
		HS1204	Housing Finance
		UP1203	Infrastructure Planning
		NT201	Nano Structures Characterization Techniques
		BI203	Optimization Techniques & Graph

		CSB201	Mathematical Modeling & Simulation of Biological Systems
		RE202	Solar Energy Systems
		ES202	Energy Management in Buildings
		BIO201	Cheminformatics & Drug Designing

Group A: Program Electives.

Group B: Departmental Electives.

Group C: Open Electives.
{It may also be opted as NPTEL Course after approval from Chairman Senate}