

Maulana Azad National Institute of Technology, Bhopal – 462003
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

SCHEME FOR B. TECH. (ECE)
(Revised December 2020)

Third Semester:

Course Number	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
MTH 4301	Mathematics-3	3	1	-	4
EC 4302	Electronic Circuits and Devices	3		-	3
EC 4303	Digital Circuit Design (Basic design Principles)	3	1	-	4
EC 4304	Network Analysis and Synthesis	3		-	3
EC 4305	Instrumentation and Control	3		-	3
EC 4306	Lab-1 (Network Lab)	-	-	2	1
EC 4307	Lab-2 (Instrumentation & Control)	-	-	2	1
EC 4308	Circuit Design Lab-1	-	-	4	2
EC 4301	Professional practice1	-	1	-	1
EC 4302	Minor-1(Electronic circuits and devices)	3	-	-	3* (Extra)
Total Hours = 26		15	3	8	22
Total Credits (Cumulative)					67

* (Minor-1 Extra for other dept. not for parent)

Fourth Semester:

Course Number	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
HUM 4401	Fundamentals of Entrepreneurship	3	1	-	4
EC 4402	Mathematics of Signals & Systems	3	1	-	4
EC 4403	Linear Integrated Circuits	3	-	-	3
EC 4404	Microprocessors and Microcontrollers	3	-	-	3
EC 4405	EM Fields and Transmission Lines	3	-	-	3
EC 4406	Lab-3 (Linear Integrated Circuits)	-	-	2	1
EC 4407	Lab-4 (Microprocessors and Micro Controllers Lab)	-	-	2	1
EC 4408	Circuit Design Lab-2	-	-	4	2
EC 4409	Professional Practice-2	-	1	-	1
EC 4405	Minor-2 (EM Fields and Transmission Lines)	3	-	-	3* (Extra)
Total Hours = 26		15	3	8	22
Total Credits (Cumulative)					89

* (Minor-2 Extra for other dept. not for parent)

Fifth Semester:

Course Number	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
EE 4501	Industrial Electronics	3	1	-	4
CS 4502	Data Structures	3	-	2	4
EC 4503	Communication Systems	3	-	-	3
EC 4504	Digital Signal Processing	3	-	-	3
EC 4505	VLSI Design	3	-	-	3
EC 4506	Lab-5 (Communication Systems Lab)	-	-	2	1
EC 4507	Lab-6 (Digital Signal Processing)	-	-	2	1
EC 4508	Lab-7 (VLSI Design)	-	-	2	1
EC 4509	Project -1 Phase-1	-	-	4	2
EC 4510	Internship/Training/Tour	-	1	-	1
EC 4503	Minor-3 (Communication Systems)	3	-	-	3* (Extra)
Total Hours = 29		15	2	12	23
Total Credits (Cumulative)					112

*(Minor-3 Extra for other dept. not for parent)

Sixth Semester:

Course Number	Subject	Scheme of Studies Periods per week			Total Credits
		L	T	P	
ME 4601	Engineering Management	3	1	-	4
EC 4602	Digital Image Processing	3	1	-	4
EC 4603	Optical Communication	3	-	-	3
EC 4604	Microwave Engineering	3	-	-	3
	Departmental Elective-1 (A)	3	-	-	3
EC 4605	Lab-8 (Digital Image Processing)	-	-	2	1
EC 4606	Lab-9 (Optical communication)	-	-	2	1
EC 4607	Lab-10 (Microwave Engineering)	-	-	2	1
EC 4608	Project -1 Phase 2	-	-	6	3
EC 4603	Minor-4 (Optical Communication)	3	-	-	3* (Extra)
Total Hours = 29		15	2	12	23
Total Credits (Cumulative)					135

*(Minor-4 Extra for other dept. not for parent)

**MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY
BHOPAL – 462003**

REVISED SCHEME FOR BATCH ADMITTED IN 2020

(49th Senate, Item S-49.2022-I-2.7)

Department of Electronics and Communication Engineering

B. Tech. (Electronics and Communication Engineering)

SEVENTH SEMESTER

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
HUM 4701	Engineering Economics & IPR	3	-	-	3
EC 4702	Antenna & Wave Propagation	3	-	-	3
EC 4703	Wireless Communication	3	-	-	3
	Department Elective-2(A)	3	-	-	3
	Department Elective-3(A)	3	-	-	3
	Open Elective 1 (C)	3	-	-	3
EC 4704	Antenna & Wireless Communication Lab	-	-	2	1
EC 4705	Project 2 Phase 1	-	1	2	2
EC 4706	Educational Tour & Training.	-	-	2	1
EC 4703	Minor-5 Wireless Communication	3	-	-	3*
Total Hours =25		18	1	6	22

* (Minor-5 Extra for other dept. not for parent)

EIGHTH SEMESTER

Course Code	Course Name	Scheme of Studies Periods per week			Credits
		L	T	P	
	Department Elective-4(A)	3	-	-	3
	Department Elective-5(A)	3	-	-	3
	Department Elective-6(A)	3	-	-	3
EC 4801 / EC 4802	Project 2 Phase 2 / Internship	-	-	12	6
EC 4803	General Proficiency	-	-	-	1
	Minor-6 Any of the Electives from above	3	-	-	3*
Total Hours =21		9	-	12	16

* (Minor-6 Extra for other dept. not for parent)

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List of Electives

Department Electives: Group-A
EC 501 Fuzzy Logic
EC 502 VLSI Technology
EC 503 Computer Networks
EC 504 Information Theory and Coding
EC 505 Digital System Design
EC 506 Satellite Communication
EC 507 Design of Analog IC
EC 508 Broadband Optical Communication
EC 509 Computer Aided Design of Digital Systems
EC 510 Telecom Switching System
EC 511 Computer Vision and Pattern Recognition
EC 512 Optimization Techniques
EC 513 Neural Networks
EC 514 Introduction to IOT
EC 515 Internet Technology
EC 516 Mobile Communication
EC 517 Physical Design Automation
EC 518 RADAR & Navigation Systems
EC 519 Video Signal Processing
EC 520 Computer Engineering
EC 521 Low Power VLSI Design
EC 522 Advance Instrumentation
EC 523 Multirate Signal Processing
EC 524 Micro Electro Mechanical Systems
EC 525 Nano Technology
EC 526 CMOS RF Circuit Design
EC 527 Statistical Signal Processing
EC 528 Biomedical Signal Processing
EC 529 Embedded Systems