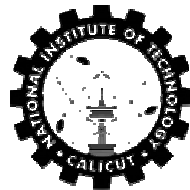

**CURRICULUM OF
B.TECH DEGREE PROGRAMME IN
ELECTRONICS AND COMMUNICATION ENGINEERING**

(Applicable from 2010 Admission onwards)

**DEPARTMENT OF ELECTRONICS AND
COMMUNICATION ENGINEERING**



नमसो मा ज्योतिर्गमय

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

Curriculum of B.Tech degree programme in Electronics and Communication Engineering

First Semester

Sl.No.	Code	Course Title	L	T	P	C	Category
1	MA1001	Mathematics I	3	1	0	3	BS
2	PH1001/CY1001	Physics / Chemistry	3	0	0	3	BS
3	MS1001/ZZ1003	Professional Communication / Basic Electrical Sciences	3	0	0	3	HL/ES
4	ZZ1001/ZZ1002	Engineering Mechanics / Engineering Graphics	3 1	0 0	0 3	3	ES/TA
5	ZZ1004 /EC1001	Computer Programming / Introduction to Electronics Engineering	2	0	0	2	ES/PT
6	ZZ1091/ZZ1092	Workshop I / Workshop II	0	0	3	2	TA
7	PH1091/CY1094	Physics Lab./ Chemistry Lab.	0	0	2	1	BS
8	ZZ1094/ZZ1093/ ZZ1095	OT (Value Education(1), Physical Education(1), NSS(1))	-	-	-	3*	OT
Total credits:							17+3*

**** Branch wise Courses of (BT, CE, CHE, CSE, EE, ECE, ME, PE, EPH)

*Three courses of one credit each is to be credited within the first four semesters.

Second Semester

Sl.No.	Code	Course Title	L	T	P	C	Category
1	MA1002	Mathematics II	3	1	0	3	BS
2	CY1001/PH1001	Chemistry / Physics	3	0	0	3	BS
3	ZZ1003/MS1001	Basic Electrical Sciences/ Professional Communication	3	0	0	3	ES/HL
4	ZZ1002/ZZ1001	Engineering Graphics/ Engineering Mechanics	1 3	0 0	3 0	3	TA/ES
5	EC1001/ ZZ1004	Introduction to Electronics Engineering/ Computer Programming	2	0	0	2	PT/ES
6	CY1094/PH1091	Chemistry Lab./ Physics Lab	0	0	2	1	BS
7	ZZ1092/ZZ1091	Workshop II / Workshop I	0	0	3	2	TA
Total Credits:							17

**** Branch wise Courses of (BT, CE, CHE, CSE, EE, ECE, ME, PE, EPH)

*Three courses of one credit each is to be credited within the first four semesters.

Third Semester

Sl.No.	Code	Course Title	L	T	P	C	Category
1	MA 2001	Mathematics III	3	1	0	3	BS
2	EC 2011	Network Theory	3	0	0	3	PT
3	EC 2012	Logic Design	4	0	0	4	PT
4	EC 2013	Solid State Devices	4	0	0	4	PT
5	EC 2014	Signals and Systems	3	0	0	3	PT
6	EC 2091	Basic Electronics Lab	0	0	3	2	PT
7	EC 2092	Electronics Workshop	0	0	3	2	PT
							Total Credits : 21

Fourth Semester

1	MA 2002	Mathematics IV	3	1	0	3	BS
2	EC 2021	Electronic Circuits - I	4	0	0	4	PT
3	EC 2022	Electromagnetic Field Theory	4	0	0	4	PT
4	EC 2023	Microprocessors and Microcontrollers	3	0	0	3	PT
5	EC 2024	Fundamentals of Communication	4	0	0	4	PT
6	EC 2093	Electronic Circuits Lab - I	0	0	3	2	PT
7	EC 2094	Logic Design Lab	0	0	3	2	PT
							Total Credits : 22

Fifth Semester

1	EC 3011	Electronic Circuits - II	4	0	0	4	PT
2	EC 3012	Digital Communication	4	0	0	4	PT
3	EC 3013	Digital Signal Processing	3	0	0	3	PT
4	EC 3014	Control systems	3	0	0	3	PT
5		Elective 1	3	0	0	3	PT
6	EC 3091	Electronic Circuits Lab – II	0	0	3	2	PT
7	EC 3092	Microprocessors and Microcontrollers Lab	0	0	3	2	PT
							Total Credits : 21

Sixth Semester

1	ME 4104	Principles of Management	3	0	0	3	HL
2	EC 3021	Computer Organization & Architecture	3	0	0	3	PT
3	EC 3022	Information Theory & Coding	4	0	0	4	PT
4	EC 3023	Computer Networks	3	0	0	3	PT
5		Elective 2	3	0	0	3	PT
6	EC 3024	Environmental Studies for Electronics Engineers	3	0	0	3*	OT
7	EC 3093	Analog Communication Lab	0	0	3	2	PT
8	EC 3099	Mini Project	0	0	3	1	PT
Total Credits : 19+3*							

Seventh Semester

1	MS 4003	Economics	3	0	0	3	HL
2	EC 4011	Fundamentals of Wireless Communication	4	0	0	4	PT
3		Elective 3	3	0	0	3	PT
4		Elective 4	3	0	0	3	PT
5	EC 4091	Digital Signal Processing Lab	0	0	3	2	PT
6	EC 4092	Digital Communication Lab	0	0	3	2	PT
7	EC 4098	Major Project	0	0	6	3	PT
Total Credits : 20							

Eighth Semester

1		Elective 5	3	0	0	3	PT
2		Elective 6	3	0	0	3	PT
3		Elective 7	3	0	0	3	PT
4		Elective 8	3	0	0	3	PT
5	EC 4094	Seminar	0	0	3	1	PT
6	EC 4099	Major Project	0	0	6	4	PT
Total Credits : 17							

Total Credits = 154 + 6 (OT) = 160

LIST OF ELECTIVES

Sl.No.	Code	Course Title	Credit
1	EC 3031	Television Engineering	3
2	EC 3032	Power Electronics	3
3	EC 3033	Microelectronics Technology	3
4	EC 3034	Modeling and Testing of Digital Systems	3
5	EC 3035	MOS Device Modeling	3
6	EC 3036	VLSI Circuits and Systems	3
7	EC 3037	Active Network Synthesis	3
8	EC 3038	Embedded Systems	3
9	EC 3039	Multi Rate Systems	3
10	EC 3040	Digital Image Processing	3
11	EC 4031	Microwave Communication	3
12	EC 4032	Speech Processing	3
13	EC 4033	Wavelet Theory	3
14	EC 4034	RF Circuits	3
15	EC 4035	High Speed Digital Circuits	3
16	EC 4036	Antenna Theory	3
17	EC 4037	Analog MOS Integrated Circuits	3
18	EC 4038	High Speed Semiconductor Devices	3
19	EC 4039	Nanoelectronics	3
20	EC 4040	Opto-electronic Communication Systems	3
21	EC 4041	Communication Switching Systems	3
22	EC 4042	Radar Engineering	3
23	EC 4043	Cryptography: Theory and Practice	3
24	EC 4044	Opto-electronic Devices and Systems	3
25	EC 4045	Signal Compression	3
26	EC 4046	Microwave Devices and Circuits	3
27	EC 4047	Advanced Wireless Communication	3
28	EC 4048	Signal Estimation and Detection	3
29	EC 4049	Architecture of Advanced Processors	3
30	EC 4050	Radiation and Propagation	3
31	EC 4051	Electronic Instrumentation	3
32	EC 4052	State of the art and Future Memories	3
33	EC 4053	Reliability of Semiconductor Devices	3
34	EC 4054	Silicon on Insulator and Advanced MOSFET based structures	3

CATEGORY-WISE CREDITS

Category	Credits
BS	20
HL	9
ES	8
TA	7
PT	110
OT	6
Total	160