



VidyaJyothi Institute of Technology

(An Autonomous Institution)
(Accredited by NAAC, Approved by AICTE New Delhi & Permanently Affiliated to JNTUH)
Aziznagar Gate, C.B. Post, Hyderabad-500 075

R18

Department of Electronics and Communication Engineering

COURSE STRUCTURE FOR B.TECH I YEAR

I B.Tech I Sem ECE:

S.No.	Subject Code	Course Title	L	T	P	Credits
1.	A21002	Mathematics-I	3	1	0	4.0
2.	A21003	Applied Physics	3	1	0	4.0
3.	A21201	Basic Electrical Engineering	0	0	3	1.5
4.	A21301	Engineering Graphics & Modeling	3	0	0	3.0
5.	A21501	Programming For Problem Solving-I	0	0	2	1.0
6.	A21082	Applied Physics Lab	1	0	3	2.5
7.	A21281	Basic Electrical Engineering Lab	0	0	2	1.0
8.	A21081	English Language Skills Lab (ELSL)	2	0	0	2.0
9.	A21581	Programming For Problem Solving Lab-I	0	0	2	1.0
Total number			12	2	12	20

I B.Tech II Sem ECE:

S.No.	Subject Code	Course Title	L	T	P	Credits
1.	A22005	English	3	1	0	4.0
2.	A22006	Mathematics-II	3	1	0	4.0
3.	A22008	Chemistry	0	0	3	1.5
4.	A22502	Programming For Problem Solving-II	2	0	0	2.0
5.	A22084	English Communication Skills Lab (ECSL)	0	0	2	1.0
6.	A22086	Chemistry Lab	2	0	0	2.0
7.	A22382	Engineering Workshop	0	0	2	1.0
8.	A22582	Programming For Problem Solving Lab-II	0	1	3	2.5
Total number			10	3	10	18



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II B.Tech I Sem ECE:

S.No.	Course Category	Course Title	L	T	P	Credits
1.	A23011	Mathematics-III (Complex Analysis and Fourier Transforms)	3	0	0	3.0
2.	A23503	OOPS Through JAVA	3	0	0	3.0
3.	A23401	Electronic Devices and Circuits	3	0	0	3.0
4.	A23402	Probability Theory and Stochastic Processes	3	0	0	3.0
5.	A23403	Signals and Systems	3	0	0	3.0
6.	A23404	Network Analysis and Transmission Lines	3	0	0	3.0
7.	A23481	Electronic Devices and Circuits Laboratory	0	0	2	1.0
8.	A23482	Basic Simulation Laboratory	0	0	2	1.0
9.	A23MC2	Gender Sensitization	2	0	0	0
Total number			20	0	4	20

II B.Tech II Sem ECE:

S.No.	Course Category	Course Title	L	T	P	Credits
1.	A24407	Switching Theory and Logic Design	2	1	0	3.0
2.	A24408	Electrical Technology	3	0	0	3.0
3.	A24015	Professional Communications	2	0	0	2.0
4.	A24409	Analog and Digital Communications	3	1	0	4.0
5.	A24410	Analog and Pulse Circuits	3	0	0	3.0
6.	A24411	Electromagnetic Waves	3	0	0	3.0
7.	A24485	Analog & Digital Communications Laboratory	0	0	2	1.0
8.	A24486	Analog and Pulse Circuits Laboratory	0	0	2	1.0
9.	A24MC2	Environmental Science	2	0	0	0
Total number			18	2	4	20



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COURSE STRUCTURE FOR B.TECH III YEAR

III B.Tech I Sem ECE:

S.No	Course Category	Course Title	L	T	P	Credits
1	A25218	Control Systems	3	0	0	3.0
2	A25412	Microprocessors & Microcontrollers	2	1	0	3.0
3	A25413	Linear & Digital IC Applications	3	0	0	3.0
4	A25414	Antenna And Propagation	3	0	0	3.0
Professional Elective-1						
5	A25415	1. Computer Architecture	3	0	0	3.0
	A25416	2. Information Theory and Coding				
	A25417	3. Introduction to Mems				
Open Elective-1						
6	A25418	1. Introduction to Microcontrollers	3	0	0	3.0
	A25419	2. Basic Electronics				
7	A25487	Microprocessor and Microcontrollers Laboratory	0	0	2	1.0
8	A25488	Linear & Digital IC App. Laboratory	0	0	2	1.0
9	A25TP2	Personality Development & Behavioral Skills	2	0	0	1.0
Total Number			19	1	4	21

III B.Tech II Sem ECE:

S.No	Course Category	Course Title	L	T	P	Credits
1	A26017	Managerial Economics & Financial Analysis	3	0	0	3.0
2	A26420	Digital Signal Processing	2	1	0	3.0
3	A26421	Microwave Engineering	2	1	0	3.0
4	A26422	Data Communication and Networking	2	1	0	3.0
Professional Elective-2						
5	A26423	1. Digital Signal Processors and Architectures	3	0	0	3.0
	A26424	2. Modelling and Simulation using MATLAB				
	A26425	3. Optical Communications				
Open Elective-2						
6	A26426	1. Basic Electronic Instrumentation	3	0	0	3.0
	A26427	2. Consumer Electronics				
7	A26489	Digital Signal Processing Laboratory	0	0	2	1.0



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8	A26088	Adv. Communication Skills Laboratory	0	0	2	1.0
9	A26TP2	Quantitative Methods & Logical Reasoning	2	0	0	1.0
Total Number			17	3	4	21

IV B.Tech I Sem ECE: COURSE STRUCTURE

S.No.	Course Category	Course Title	L	T	P	Credits
1	A27429	Embedded System Design	2	1	0	3.0
2	A27430	VLSI Design	2	1	0	3.0
3	Professional Elective-3		3	0	0	3.0
	A27431	1. Digital Image Processing				
	A27432	2. Cellular and Mobile Communications				
4	Professional Elective-4		3	0	0	3.0
	A27434	1. Biomedical Instrumentation				
	A27435	2. Satellite Communications				
5	Open Elective-3		3	0	0	3.0
	A27437	1. Automotive Electronics				
	A27438	2. Introduction to Communication Engineering				
6	A27491	Embedded & VLSI Laboratory	0	0	2	1.0
7	A27492	Antenna and Microwave Engineering Laboratory	0	0	2	1.0
8	A274P1	Industry Oriented Mini Project	0	0	0	3.0
Total Number			13	2	4	20

IV B.Tech II Sem ECE:

S.No.	Course Category	Course Title	L	T	P	Credits
1	A28439	Electronic Measurements & Instrumentation	3	0	0	3.0
2	A28440	Wireless Communications and Networks	3	0	0	3.0
3	A284TS	Technical Seminar	0	0	0	2.0
4	A284CV	Comprehensive Viva Voce	0	0	0	2.0



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5	A284P2	Major Project	0	0	0	10.0
Total number			6	0	0	20



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ELECTRONICS AND COMMUNICATION ENGINEERING

I YEAR I SEMESTER

COURSE STRUCTURE

Subject Code	Subject Name	L	T	P/D	Total Credits
A11001	English-I	2	0	0	2
A11002	Mathematics – I	4	1	0	3
A11003	Engineering Physics-I	3	1	0	3
A11502	C Programming – I	3	1	0	3
A11201	Electrical Circuits	3	1	0	3
A11004	Engineering Chemistry	3	1	0	3
A11081	English Language Communication Skills Lab-I	0	0	3	2
A11582	C Programming Lab – I	0	0	3	2
A11083	Engineering Physics and Chemistry Lab	0	0	3	2
A11584	IT & Engineering Workshop	0	0	3	2
	Total	18	05	12	25

I YEAR II SEMESTER

COURSE STRUCTURE

Subject Code	Subject Name	L	T	P/D	Total Credits
A12005	English-II	2	0	0	2
A12306	Engineering Graphics	2	3	0	3
A12007	Engineering Physics-II	3	1	0	3
A12006	Mathematics – II	4	1	0	3
A12009	Mathematics – III	3	1	0	3
A12503	C Programming – II	3	1	0	3
A12085	English Language Communication Skills Lab-II	0	0	3	2
A12584	C Programming Lab – II	0	0	3	2
A12088	Engineering Physics Lab	0	0	3	2
	Total	17	7	9	23

II YEAR I SEMESTER (R15)**COURSE STRUCTURE**

Subject Code	Subject Name	L	T	P/D	Total Credits
A13012	Mathematics – IV	3	1	0	3
A13401	Electronic Devices and Circuits	3	1	0	3
A13402	Signals and Systems	4	0	0	4
A13403	Switching Theory and Logic Design	3	0	0	3
A13404	Electronic Measurements & Instruments	3	0	0	3
A13405	Probability Theory and Stochastic Processes	4	0	0	4
A13481	Electronic Devices and Circuits Lab	0	0	3	2
A13482	Basic Simulation Lab	0	0	3	2
A13MC1	Disaster Management	2	0	0	0
	Total	22	2	6	24

II YEAR II SEMESTER (R15)**COURSE STRUCTURE**

Subject Code	Subject Name	L	T	P/D	Total Credits
A14211	Principles of Electrical Engineering	3	1	0	3
A14409	Electronic Circuit Analysis	4	0	0	4
A14410	Pulse and Digital Circuits	4	0	0	4
A14411	Electromagnetic Theory and Transmission Lines	4	0	0	4
A14412	Digital System Design	3	1	0	3
A14016	Environmental Science	2	0	0	2
A14485	ECA Lab	0	0	3	2
A14486	PDC Lab	0	0	3	2
A14MC2	IPR&CL	2	0	0	-
	Total	22	2	6	24

III YEAR I SEMESTER (R15)
COURSE STRUCTURE

Subject Code	Subject Name	Lectures			Credits
		L	T	P	
A15413	Analog Communications	4	0	0	3
A15414	Linear & Digital IC Applications	3	1	0	4
A15415	Control Systems Engineering	3	1	0	3
	Professional Elective – 1:	4	0	0	3
A15416	1. Computer Organization and Architecture				
A15417	2. Soft Computing				
A15418	3. Biomedical Instrumentation				
	Open Elective – 1:	4	0	0	3
A15419	1. Introduction to Microcontrollers & Applications				
A15420	2. Basic Electronics & Instrumentation				
A15487	Analog Communications Lab	0	0	3	2
A15488	Linear & Digital IC Applications Lab	0	0	3	2
A15089	Advanced English Language & Communication Skills Lab	0	0	3	2
MC-III	Quantitative Methods & Logical Reasoning	2	0	0	2
Total		20	2	9	24

III YEAR II SEMESTER (R15)
COURSE STRUCTURE

Subject Code	Subject Name	Lectures			Credits
		L	T	P	
A16018	Managerial Economics and Financial Analysis	4	0	0	3
A16422	VLSI Design	3	1	0	3
A16423	Digital Signal Processing	3	1	0	3
A16424	Microprocessors and Microcontrollers	4	0	0	3
	Professional Elective – 2:	4	0	0	3
A16425	1. Optical Communications				
A16426	2. Programming in MATLAB				
A16427	3. Satellite & Wireless Communications				
	Open Elective – 2:	4	0	0	3
A16428	1. Fundamentals of Embedded Systems				
A16429	2. Principles of Communications				
A16489	Microprocessors and Microcontrollers Lab	0	0	3	2
A16490	Digital Signal Processing & e-CAD Lab	0	0	3	2

	Personality Development & Behavioural Skills	2	0	0	2
Total		24	2	6	24

IV B.Tech I Sem ECE:

Subject Code	Subject Name	Lectures			Credits
		L	T	P	
A17430	Digital Communication	4	0	0	3
A17431	Embedded System Design	4	0	0	3
A17432	Antennas & Microwave Engineering	3	1	0	3
	Professional Elective – 3:	4	0	0	3
A17433	1. Digital Image Processing				
A17434	2. Spread Spectrum Communications				
A17435	3. Multimedia and Signal Coding				
	Professional Elective – 4:	4	0	0	3
A17436	1. DSP Architectures				
A17437	2. Telecommunication Switching Systems and Networks				
A17438	3. Low Power VLSI				
	Open Elective – 3:	4	0	0	3
A17439	1. Introduction to MATLAB				
A17440	2. Circuit Simulation using PSpice				
A17491	Embedded System Design Lab	0	0	3	2
A17492	Microwave Engineering & Digital Communications Lab	0	0	3	2
MP - I	Industry Oriented Mini-Project	-	-	-	2
Total		23	1	6	24

IV B.Tech II Sem ECE:

Subject Code	Subject Name	Lectures			Credits
		L	T	P	
A18441	Cellular and Mobile Communications	4	0	0	3
A18442	Computer Networks	4	0	0	3
A18443	Radar Engineering	3	1	0	3
MP - II	Major Project	0	0	15	10
SM	Seminar	0	0	6	2
CVV	Comprehensive Viva-Voce	-	-	-	3
Total		11	1	21	24

1. _____ ELECTRONICS AND COMMUNICATION ENGINEERING 2013-14
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD.

B. TECH. ELECTRONICS AND COMMUNICATION ENGINEERING

I YEAR

Code	Subject	L	T/P/ D	C
A10001	English	2	-	4
A10002	Mathematics – I	3	1	6
A10003	Mathematical Methods	3	-	6
A10004	Engineering Physics	3	-	6
A10005	Engineering Chemistry	3	-	6
A10501	Computer Programming	3	-	6
A10301	Engineering Drawing	2	3	6
A10581	Computer Programming Lab.	-	3	4
A10081	Engineering Physics / Engineering Chemistry Lab.	-	3	4
A10083	English Language Communication Skills Lab.	-	3	4
A10082	IT Workshop / Engineering Workshop	-	3	4

II YEAR I SEMESTER

Code	Subject	L	T/P/ D	C
A30007	Mathematics - III	4	-	4
A30405	Probability Theory and Stochastic Processes	4	-	4
A30407	Switching Theory and Logic Design	4	-	4
A30204	Electrical Circuits	4	-	4
A30404	Electronic Devices and Circuits	4	-	4
A30406	Signals and Systems	4	-	4
A30482	Electronic Devices and Circuits Lab.	-	3	2
A30481	Basic Simulation Lab.	-	3	2
	Total	24	6	28

II YEAR II SEMESTER

Code	Subject	L	T/P/ D	C
A40215	Principles of Electrical Engineering	4	-	4
A40412	Electronic Circuit Analysis	4	-	4
A40415	Pulse and Digital Circuits	4	-	4
A40009	Environmental Studies	4	—	4
A40411	Electromagnetic Theory and Transmission Lines	4	-	4
A40410	Digital Design using Verilog HDL	4	-	4
A40288	Electrical Technology Lab.	-	3	2
A40484	Electronic Circuits and Pulse Circuits Lab.	-	3	2
	Total	24	6	28

III YEAR I SEMESTER

Code	Subject	L	T/P/ D	C
A50217	Control Systems Engineering	4	-	4
A50516	Computer Organization and Operating Systems	4	-	4
A50418	Antennas and Wave Propagation	4	-	4
A50422	Electronic Measurements and Instrumentation	4	-	4
A50408	Analog Communications	4	-	4
A50425	Linear and Digital IC Applications	4	-	4
A50482	Analog Communications Lab.	-	3	2
A50488	IC Applications and HDL Simulation Lab.	-	3	2
	Total	24	6	28

III YEAR II SEMESTER

Code	Subject	L	T/P/ D	C
A60010	Managerial Economics and Financial Analysis	4	-	4
	Open Elective:	4	-	4
A60018	Human Values and Professional Ethics Disaster Management			
A60017	Intellectual Property Rights			
A60017				
A60420	Digital Communications	4	-	4
A60432	VLSI Design	4	-	4
A60430	Microprocessors and Microcontrollers	4	-	4
A60421	Digital Signal Processing	4	-	4
A60494	Microprocessors and Microcontrollers Lab.	-	3	2
A60493	Digital Signal Processing Lab.	-	3	2
	Total	24	6	28

IV YEAR I SEMESTER

Code	Subject	L	T/P/D	C
A70014	Management Science	4	-	4
A70442	Microwave Engineering	4	-	4
A70515	Computer Networks	4	-	4
A70434	Cellular and Mobile Communications	4	-	4
	Elective -I:	4	-	4
A70436	Digital Image Processing			
A70443	Multimedia and Signal Coding			
A70505	Object Oriented Programming through Java			
	Elective -II:	4	-	4
A70447	Television Engineering			
A70444	Optical Communications			
A70440	Embedded Systems Design			
A70086	Advanced Communication Skills Lab,	-	3	2
A70499	Microwave Engineering and Digital Communications Lab	-	3	2
	Total	24	6	28

IV YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Elective -III:	4	-	4
A80452	Satellite Communications			
A81102	Biomédical Instrumentation			
A80527	Artificial Neural Networks			
	Elective -IV:	4	-	4
A80431	Telecommunication Switching Systems and Networks			
A80450	Radar Systems			
A80449	Network Security			
	Elective -V:	4	-	4
A80454	Wireless Communications and Networks			
A80437	Digital Signal Processors and Architectures			
A80451	RF Circuit Design			
A80087	Industry Oriented Mini Project	-	-	2
A80089	Seminar	-	6	2
A80088	Major Project Work	-	15	10
A80090	Comprehensive Viva	-	-	2
	Total	12	21	28

Note: All End Examinations (Theory and Practical) are of three hours duration.
T-Tutorial L – Theory P – Practical D-Drawing C – Credits

**Jawaharlal Nehru Technological University
Hyderabad**

Electronics & Communication Engineering

IV Year I Semester (R09)

Course Structure

Code	Subject	L	T/P/D	C
57034	Management Science	3	1	3
57035	VLSI Design	4	-	4
57036	Microwave Engineering	3	1	3
57037	Computer Networks	4	1	4
	Elective-I	3	1	3
57038	EMI/EMC			
57039	DSP Processors & Architectures			
57040	Telecommunication Switching Systems			
57041	Digital Image Processing			
	Elective-II	4	1	4
57042	Optical Communications			
57043	Embedded Systems			
57044	Television Engineering			
57045	Multimedia & Signal Coding			
57607	e-CAD & VLSI Lab	-	3	2
57608	Microwave engg. & Digital Communication Lab	-	3	2
	Total	21	11	25

IV Year II Semester (R09)

Course Structure

Code	Subject	L	T/P/D	C
	Elective-III	3	1	3
58024	Cellular and Mobile Communications			
58025	Satellite Communications			
58026	Bio Medical Instrumentation			
58016	Artificial Neural Networks			
	Elective-IV	3	1	3
58027	Internetworking			
58028	Radar Systems			
58029	Spread Spectrum Communications			
58030	Network Security			
	Elective-V	3	1	3
58031	RF Circuit Design			
58032	Wireless Communication & Networks			
58033	Digital Design Through Verilog HDL			
58034	Pattern Recognition			
58613	Industry Oriented Mini Project	0	-	2
58614	Seminar	0	6	2
58615	Project Work	0	15	10
58616	Comprehensive Viva	0	-	2