

### NH-16, Chaitanya Knowledge City, Rajahmundry

### I YEAR I SEMESTER

Sl. No.	Course Code	Course Category	Subject Title		Periods per week		С	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1	201HB101	BSC	Mathematics-I	3	0	0	3	30	70	100
2	201HB102	HSMC	Communicative English	3	0	0	3	30	70	100
3	201HB103a	BSC	Applied Physics	3	0	0	3	30	70	100
4	201CS104	ESC	Problem Solving & Programming in C	3	0	0	3	30	70	100
5	201EC105	ESC	Introduction to Electronics Engineering	3	0	0	3	30	70	100
6	201HB196	MS	Environmental science	2	0	0	0	100	0	100
7	201HB111a	BSC	Applied Physics Laboratory	0	0	3	1.5	50	50	100
8	201CS112	ESC	Problem Solving & Programming in C Laboratory	0	0	3	1.5	50	50	100
9	201ME113a	ESC	Electronic Engineering Workshop	0	0	3	1.5	50	50	100
			TOTAL	17	0	09	19.5	400	500	900
	BSC-7.5 ESC-9 HSMC-3									

Dr. M. Sailaja (University Nominee)

Dr. P. Rafesh Kumar (Subject Expert) Mr. S. Surya Shankar (Industrial Expert)

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Mr. Biswaranjan Barik (Member, BOS) Mrs. K Jyothi (Member, BOS)



### NH-16, Chaitanya Knowledge City, Rajahmundry

## I YEAR - II SEM (GRBT20) (4 SEM)

Sl. Course Code		Course	Subject Title		iods week	-	er Credits	Scheme of Examination Maximum Marks		
No.	Course Code	Category	Subject Title	L	Т	P	Credits	Int.	Ext.	Total
1	201HB201	BSC	Mathemetics-II	3	0	0	3	30	70	100
2	201HB202	BSC	Engineering Chemistry	3	0	0	3	30	70	100
3	201ME203	ESC	Engineering Graphics	1	0	4	3	30	70	100
4	201CS204b	ESC	Data Structure using C	3	0	0	3	30	70	100
5	201EE205	ESC	Basic Electrical and Electronics Engineering	3	0	0	3	30	70	100
6	201HB211	BSC	Engineering Chemistry Laboratory	0	0	3	1.5	50	50	100
7	201HB212	HSMC	Communicative English Laboratory	0	0	3	1.5	50	50	100
8	201EE213	ESC	Basic Electrical and Electronics Engineering Laboratory	0	0	3	1.5	50	50	100
		TOTAL	16	0	13	19.5	300	500	800	
BSC-7.5										
ESC-10.5										
HSMC-	1.5									İ

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### II YEAR I SEMESTER

Sl. No.	Course Code	Course Category	Subject Title		Periods per week		С	Scheme of Examination Maximum Marks		
				L	T	P		Int.	Ext.	Total
1	201HB301	BSC	Mathematics-III	3	1	0	3	30	70	100
2	201EC302	PCC	Electronic Devices and Circuits	3	1	0	3	30	70	100
3	201EC303	PCC	Network Analysis	3	1	0	3	30	70	100
4	201EC304	PCC	Switching Theory and Logic Design	3	1	0	3	30	70	100
5	201EC305	PCC	Signals and Systems	3	1	0	3	30	70	100
6	201CS311	PCC	Programming with Java Lab	0	0	3	1.5	50	50	100
7	201EC312	PCC	Electronic Devices and Circuits Lab	0	0	3	1.5	50	50	100
8	201EE313	PCC	Network Analysis Lab	0	0	3	1.5	50	50	100
9	201HB381	SOC	English for career	1	0	2	2	1	-	-
	TOTAL		16	5	11	21.5	300	500	800	
BSC 3	PCC 16.5	SOC 2								

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### NH-16, Chaitanya Knowledge City, Rajahmundry

### II YEAR II SEMESTER

Sl.	. Course Course Subject Title		Periods per week			Credits	Scheme of Examination Maximum Marks			
No.	Code	Category	Subject Title	L	Т	P	Credits	Int.	Ext.	Total
1	201EC401	PCC	Electronic Circuit Analysis	3	1	0	3	30	70	100
2	201EC402	PCC	Analog Communications	3	1	0	3	30	70	100
3	201EC403	ESC	Random Variable and Stochastic Process	3	1	0	3	30	70	100
4	201EC404	PCC	Electromagnetic Waves And Transmission Lines	3	1	0	3	30	70	100
5	201EC405	HSS	Managerial Economics And Financial Analysis	3	1	0	3	30	70	100
6	201EC411	PCC	Electronic Circuit Analysis Lab	0	0	3	1.5	50	50	100
7	201EC412	PCC	Analog Communication Lab	0	0	3	1.5	50	50	100
8	201EC413	PCC	Switching Theory and Logic Design Lab	0	0	3	1.5	50	50	100
9	201CS481A	SOC	Programming with Python Lab	0	1	2	2	-	50	50
10	201CE491	MC	Constitution of India	2	0	0	-	30	70	100
	·		TOTAL		6	11	21.5	330	620	950
HSS 3	PCC 13.5	ESC 3	SOC 2							

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### NH-16, Chaitanya Knowledge City, Rajahmundry

### III YEAR - I SEMESTER COURSE STRUCTURE (GRBT20)

S. No.	Course Code	Cou rse Ty	Course Title		Periods per week		С	Scheme of Examination Maximum Marks			
		pe		I	Т	P		Int.	Ext.	Total	
1	201EC501	PC	Linear and Digital IC Applications	3	1	0	3	30	70	100	
2	201EC502	PC	Digital Communications	3	1	0	3	30	70	100	
3	201EC503	PC	Antenna and Wave Propagation	3	1	0	3	30	70	100	
4	201EC564A	-	<ul><li>Professional Elective-1</li><li>a. Electronic Measurements and Instrumentation</li><li>b. Control Systems</li></ul>								
	201EC564B		·								
	201EC564C	PE	c. Computer Architecture & Organization	3	1	0	3	30	70	100	
	201EC564D		d.Artifical Neural Networks								
	201CE565a		Open Elective – 1 a. Environmental pollution & control								
5	201EE565a		b. Fundamentals of Utilization of Electrical Energy								
	201ME565a		c. Robotics								
	201EC565a		d. Microprocessor and its interfacing								
	201CS565a	OE	e. Foundations of operating systems	3	1	0	3	30	70	100	
	201PT565a		f. Fundamentals of Petroleum Engineering								
	201MM565a		g. Elements of Mining Technology								
	201AM565a		h. Basic automobile Engineering	-							
	201MB565a		i. Principles of Management								
6	201HB591	MC	Quantitative Aptitude and Reasoning	2	0	0	-	30	70	100	
7	201EC511	PC	Linear and Digital IC Applications Lab	0	0	3	1.5	50	50	100	
8	201EC512	PC	Digital Communications Lab	0	0	3	1.5	50	50	100	
9	201EC581	SOC	Analog and Digital Circuit Design UsingMultisim	1	0	2	2	ı	50	50	
10	201EC531		Internship (Mandatory) after second year(to be evaluated during V semester	0	0	0	1.5	100	-	100	
			Total				21.5	380	570	950	
			Minor courses tion can be 3-0-2or 3-1-0 also)	4	0	0	4				

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### III YEAR - II SEMESTER COURSE STRUCTURE (GRBT20)

S. No.	Course Code	Course	Course Title		riods j week	-	С	Scheme of Examination Maximum Marks			
		Type		L	T	P		Int.	Ext.	Total	
1	201EC601	PC	Microprocessors and Microcontrollers	3	1	0	3	30	70	100	
2	201EC602	PC	Digital Signal Processing	3	1	0	3	30	70	100	
3	201EC603	PC	Microwave & Optical CommunicationEngineering	3	1	0	3	30	70	100	
	201EC664A		Professional Elective-2 Radar Engineering								
4	201EC664B		Mobile & Cellular Communication	3	1	0	3	30	70	100	
	201EC664C	PE	Digital Image Processing								
	201EC664D	PE	VLSI Design								
5	201CE665a 201EE665b 201ME665c 201EC665d 201CS665e 201PT665f	OE	Open Elective – 2 a. Solid Waste Management b. Concepts of power system engineering c. Introduction to MEMS d. IoT and its Applications e. Fundamentals of Databases f. Basic Concepts in petroleum	3	1	0	3	30	70	100	
	201MM665g 201AM665h 201MB665i		drilling Engineering g. Open Pit Slope analysis and design h. Hybrid and electric vehicles i. Operations Management								
6	201MB691	MC	IPR and Patents	2	0	0	_	30	70	100	
7	201EC611	PC	Microwave & Optical CommunicationEngineering Lab	0	0	3	1.5	50	50	100	
8	201EC612	PC	Microprocessors and Microcontrollers Lab	0	0	3	1.5	50	50	100	
9	201EC613	PC	Digital Signal Processing Lab	0	0	3	1.5	50	50	100	
10	201EC681	SAC	ARM based / Arduino based Programming	0	1	2	2	-	50	50	
		,	ГОТАL				21.5	330	620	950	
Hono	rs/Minor courses (T	The hours of	distribution can be 3-0-2 or 3-1-0also)	4	0	0	4				
			Internship (Mandatory) 2 Months during	sumn	ner va	cation	1				

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#### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### IV YEAR - I SEMESTER COURSE STRUCTURE (GRBT20)

S. No.	Course Type	Course Title	Perio	ods pe	r week	С	Scheme of Examination Maximum Marks			
110.	Турс		L	T	P		Int.	Ext.	Total	
1	PE	Professional Elective – 3 Wireless Sensor Networks Software Defined Radio Cognitive Radio Information Theory and Coding	3	1	0	3	30	70	100	
2	PE	Professional Elective – 4 Embedded System Design Real time operating systems Digital Signal Processors and Architecture Soft Computing Techniques	3	1	0	3	30	70	100	
3	PE	Professional Elective – 5 Internet of Things and Cloud Computing Digital IC Design using CMOS Computer Networks Pattern Recognition & Machine Learning	3	1	0	3	30	70	100	
4	OE	Open Elective – 3	3	0	0	3	30	70	100	
5	OE	Open Elective – 4	3	0	0	3	30	70	100	
6	HSSE	UHV – 2	3	0	0	3	30	70	100	
7	SAC	VLSI Lab	1	0	2	2	-	50	100	
8	Industrial Internship	Internship 2 Months (Mandatory) after third year (to be evaluated during VII semester)	0	0	0	3	100	-	100	
					23	280	470	750		
Ho	nors / Mino	4	0	0	4					

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#### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

### IV YEAR - II SEMESTER COURSE STRUCTURE (GRBT20)

S. No.	Course Type	Course Title	Period	week	C	Scheme of Examination Maximum Marks			
		L	T	P		Int.	Ext.	Total	
1	Major Project	Project Project work, seminar and internship in Industry	0	0	4	12	60	140	200
		Total				12	60	140	200

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#### DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

# **LIST OF OPEN ELECTIVE SUBJECTS (GRBT20)**

III B.Tech – I Sem	III B.Tech – II Sem
<ol> <li>Fundamentals of Utilization of Electrical Energy</li> <li>Robotics</li> <li>Microprocessors and Microcontrollers (ECE)</li> <li>Fundamentals of Petroleum Engineering</li> <li>Elements of Mining Technology</li> <li>Basic Automobile Engineering</li> <li>Environmental Pollution &amp; Control</li> </ol>	<ol> <li>Concepts of Power System Engineering</li> <li>Introduction to MEMS</li> <li>IoT and its Applications (ECE)</li> <li>Basic Concepts in Drilling Engineering</li> <li>Open Pit Slope Analysis and Design</li> <li>Hybrid and Electric Vehicles</li> <li>Solid Waste Management</li> </ol>

IV B.Tech - I Sem	IV B.Tech - I Sem
<ol> <li>Fundamentals of Smart Grid Technologies</li> <li>Nano Technology and its Applications</li> <li>Embedded Systems (ECE)</li> <li>Introduction to Petroleum Production Engineering</li> <li>Dimensional Stone Mining</li> <li>Modern Vehicle Technology</li> <li>Global Environmental Problems &amp; Policies</li> </ol>	<ol> <li>Basics of Electrical Measurements and Instrumentation</li> <li>Introduction to Operations Research</li> <li>Digital Image Processing (ECE)</li> <li>Basic concepts in petroleum reservoir engineering</li> <li>Remote Sensing &amp; GIS in Mining</li> <li>Alternative Energy Resources for Automotives</li> <li>Urban Transportation Planning</li> </ol>