

**R.T.M. Nagpur University, Nagpur**  
**FOUR-YEAR B.E. COURSE**  
**(Revised Curriculum as per AICTE Model Curriculum)**  
**SCHEME OF EXAMINATION FOR**  
**B.Tech. FIRST YEAR (All Branches of Engineering)**  
**(SEMESTER – I)**

Code	Subject	Teaching Scheme				Credits				MARKS				
										Theory		Practical		Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BSE1-1T	Mathematics-I	3	-	1T	4	3	-	1	4	30	70	-	-	100
BSE1-2T	Applied Physics	3	-	1T	4	3	-	1	4	30	70	-	-	100
BSE1-3T	Energy and Environment	2	-	1T	3	2	-	1	3	30	70	-	-	100
BSE1-4T	Communication Skills	2	-	-	2	2	-	-	2	15	35	-	-	50
BSE1-5T	Engineering Graphics	1	-	-	1	1	-	-	1	15	35	-	-	50
BSE1-6T	Basics of Civil & Mechanical Engineering	4	-	-	4	-	-	-	AUDIT	50	-	-	-	AUDIT
BSE1-2P	Applied Physics Lab	-	3	-	3	-	1.5	-	1.5	-	-	25	25	50
BSE1-3P	Energy and Environment Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BSE1-4P	Communication Skills Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BSE1-5P	Engineering Graphics Lab	-	4	-	4	-	2	-	2	-	-	25	25	50
	Three weeks Induction Program													
<b>Total</b>		15	11	3T	29	11	5.5	3	19.5	120	280	100	100	600

- L- Lecture , P-Practical, T- Tutorial , A- Activity (Half Credit perHour)
- Audit course marks are not counted in totalmarks

**SCHEME OF EXAMINATION FOR  
B.Tech. FIRST YEAR (All Branches of Engineering)  
(SEMESTER – II)**

Code	Subject	Teaching Scheme				Credits				MARKS				
										Theory		Practical		Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BSE2-1T	Mathematics-II	3	-	1T	4	3	-	1	4	30	70	-	-	100
BSE2-2T	Advanced Engineering Materials	2	-	1A	3	2	-	1	3	30	70	-	-	100
BSE2-3T	Applied Chemistry	3	-	1T	4	3	-	1	4	30	70	-	-	100
BSE2-4T	Computational Skills	2	-	-	2	2	-	-	2	15	35	-	-	50
BSE2-6T	Basics of Electrical Engineering	2	-	-	2	2	-	-	2	15	35	-	-	50
BSE2-7T	Engineering Mechanics	2	-	-	2	2	-	-	2	15	35	-	-	50
BSE2-8T	Indian Culture & Constitution	2	-	-	2	-	-	-	AUDIT	50	-	-	-	AUDIT
BSE1-5P	Workshop Practices	-	4	-	4	-	2	-	2	-	-	50	50	100
BSE2-2P	Advanced Engineering Materials Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BSE2-3P	Applied Chemistry Lab	-	3	-	3	-	1.5	-	1.5	-	-	25	25	50
BSE2-4P	Computational Skills Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
	Three weeks Induction Program													
<b>Total</b>		<b>16</b>	<b>11</b>	<b>2T+1A</b>	<b>30</b>	<b>14</b>	<b>5.5</b>	<b>3</b>	<b>22.5</b>	<b>135</b>	<b>315</b>	<b>125</b>	<b>125</b>	<b>700</b>

**Guidelines**

- Energy and Environment shall be taught by faculty of Chemistry and will come under board of Applied Science and Humanities (only by ChemistryDept)
- Advance Engineering Materials shall be taught by faculty of Physics and will come under board of Applied Science and Humanities (only by PhysicsDept)

# R.T.M. Nagpur University, Nagpur

## SCHEME OF EXAMINATION

### B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING/ ELECTRONICS ENGINEERING

#### (SEMESTER – III)

Code	Subject	Teaching Scheme				Credit				MARKS				
										Theory		Practical		Total Marks
		L	Practical	Tutorial / Activity	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BEETC-301	Applied Maths-III	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-302T	Components for Electronic circuit design	3	-		3	3	-	-	3	30	70	-	-	100
BEETC-302P	Components for Electronic circuit design Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-303T	Digital System Design	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-303P	Digital System Design Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-304P	Network Theory	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-305T	Signal & System	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-306T	Measurement and Instrumentation	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-307P	Electronics Workshop I Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-308T	Consumer affairs	2	-		2							-	-	Audit
	<b>Total</b>	<b>20</b>	<b>6</b>	<b>1T</b>	<b>27</b>	<b>18</b>	<b>3</b>	<b>1</b>	<b>22</b>	<b>180</b>	<b>420</b>	<b>75</b>	<b>75</b>	<b>750</b>

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING/ ELECTRONICS  
ENGINEERING  
(SEMESTER – IV)**

Code	Subject	Teaching Scheme				Credit				MARKS				
										Theory		Practical		Total Marks
										Internal	University	Internal	Univ.	
		L	Practical	Tutorial / Activity	Total	L	P	T/A	Total					
BEETC-401T	Microcontrollers & Applications	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-401P	Microcontrollers & Applications Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-402T	Analog & Digital Communications	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-403P	Analog and Digital Electronics Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-404T	Analog System Design	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-405T	Data structure & Algorithm	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-406T	HSC: Numerical Mathematics and Probability Using MATLAB	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-407T	Programming for problem solving	2	-	-	2	2	-	-	2	15	35	-	-	50
BEETC-407P	Programming for problem solving Lab	-	4	-	4	-	2	-	2			25	25	50
BEETC-408I	Internship								1			50	-	50
BEETC-409A	Universal human values	3			3	3			3	30	70			100
	<b>Total</b>	<b>20</b>	<b>8</b>	<b>3T</b>	<b>31</b>	<b>20</b>	<b>4</b>	<b>3</b>	<b>28</b>	<b>195</b>	<b>455</b>	<b>125</b>	<b>75</b>	<b>850</b>

- L- Lecture , P-Practical, T- Tutorial , A- Activity
- Audit course marks are not counted in total marks

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING  
(SEMESTER – V)**

Code	Subject	Teaching Scheme				Credits				MARKS				
										Theory		Practical		Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BEETC-501T	Embedded System Design	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-501P	Embedded System Design Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-502T	Electromagnetic Waves	3	-	1T	4	3	-	1	4	30	70	-	-	100
BEETC-503T	Digital Signal Processing	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC-503P	Digital Signal Processing Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-504OT	HSC: IEED(Economics)	2	-	1A	3	2	-	1	3	30	70			100
BEETC-505PE	PEC-I	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-506P	Electronic Workshop II	-	2	-	2		1	-	1	-	-	25	25	50
BEETC-507A	Audit Course													AUDIT
	<b>Total</b>	<b>12</b>	<b>6</b>	<b>3T+1A</b>	<b>22</b>	<b>12</b>	<b>3</b>	<b>4</b>	<b>19</b>	<b>150</b>	<b>350</b>	<b>75</b>	<b>75</b>	<b>650</b>

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING  
(SEMESTER – VI)**

Code	Subject	Teaching Scheme				Credit				MARKS				Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Theory		Practical		
										Internal	Univ.	Internal	Univ.	
BEETC-601T	Computer Communication Network	2	-	-	2	2	-	-	2	30	70	-	-	100
BEETC-601P	Computer Communication Network Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-602T	Internet of Things (IOT)	2	-	-	2	2	-	-	2	30	70	-	-	100
BEETC-602P	IOT Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-603T	Wireless Sensor Network	2	-	-	2	2	-	-	2	30	70	-	-	100
BEETC-603P	Wireless Sensor Network Lab	-	2	-	2	-	1	-	1	-	-	25	25	50
BEETC-604PE	PEC-II	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-605OE	OE-I	2	-	1A	3	2	-	1	3	30	70	-	-	100
BEETC-606T	HSC: Effective Technical Communication	2		-	2	-	-	2	2	15	35	-	-	50
BEETC-607I	Mini Project(Internship)	-		3A	3	--	-	3	3	-	-	25	25	50
BEETC-608A	Audit Course	-								-	-			AUDIT
<b>Total</b>		<b>12</b>	<b>6</b>	<b>1T+4A</b>	<b>23</b>	<b>10</b>	<b>3</b>	<b>7</b>	<b>20</b>	<b>165</b>	<b>385</b>	<b>100</b>	<b>100</b>	<b>750</b>

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING  
(SEMESTER – VII)**

Code	Subject	Teaching Scheme				Credit				MARKS				
										Theory		Practical		Total Marks
		L	P	T/A	Total	L	P	T/A	Total	Internal	Univ.	Internal	Univ.	
BEETC-701PE	PEC-III	3	2	1T	6	3	1	1	5	30	70	25	25	150
BEETC-702PE	PEC-IV	3	2	1T	6	3	1	1	5	30	70	25	25	150
BEETC-703PE	PEC-V	3	-		3	3	-		3	30	70	-	-	100
BEETC-704OE	OE-II	2	-	1T	3	2	-	1	3	30	70	-	-	100
BEETC-705I	Seminar/Internship	-	2	-	2	-	1	-	1	-	-	50	-	50
BEETC-706A	IPR	1		1A	2	-	-	-	-	-	-	-	-	AUDIT
	<b>Total</b>	<b>12</b>	<b>6</b>	<b>3T+1A</b>	<b>22</b>	<b>11</b>	<b>3</b>	<b>3</b>	<b>17</b>	<b>120</b>	<b>280</b>	<b>100</b>	<b>50</b>	<b>550</b>

**SCHEME OF EXAMINATION FOR  
B.Tech. ELECTRONICS & TELECOMMUNICATION / ELECTRONICS & COMMUNICATION ENGINEERING  
(SEMESTER – VIII)**

Code	Subject	Teaching Scheme				Credit				MARKS				
		L	P	T/ A	Total	L	P	T/ A	Total	Theory		Practical		Total Marks
										Internal	Univ.	Internal	Univ.	
BEETC - 801PE	Program Elective –VI MOOC/NPTEL Course	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC - 802PE	Program Elective -VII MOOC/NPTEL Course	3	-	-	3	3	-	-	3	30	70	-	-	100
BEETC -803P	Project	-	12	-	12	-	6	-	6	-	-	50	50	100
	Seminar	-	-	2A	2	-	-	2	2	-	-	50	-	50
<b>Total</b>		<b>6</b>	<b>12</b>	<b>2A</b>	<b>20</b>	<b>6</b>	<b>6</b>	<b>2</b>	<b>14</b>	<b>60</b>	<b>140</b>	<b>100</b>	<b>50</b>	<b>350</b>

**LIST OF ELECTIVE COURSES**



Semester	Elective Type	Subject	
V	Program Elective-I	1. Operating Systems	
		2. Information Theory and Error Correcting Codes	
		3. Electronic Design Techniques With HDL	
		4. Sensors and Systems	
VI	Program Elective-II	1. Computer Architecture	
		2. Database Management Systems	
		3. Antennas & Wave Propagation	
		4. Control System Engineering	
	Open Elective-I	1. Consumer Electronics	
		2. Industrial Electronics	
VII	Program Elective-III	1. Audio and Video Engineering	
		2. Web Technologies	
		3. Mobile Communications	
		4. Robotics and Automation	
	Program Elective-IV	1. Mixed Signal Design	
		2. Data Science/ Cloud Computing	
		3. Radar and Satellite Communication	
		4. PLA and Scada	
	Program Elective-V	1. Soft computing	
		2. Fundamentals of Machine Learning	
		3. Optical Communication	
		4. Biomedical Engineering	
	Open Elective II	1. Mechatronics	
		2. Bioengineering	
	VIII	Mooc I	1. CMOS VLSI Design
			2. Artificial Intelligence
3. Evolution of Air Interface towards 5G			
4. MEMS			
MOOC		1. VLSI Signal Processing	
		2. Android Programming	