

**STUDY & EVALUATION SCHEME**  
**B.TECH: ELECTRONIC & COMMUNICATION ENGINEERING (LATERAL)**  
**II YEAR: III SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	BEC3013	Electronics Devices	3	0	0	40	60	100	3
2	BEC3014	Digital System Design	3	1	0	40	60	100	4
3	BEC3015	Network Theory	3	1	0	40	60	100	4
4	BEC3001	Signals and Systems	3	1	0	40	60	100	4
5	BMA3010	Math's-III	3	1	0	40	60	100	4
6	--	OE-1	3	0	0	40	60	100	3
<b>PRACTICAL/TRAINING/PROJECT</b>									
7	BEC3511	Electronics Devices Lab	0	0	2	80	20	100	1
8	BEC3512	Digital System Design Lab	0	0	2	80	20	100	1
<b>TOTAL</b>			<b>18</b>	<b>4</b>	<b>4</b>	<b>400</b>	<b>280</b>	<b>800</b>	<b>24</b>
9	BEC3701-VI	*Basics of LabVIEW Programming	1	0	4	80	20	100	3

L - Lecture  
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C – Credit

**SPECIALIZATION STREAMS-**

\*Virtual Instrumentation-VI

**STUDY & EVALUATION SCHEME**  
**B.TECH: ELECTRONIC & COMMUNICATION ENGINEERING (LATERAL)**  
**II YEAR: IV SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	BEC4014	Electromagnetic Waves	3	1	0	40	60	100	4
2	BEC4015	Computer Architecture	3	0	0	40	60	100	3
3	BMA4011	Probability Theory and Stochastic Processes	3	0	0	40	60	100	3
4	BEC4023	Biology	2	0	0	40	60	100	2
5	BME4005	Engineering Mechanics	3	1	0	40	60	100	4
6	BSS4001	Soft Skills and Interpersonal Communication	2	0	0	100	0	100	2
7	XHUX602	Essence of Indian Traditional Knowledge	2	0	0	Satisfactory/ Unsatisfactory			2
<b>PRACTICAL/TRAINING/PROJECT</b>									
8	BEC4512	Electromagnetic Waves Lab	0	0	2	80	20	100	1
9	BEC4513	Electronic Measurement Lab	0	0	2	80	20	100	1
10	BEC4514	Mini Project/ Electronic Design Workshop	0	0	4	80	20	100	2
<b>TOTAL</b>			<b>18</b>	<b>2</b>	<b>8</b>	<b>540</b>	<b>360</b>	<b>900</b>	<b>22</b>
11	BEC4701-VI	* Virtual Implementation of Digital Circuits	1	0	4	80	20	100	3
	BEC4701-SP	**Basics of MAT/SCI Lab Programming	1	0	4	80	20	100	3
	BEC4001-ITC	***Information Theory	3	0	0	40	60	100	3

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**SPECIALIZATION STREAMS-**

\*Virtual Instrumentation-VI  
\*\*Signal Processing-SP  
\*\*\* Information Theory and Coding-ITC

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**B.TECH: ELECTRONIC & COMMUNICATION ENGINEERING (LATERAL)**  
**III YEAR: V SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	BEC5012	Analog and Digital Communication	3	0	0	40	60	100	3
2	BEC5013	Analog Circuits	3	0	0	40	60	100	3
3	BEC5014	Microcontrollers	3	0	0	40	60	100	3
4	BEC5004	Control Systems	3	1	0	40	60	100	4
5	--	DE-1	3	0	0	40	60	100	3
6	--	OE-2	3	0	0	40	60	100	3
7	XLAX6001	Constitutions of India	2	0	0	Satisfactory/ Unsatisfactory			2
<b>PRACTICAL/TRAINING/PROJECT</b>									
8	BEC5511	Analog and Digital Communication Lab	0	0	2	80	20	100	1
9	BEC5512	Analog Circuits Lab	0	0	2	80	20	100	1
10	BEC5513	Microcontrollers Lab	0	0	2	80	20	100	1
11	BAP5501	Aptitude and Reasoning Online Test	0	0	2	0	0	0	0
<b>TOTAL</b>			<b>20</b>	<b>1</b>	<b>8</b>	<b>580</b>	<b>420</b>	<b>1000</b>	<b>22</b>
12	BEC5701-VI	* Virtual Implementation of Analog Circuits	1	0	4	80	20	100	3
	BEC5701-SP	**Transformation Techniques	1	0	4	80	20	100	3
	BEC5001-ITC	***Error Detection and Correction Codes	3	0	0	40	60	100	3
	BEC5001-MD	****Microwaves Antennas	3	1	0	40	60	100	4

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\*Virtual Instrumentation-VI

\*\*Signal Processing-SP

\*\*\* Information Theory and Coding-ITC

\*\*\*\*Microwaves Devices-MD

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**B.TECH: ELECTRONIC & COMMUNICATION ENGINEERING (LATERAL)**  
**III YEAR: VI SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	BEC6009	Digital Signal Processing	3	1	0	40	60	100	4
2	BCS6013	Computer Network	3	0	0	40	60	100	3
3	--	DE-2	3	0	0	40	60	100	3
4	--	OE-3	3	0	0	40	60	100	3
5	--	OE-4	3	0	0	40	60	100	3
<b>PRACTICAL/TRAINING/PROJECT</b>									
6	BEC6510	Digital Signal Processing Lab	0	0	2	80	20	100	1
7	BCS6514	Computer Network Lab	0	0	2	80	20	100	1
8	BEC6504	Seminar	0	0	2	80	20	100	1
9	BAP6501	Aptitude and Reasoning Online Test	0	0	2	0	0	0	0
10	XECX601	Industrial Visit	0	0	0	Satisfactory/ Unsatisfactory			0
<b>TOTAL</b>			<b>15</b>	<b>1</b>	<b>8</b>	<b>560</b>	<b>340</b>	<b>900</b>	<b>19</b>
11	BEC6701-VI	* Virtual Implementation of Hardware Electronic Devices	2	0	4	80	20	100	4
	BEC6701-SP	**Image Processing	2	0	6	80	20	100	5
	BEC6001-ITC	***Channel Coding Schemes	3	1	0	40	60	100	4
	BEC6001-MD	****Microwaves Theory and Techniques	4	1	0	40	60	100	5

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**SPECIALIZATION STREAMS**

\*Virtual Instrumentation-VI  
\*\*Signal Processing-SP  
\*\*\* Information Theory and Coding-ITC  
\*\*\*\*Microwaves Devices-MD

**STUDY & EVALUATION SCHEME**  
**B.TECH: ELECTRONIC & COMMUNICATION ENGINEERING (LATERAL)**  
**IV YEAR: VII SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	--	DE-3	3	0	0	40	60	100	3
2	--	DE-4	3	0	0	40	60	100	3
3	--	DE-5	3	0	0	40	60	100	3
4	--	OE-5	3	0	0	40	60	100	3
<b>PRACTICAL/TRAINING/PROJECT</b>									
5	BEC7503	Summer Training	0	0	2	100	0	100	1
6	BEC7506	Project-I	0	0	8	100	0	100	4
<b>TOTAL</b>			<b>12</b>	<b>0</b>	<b>10</b>	<b>360</b>	<b>240</b>	<b>600</b>	<b>17</b>
7	BEC7701-VI	* Virtual Implementation of Signal Processing	1	0	4	80	20	100	3
	BEC7701-SP	**Digital Filters	2	0	6	80	20	100	5
	BEC7701-ITC	***LabVIEW Programming Concepts	1	0	3	80	20	100	2.5
	BEC7702-ITC	*** Virtual Implementation of Channel Coding Schemes	1	0	3	80	20	100	2.5
	BEC7001-MD	****Mobile and Wireless Communication	4	1	0	40	60	100	5

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**SPECIALIZATION STREAMS-**

\*Virtual Instrumentation-VI  
\*\*Signal Processing-SP  
\*\*\* Information Theory and Coding-ITC  
\*\*\*\*Microwaves Devices-MD

**STUDY & EVALUATION SCHEME**  
**B.TECH: ELECTRONIC & COMMUNICATION ENGINEERING (LATERAL)**  
**IV YEAR: VIII SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
<b>THEORY</b>									
1	--	DE-6	3	0	0	40	60	100	3
2	--	DE-7	3	0	0	40	60	100	3
3	--	OE-6	3	0	0	40	60	100	3
4	--	OE-7	3	0	0	40	60	100	3
<b>PRACTICAL/TRAINING/PROJECT</b>									
5	BEC8503	Project-II	0	0	18	80	20	100	9
<b>TOTAL</b>			<b>12</b>	<b>0</b>	<b>18</b>	<b>240</b>	<b>260</b>	<b>500</b>	<b>21</b>
6	BEC8701-VI	* Virtual Implementation of Embedded System/ Information Theory and Coding	2	0	4	80	20	100	4
	BEC8701-SP	**Biomedical Signal/ Image Processing	2	0	4	80	20	100	4
	BEC8701-ITC	***Application of Channel Coding Schemes in Wireless Communication	2	0	6	80	20	100	5
	BEC8701-MD	****Study and Simulation of Microwave Devices	3	0	6	80	20	100	6

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**SPECIALIZATION STREAMS-**

\*Virtual Instrumentation-VI  
\*\*Signal Processing-SP  
\*\*\* Information Theory and Coding-ITC  
\*\*\*\*Microwaves Devices-MD

**STUDY & EVALUATION SCHEME**  
**B.TECH: ELECTRONIC & COMMUNICATION ENGINEERING (LATERAL)**

**LIST OF ELECTIVES**

**LIST OF DEPARTMENT ELECTIVES**

	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>SEMESTER</b>
<b>Department Elective-I</b>	BEC5001-DE1	Antennas and Propagation	V
	BEC5002-DE1	Bio-Medical Electronics	V
	BEC5003-DE1	MOOC: Digital Switching - I	V
<b>Department Elective-II</b>	BEC6004-DE2	MOOC: Microwave Theory and Techniques	VI
	BEC6001-DE2	Embedded systems	VI
	BEC6002-DE2	Error correcting codes	VI
	BEC6003-DE2	Advanced Semiconductor Devices	VI
<b>Department Elective-III</b>	BEC 7001-DE3	Fiber Optic Communications	VII
	BEC 7002-DE3	Information Theory and Coding	VII
	BEC 7003-DE3	Speech and Audio Processing	VII
	BEC 7004-DE3	Mixed Signal Design	VII
<b>Department Elective-IV</b>	BEC 7001-DE4	Digital System Design Using VHDL	VII
	BEC 7002-DE4	Adaptive Signal Processing	VII
	BEC 7003-DE4	Artificial Neural Network	VII
	BEC 7004-DE4	Scientific computing	VII
<b>Department Elective-V</b>	BEC 7001-DE5	Spread Spectrum Systems	VII
	BEC 7002-DE5	Mobile Communication and Networks	VII
	BEC 7004-DE5	MOOC: Principles of Modern CDMA/ MIMO/ OFDM Wireless Communications	VII
	BEC 7003-DE5	CMOS Design	VII

<b>Department Elective-VI</b>	BEC 8001-DE6	High Speed Electronics	VIII
	BEC 8002-DE6	Optoelectronics	VIII
	BEC 8003-DE6	MOOC: Digital Image Processing	VIII
	BEC 8004-DE6	Fundamentals of Radar and Navigation	VIII
<b>Department Elective-VII</b>	BEC 8001-DE7	Wireless Sensor Networks	VIII
	BEC 8002-DE7	Biomedical Signal Processing	VIII
	BEC 8003-DE7	Wavelets	VIII
	BEC 8004-DE7	Satellite Communication	VIII

### **LIST OF OPEN ELECTIVES**

#### **OE-1: V Sem.**

<b>S. NO.</b>	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>DEPT. TO OFFER</b>
1	BHU3301	Organizational Psychology	INSH
2	BHU3302	Organizational Sociology	INSH

#### **OE-2: V Sem.**

<b>S. NO.</b>	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>DEPT. TO OFFER</b>
1	BCS5302	Data Structure	CSE
2	BCS5303	Information Systems	CSE
3	BEE5301	Solar and Energy Storage Systems	EE

#### **OE-3: VI Sem.**

<b>S. NO.</b>	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>DEPT. TO OFFER</b>
1	BCS6301	Web Technologies	CSE
2	BCS6302	Advances in IT	CSE
3	BME6302	Mechatronics Systems	ME
4	BEE6301	Non-Conventional Energy Resources	EE



**OE-4: VI Sem.**

<b>S. NO.</b>	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>DEPT. TO OFFER</b>
1	BMG6301	Economics	IMCE
2	BMG6302	Principles of Management	IMCE

**OE-5: VII Sem.**

<b>S. NO.</b>	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>DEPT. TO OFFER</b>
1	BCS7305	Java Programming	CSE
2	BCS7304	E-Commerce	CSE
3	BEE7307	Advanced Control Systems	EE
4	BME7306	Computer Aided Design	ME

**OE-6: VIII Sem.**

<b>S. NO.</b>	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>DEPT. TO OFFER</b>
1	BCS8304	Multimedia Tools and Applications	CSE
2	BEE8305	Wind Energy Conversion Systems	EE
3	BME8305	Automobile Engineering	ME

**OE-7: VIII Sem.**

<b>S. NO.</b>	<b>SUBJECT CODE</b>	<b>SUBJECT NAME</b>	<b>DEPT. TO OFFER</b>
1	BCS8305	Cyber Security and Cyber Laws	CSE
2	BCS8306	Software Quality Management	CSE
3	BEE8301	Fuzzy System and it's Application	EE