

**STUDY & EVALUATION SCHEME**  
**B.TECH: ELECTRONIC & COMMUNICATION ENGINEERING**  
**SPECIALIZATION: ELECTRIC VEHICLE**  
**II YEAR: III SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BEE3006	Electrical Machines-I	3	0	0	40	60	100	3
2	BEE3504	Electrical Machines-I Lab	0	0	2	80	20	100	1
3	BEC3014	Digital System Design	3	1	0	40	60	100	4
4	BEC3512	Digital System Design Lab	0	0	2	80	20	100	1
5	BEC3001	Signals and Systems	3	1	0	40	60	100	4
6	BEC3015	Network Theory	3	1	0	40	60	100	4
7	BMA3010-EC	Maths-III (ECE)	3	0	0	40	60	100	3
8		OE-1	3	0	0	40	60	100	3
<b>TOTAL</b>			<b>18</b>	<b>3</b>	<b>4</b>	<b>400</b>	<b>280</b>	<b>800</b>	<b>23</b>
9	-----	Fundamentals of EV & HEV	3	0	0	40	60	100	2
10	-----	EV Fundamental Lab	0	0	2	20	80	100	1

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S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BEC4014	Electromagnetic Waves	3	1	0	40	60	100	4
2	BEC4512	Electromagnetic Waves Lab	0	0	2	80	20	100	1
3	BEC4015	Computer Architecture	3	0	0	40	60	100	3
4	BEE4005	Electrical Machines-II	3	0	0	40	60	100	3
5	BEC4513	Electronic Measurement Lab	0	0	2	80	20	100	1
6	BEC4514	Mini Project/Electronic Design workshop	0	0	4	80	20	100	2
7	BBT4023	Biology	2	0	0	40	60	100	2
8	BME4005	Engineering Mechanics	3	1	0	40	60	100	4
9	BSS4001	Soft Skills and Interpersonal Communication	2	0	0	100	0	100	2
10	XHUX602	Essence of Indian Traditional Knowledge	2	0	0	Satisfactory/ Unsatisfactory			0
<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	----	Powertrain & Modes	3	0	0	40	60	100	2
12	----	EV Powertrain Lab	<b>0</b>	0	2	20	80	100	1

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S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BEC5012	Analog and Digital Communication	3	0	0	40	60	100	3
2	BEC5511	Analog and Digital Communication Lab	0	0	2	80	20	100	1
3	BEC5013	Analog Circuits	3	0	0	40	60	100	3
4	BEC5512	Analog Circuits Lab	0	0	2	80	20	100	1
5	BEC5014	Microcontrollers	3	0	0	40	60	100	3
6	BEC5513	Microcontrollers Lab	0	0	2	80	20	100	1
7	BEE6001	Power Electronics	3	1	0	40	60	100	4
8		DE-1	3	0	0	40	60	100	3
9		OE-2	3	0	0	40	60	100	3
10	XLAX601	Constitution of India	2	0	0	Satisfactory/ Unsatisfactory			0
11	BAP5501	Aptitude & Reasoning and Online Test	0	0	2	100	0	100	1
<b>TOTAL</b>			<b>20</b>	<b>1</b>	<b>8</b>	<b>580</b>	<b>420</b>	<b>1000</b>	<b>23</b>
12	----	Battery, BMS & BTMS	3	0	0	40	60	100	2
13	----	Battery, BMS & BTMS Lab	<b>0</b>	0	2	20	80	100	1

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**III YEAR: VI SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BEC6009	Digital Signal Processing	3	1	0	40	60	100	4
2	BEC6510	Digital Signal Processing Lab	0	0	2	80	20	100	1
3	BCS6013	Computer Network	3	0	0	40	60	100	3
4	BCS6514	Computer Networks Lab	0	0	2	80	20	100	1
5		DE-2	3	0	0	40	60	100	3
6		OE-3	3	0	0	40	60	100	3
7		OE-4	3	0	0	40	60	100	3
8	BEC6504	Seminar	0	0	2	100	0	100	1
9	XECX601	Industrial Visit	0	0	0	Satisfactory/ Unsatisfactory			0
10	BAP6501	Aptitude & Reasoning and Online Test	0	0	2	100	0	100	1
<b>TOTAL</b>			<b>15</b>	<b>1</b>	<b>8</b>	<b>560</b>	<b>340</b>	<b>900</b>	<b>20</b>
11	----	EV Charging Infra	3	0	0	40	60	100	2
12	----	EV Charging Infra Lab	<b>0</b>	0	2	20	80	100	1

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**IV YEAR: VII SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
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
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	----	Intelligent Transport System	3	0	0	40	60	100	4
8	----	Automotive Diagnosis	3	0	0	40	60	100	4

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**IV YEAR: VIII SEMESTER**

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
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
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>

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**B.TECH: ELECTRONIC & COMMUNICATION ENGINEERING**  
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**LIST OF ELECTIVES**

**LIST OF DEPARTMENT ELECTIVES**

**DE-1**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>
1	BEC5001-DE1	Antennas and Propagation
2	BEC5002-DE1	Bio-Medical Electronics

**DE-2**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>
1		Microwave Theory and Techniques
2	BEC6001-DE2	Embedded systems
3	BEC6002-DE2	Error correcting codes
4	BEC6003-DE2	Advanced Semiconductor Devices

**DE-3**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>
1	BEC7001-DE3	Fiber Optic Communications
2	BEC7002-DE3	Information Theory and Coding
3	BEC7003-DE3	Speech and Audio Processing
4	BEC7004-DE3	Mixed Signal Design

**DE-4**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>
1	BEC7001-DE4	Digital System Design Using VHDL
2	BEC7002-DE4	Adaptive Signal Processing
3	BEC7003-DE4	Artificial Neural Network
4	BEC7004-DE4	Scientific computing

**DE-5**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>
1	BEC7001-DES	Spread Spectrum Systems
2	BEC7002-DES	Mobile Communication and Networks
3		Digital Image & Video Processing
4	BEC7003-DES	CMOS Design

**DE-6**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>
1	BEC8001-DE6	High Speed Electronics
2	BEC8002-DE6	Optoelectronics
3		Introduction to MEMS
4	BEC8003-DE6	Fundamentals of Radar and Navigation

**DE-7**

<b>S. No.</b>	<b>Subject Code</b>	<b>Subject Name</b>
1	BEC8001-DE7	Wireless Sensor Networks
2	BEC8002-DE7	Biomedical Signal Processing
3	BEC8003-DE7	Wavelets
4	BEC8004-DE7	Satellite Communication

**LIST OF OPEN ELECTIVES****OE-1**

<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**

<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**

<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**

<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**

<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**

<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**

<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