

## Curriculum of EE Department (B.Tech) / 2018 Batch Onwards

### SEMESTER - 1

Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
MA 101	Differential Calculus and Linear Algebra	Sc/HS	3	1	0	4	None
ME 101	Engineering Mechanics	BE	3	0	0	3	None
CY 101 /PH 101	Chemistry / Physics	Sc/HS	2/3	1	0	3/4	None
CE 101	Engineering Drawing	BE	1	0	4	3	None
EC101 /EE 101	Basic Electronics Engineering / Basic Electrical Engineering	BE	2	0	0	2	None
HS 101	English Language Skills	Sc/HS	2	0	0	2	None
HS 151	English Language Skills Lab	L	0	0	2	1	None
CY 151 /PH 151	Chemistry Lab / Physics Lab	L	0	0	2	1	None
EC151 /EE 151	Basic Electronics Lab / Basic Electrical Lab	L	0	0	2	1	None
<b>Total Contact Hours – Component wise</b>			<b>13/14</b>	<b>2</b>	<b>10</b>	---	
<b>Total Contact Hours</b>			<b>25/26</b>			<b>20/21</b>	---

### SEMESTER - 2

Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
MA 102	Integral Calculus and Complex Variables	Sc/HS	3	1	0	4	None
EE 101 /EC 101	Basic Electrical Engineering / Basic Electronics Engineering	BE	2	0	0	2	None
PH 101 /CY 101	Physics / Chemistry	Sc/HS	3/2	1	0	4/3	None
CY 102	Environmental Science	Sc/HS	2	0	0	2	None
CS 102	Introduction to Computing	BE	2	1	0	3	None
ME 152	Workshop Practice-I	L	0	0	4	2	None
EE 151 /EC 151	Basic Electrical Lab / Basic Electronics Lab	L	0	0	2	1	None
PH151 /CY 101	Physics Lab / Chemistry Lab	L	0	0	2	1	None
CS 152	Computing Lab	L	0	0	2	1	None
<b>Total Contact Hours – Component wise</b>			<b>12/11</b>	<b>3</b>	<b>10</b>	---	
<b>Total Contact Hours</b>			<b>25/24</b>			<b>20/19</b>	---

**SEMESTER - 3**

Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
MA 201	Integral Transforms and PDEs	M	3	1	0	4	None
<b>Professional Core Courses - 1, 2, 3</b>							
EE 201	Analog Electronics	PC	3	1	0	4	EC 101
EE 203	Electrical Machine-I	PC	3	1	0	4	None
EE 205	Network Theory	PC	3	0	0	3	EE 101
<b>Special Course – 1</b>							
CE 291	Disaster Management	S	2	0	0	2	None
<b>Lab Courses - 1, 2, 3</b>							
EE 251	Analog Electronics Lab	L	0	1	2	2	None
EE 253	Electrical Machine-I Lab	L	0	1	2	2	None
EE 255	Network Theory Lab	L	0	0	2	1	None
<b>Total Contact Hours – Component wise</b>			<b>14</b>	<b>5</b>	<b>6</b>	<b>---</b>	
<b>Total Contact Hours</b>			<b>25</b>			<b>22</b>	<b>---</b>

**SEMESTER – 4**

Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
<b>Professional Core Courses - 4, 5, 6</b>							
EE 202	Power System – I	PC	3	1	0	4	None
EE 204	Electrical Machine - II	PC	3	1	0	4	None
EE 206	Measurement & Instrumentation	PC	3	0	0	3	EE 101
<b>Professional Elective - 1</b>							
EE 212	Electromagnetic Theory	PE	3	0	0	3	None
EE 214	Electrical Engineering Materials	PE	3	0	0	3	None
EE 216	Power Plant Engineering	PE	3	0	0	3	None
<b>Professional Elective – 2</b>							
EE 218	Digital Logic Design	PE	3	0	0	3	None
EE 220	Network Synthesis and Application	PE	3	0	0	3	None
EE 222	Communication Engineering	PE	3	0	0	3	None

Open Elective – 1							
EE 272	Electrical Technology	OE	2	0	0	2	None
Lab Courses - 4, 5, 6							
EE 252	Power System – I Lab	L	0	0	2	1	None
EE 254	Electrical Machine – II Lab	L	0	1	2	2	None
EE 256	Measurement & Instrumentation Lab	L	0	1	2	2	None
<b>Total Contact Hours – Component wise</b>			<b>17</b>	<b>4</b>	<b>6</b>	<b>---</b>	
<b>Total Contact Hours</b>			<b>27</b>			<b>24</b>	<b>---</b>

SEMESTER - 5							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
Professional Core Courses - 7, 8, 9							
EE 301	Power System - II	PC	3	1	0	4	None
EE 303	Power Electronics	PC	3	1	0	4	None
EE 305	Microprocessor & Interfacing	PC	3	0	0	3	None
Professional Elective – 3							
EE 311	Signal & Systems	PE	3	0	0	3	None
EE 313	Sensors & Transducers	PE	3	0	0	3	None
EE 315	Energy Technology and Management	PE	3	0	0	3	None
Professional Elective – 4							
EE 317	EHVAC & HVDC Power Transmission	PE	3	0	0	3	None
EE 319	Electrical Machine Design	PE	3	0	0	3	None
EE 321	Restructured Power System	PE	3	0	0	3	None
Open Elective - 2							
EE 371	Electrical Safety & Regulations	OE	2	0	0	2	None
Lab Courses - 7, 8, 9							
EE 351	Power System II Lab	L	0	1	2	2	None
EE 353	Power Electronics Lab	L	0	1	2	2	None
EE 355	Microprocessor & Interfacing Lab	L	0	0	2	1	None
<b>Total Contact Hours – Component wise</b>			<b>17</b>	<b>4</b>	<b>6</b>	<b>---</b>	
<b>Total Contact Hours</b>			<b>27</b>			<b>24</b>	<b>---</b>

**SEMESTER - 6**

Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
<b>Professional Core Courses – 10, 11</b>							
EE 302	Control System	PC	3	0	0	3	None
EE 304	Switchgear & Protection	PC	3	1	0	4	None
<b>Professional Elective – 5</b>							
EE 312	Microcontroller & Embedded System	PE	3	0	0	3	None
EE 314	Industrial Automation	PE	3	0	0	3	None
EE 316	Flexible AC Transmission System	PE	3	0	0	3	None
<b>Professional Elective – 6</b>							
EE 318	Digital Signal Processing	PE	3	0	0	3	None
EE 320	Biomedical Instrumentation	PE	3	0	0	3	None
EE 322	Power System Transients	PE	3	0	0	3	None
<b>Open Elective – 3</b>							
EE 372	Utilisation of Electrical Power	OE	2	0	0	2	None
<b>Special HS Course - 2</b>							
HS 392	Corporate Communication	S	2	0	0	2	None
<b>Lab Courses – 10, 11</b>							
EE 352	Control System Lab	L	0	1	2	2	None
EE 354	Switchgear & Protection Lab	L	0	1	2	2	None
EE 382	Term Paper	T	0	0	2	1	None
<b>Total Contact Hours – Component wise</b>			<b>16</b>	<b>3</b>	<b>6</b>	<b>---</b>	
<b>Total Contact Hours</b>			<b>25</b>			<b>22</b>	<b>---</b>

**SEMESTER - 7**

Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
EE 401	Project – I	P	0	0	10	5	None
<b>Professional Elective - 7</b>							
EE 411	Electrical Drives	PE	3	0	0	3	None
EE 413	Wide Area Monitoring Systems	PE	3	0	0	3	None

EE 415	Digital Filter Design	PE	3	0	0	3	None
<b>Professional Elective – 8</b>							
EE 417	Advanced Control System	PE	3	0	0	3	None
EE 419	Special Electrical Machines	PE	3	0	0	3	None
EE 421	High Voltage Engineering	PE	3	0	0	3	None
<b>Open Elective – 4</b>							
EE 471	Non – Conventional Energy Sources	OE	2	0	0	2	None
<b>Special Course - 3</b>							
ME 491	Safety Engineering	S	2	0	0	2	None
<b>Lab Courses – 12</b>							
EE 451	Soft Computing Lab	L	0	1	2	2	None
EE 481	Summer Internship	I	0	0	0	1	None
<b>Total Contact Hours – Component wise</b>			<b>10</b>	<b>1</b>	<b>12</b>	<b>---</b>	
<b>Total Contact Hours</b>			<b>23</b>			<b>16</b>	<b>---</b>

<b>SEMESTER - 8</b>							
Course Code	Course Title	Course Type	Contact Hours			Credit	Pre-requisites
			L	T	P	C	
EE 402	Project – II	P	0	0	18	9	None
<b>Professional Elective - 9</b>							
EE 412	Power Quality	PE	3	0	0	3	None
EE 414	Non - linear Control	PE	3	0	0	3	None
EE 416	Renewable Energy Systems	PE	3	0	0	3	None
<b>Professional Elective – 10</b>							
EE 418	Smart Grid Technology	PE	3	0	0	3	None
EE 420	Application of Power Electronics	PE	3	0	0	3	None
EE 422	Advanced Signal & Image Processing	PE	3	0	0	3	None
<b>Special Course - 4</b>							
HS 492	Entrepreneurship	S	2	0	0	2	None
<b>Total Contact Hours – Component wise</b>			<b>08</b>	<b>0</b>	<b>18</b>	<b>---</b>	
<b>Total Contact Hours</b>			<b>26</b>			<b>17</b>	<b>---</b>