

**B.E. ELECTRICAL AND ELECTRONICS ENGINEERING**  
**Regulation 2019 (Revised)**

**Semester I**

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
<b>THEORY</b>								
		Induction Program	-	-	-	-	-	-
1	R19MA101	Matrix Algebra and Calculus	BS	4	3	1	0	4
2	R19PH102	Semiconductor Physics	BS	3	3	0	0	3
3	R19CS101	Problem Solving using C	ES	3	3	0	0	3
4	R19ME101	Engineering Graphics	ES	5	1	0	4	3
<b>THEORY CUM PRACTICAL</b>								
5	R19HS151	Technical English	HS	4	2	0	2	3
<b>PRACTICALS</b>								
6	R19PH112	Semiconductor Physics Laboratory	BS	2	0	0	2	1
7	R19GE111	Engineering Practices Laboratory	ES	4	0	0	4	2
8	R19CS111	Problem Solving using C Laboratory	ES	4	0	0	4	2
<b>PROFESSIONAL DEVELOPMENT</b>								
9	R19EM101	Soft Skills	EM	2	0	0	2	1
<b>TOTAL</b>				<b>31</b>	<b>12</b>	<b>1</b>	<b>18</b>	<b>22</b>

**Semester II**

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
<b>THEORY</b>								
1	R19MA102	Advanced Calculus and Complex Variables	BS	4	3	1	0	4
2	R19CY101	Engineering Chemistry	BS	3	3	0	0	3
3	R19CS201	Data Structures	ES	3	3	0	0	3
4	R19CS104	Application Design and Development	ES	4	2	2	0	4
5	R19EE103	Circuit Theory	PC	4	3	1	0	4
<b>THEORY CUM PRACTICAL</b>								
6	R19HS55X	Language Elective	HS	4	2	0	2	3
<b>PRACTICALS</b>								
7	R19CY111	Chemistry Laboratory	BS	2	0	0	2	1
8	R19CS211	Data Structures Laboratory	ES	4	0	0	4	2
9	R19EE111	Electric Circuits Laboratory	PC	2	0	0	2	1
<b>MANDATORY COURSE</b>								
10	R19MC101	தமிழர் மரபு / Heritage of Tamils	HSMC	1	1	0	0	1
<b>TOTAL</b>				<b>31</b>	<b>17</b>	<b>4</b>	<b>10</b>	<b>26</b>

**Semester III**

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
<b>THEORY</b>								
1	R19MA201	Transforms and Partial Differential Equations	BS	4	3	1	0	4
2	R19CS207	Algorithmic Design Techniques	ES	3	3	0	0	3
3	R19CS203	Object Oriented Programming using Java	ES	3	3	0	0	3
4	R19EE201	Field Theory	PC	4	3	1	0	4
5	R19EE202	Linear Integrated Circuits and Digital Electronics	PC	3	3	0	0	3
6	R19XXXXX	Open Elective I*	OE	3	3	0	0	3
<b>PRACTICALS</b>								
7	R19CS213	Object Oriented Programming using Java Laboratory	ES	2	0	0	2	1
8	R19CS217	Algorithmic Design Techniques Laboratory	ES	2	0	0	2	1
9	R19EE211	Linear Integrated Circuits and Digital Electronics Laboratory	PC	2	0	0	2	1
<b>PROFESSIONAL DEVELOPMENT</b>								
10	R19EM201	Logical Thinking	EM	2	0	0	2	1
<b>MANDATORY COURSE</b>								
11	R19MC102	தமிழரும் தொழில்நுட்பமும் / Tamils and Technology	HSMC	1	1	0	0	1
<b>TOTAL</b>				<b>29</b>	<b>19</b>	<b>2</b>	<b>8</b>	<b>25</b>

**Semester IV**

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
<b>THEORY</b>								
1	R19MA205	Statistics and Numerical Methods	BS	4	3	1	0	4
2	R19EE203	Electrical Machines – I	PC	3	2	1	0	3
3	R19EE204	Control Systems	PC	4	3	1	0	4
4	R19EE205	Measurements and Instrumentation	PC	3	3	0	0	3
5	R19XXXXX	Open Elective II*	OE	3	3	0	0	3
<b>THEORY CUM PRACTICAL</b>								
6	R19EE251	Microprocessors and Microcontrollers	PC	5	3	0	2	4
<b>PRACTICALS</b>								
7	R19EE212	Electrical Machines Laboratory – I	PC	3	0	0	3	1.5
8	R19EE213	Control and Instrumentation Laboratory	PC	3	0	0	3	1.5
<b>PROJECT</b>								
9	R19EE281	Mini Project with Design Thinking	PW	2	0	0	2	1
<b>PROFESSIONAL DEVELOPMENT</b>								
10	R19EM202	Advanced Logical Thinking	EM	2	0	0	2	1
	R19EM203	Summer Internship	EM	-	-	-	-	NC
<b>MANDATORY COURSE</b>								
	R19MC201	Environmental Science	MC	1	1	0	0	NC
<b>TOTAL</b>				<b>33</b>	<b>18</b>	<b>3</b>	<b>12</b>	<b>26</b>

\* L T P C either 3 0 0 3 or 2 0 2 3

### Semester V

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
<b>THEORY</b>								
1	R19EE301	Electrical Machines – II	PC	3	2	1	0	3
2	R19EE302	Generation, Transmission and Distribution	PC	4	3	1	0	4
3	R19EE303	Power Electronics	PC	3	3	0	0	3
4	R19EE304	Embedded Systems	PC	3	3	0	0	3
5	R19EE5XX	Professional Elective I	PE	3	3	0	0	3
6	R19XXXXX	Open Elective III*	OE	3	3	0	0	3
<b>PRACTICALS</b>								
7	R19EE311	Electrical Machines Laboratory – II	PC	3	0	0	3	1.5
8	R19EE312	Power Electronics Laboratory	PC	3	0	0	3	1.5
<b>MANDATORY COURSE</b>								
	R19MC202	Indian Constitution and Tradition	MC	1	1	0	0	NC
<b>TOTAL</b>				<b>26</b>	<b>18</b>	<b>2</b>	<b>6</b>	<b>22</b>

### Semester VI

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
<b>THEORY</b>								
1	R19EE305	Power System Analysis and Stability	PC	4	3	1	0	4
2	R19EE306	Solid State Drives	PC	3	3	0	0	3
3	R19EC301	Internet of Things	PC	3	3	0	0	3
4	R19AM303	Artificial Intelligence and Machine Learning	PC	3	3	0	0	3
5	R19EE5XX	Professional Elective II	PE	3	3	0	0	3
<b>PRACTICALS</b>								
6	R19EE313	Power Systems Laboratory	PC	2	0	0	2	1
7	R19AM312	Artificial Intelligence and Machine Learning Laboratory	PC	2	0	0	2	1
<b>PROJECT WORK</b>								
7	R19EE381	Innovative/ Multi-Disciplinary Project	PW	2	0	0	2	1
<b>TOTAL</b>				<b>22</b>	<b>15</b>	<b>1</b>	<b>6</b>	<b>19</b>

\* L T P C either 3 0 0 3 or 2 0 2 3

**Semester VII**

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
<b>THEORY</b>								
1	R19HS401	Principles of Management and Professional Ethics	HS	3	3	0	0	3
2	R19EE401	Digital Power System Protection and Switchgear	PC	3	3	0	0	3
3	R19EE5XX	Professional Elective III	PE	3	3	0	0	3
<b>PROJECT WORK</b>								
5	R19EE481	Project Work – Phase I	PW	6	0	0	6	3
<b>TOTAL</b>				<b>15</b>	<b>9</b>	<b>0</b>	<b>6</b>	<b>12</b>

**Semester VIII**

Sl. No.	Course Code	Course Title	Category	Contact Periods	L	T	P	C
<b>THEORY</b>								
1	R19EE5XX	Professional Elective IV	PE	3	3	0	0	3
<b>PROJECT WORK</b>								
2	R19EE482	Project Work – Phase II	PW	16	0	0	16	8
<b>TOTAL</b>				<b>19</b>	<b>3</b>	<b>0</b>	<b>16</b>	<b>11</b>

**Total Number of Credits: 163**

**SUMMARY**

Sl. No.	Course Category	Credits per Semester								Credits	Credit %
		I	II	III	IV	V	VI	VII	VIII		
1	HS	3	3	-	-	-	-	3	-	9	5.5
2	BS	8	8	4	4	-	-	-	-	24	14.7
3	ES	10	9	8	-	-	-	-	-	27	16.6
4	PC	-	5	8	17	16	15	3	-	64	39.3
5	PE	-	-	-	-	3	3	3	3	12	7.4
6	OE	-	-	3	3	3	-	-	-	9	5.5
7	PW	-	-	-	1	-	1	3	8	13	8.0
8	EM	1	-	1	1	-	-	-	-	3	1.8
9	NC	-	-	-	√	-	-	-	-	-	-
10	MC	-	-	-	√	√	-	-	-	-	-
11	HSMC	-	1	1	-	-	-	-	-	2	1.2
<b>Total</b>		<b>22</b>	<b>26</b>	<b>25</b>	<b>26</b>	<b>22</b>	<b>19</b>	<b>12</b>	<b>11</b>	<b>163</b>	<b>100</b>