



# SAVEETHA ENGINEERING COLLEGE

**AUTONOMOUS**


Affiliated to Anna University | Approved by AICTE

**REGULATIONS 2019**  
**FLEXIBLE CHOICE BASED CREDIT SYSTEM**  
**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**  
**B.E. Electrical and Electronics Engineering**  
**CURRICULUM**

S.No.	Category	Course Code	Course Title	Contact Hours per Week			Credits	Prerequisite
				L	T	P		
1	HS	<a href="#">19EN102</a>	Technical English	3	0	2	4	-
2	HS	<a href="#">19MS151</a>	Principles of Management	3	0	0	3	-
3	HS	<a href="#">19MS152</a>	Total Quality Management	3	0	0	3	-
4	BS	<a href="#">19MA202</a>	Calculus and Laplace Transforms	3	1	0	4	-
5	BS	<a href="#">19MA207</a>	Numerical Methods and Partial Differential Equations	3	1	0	4	19MA202
6	BS	<a href="#">19MA214</a>	Series and Transforms	3	1	0	4	19MA202
7	BS	<a href="#">19CY206</a>	Principles of Electrochemistry	3	0	2	4	-
8	BS	<a href="#">19PH207</a>	Materials for Electronics	3	0	0	3	-
9	BS	<a href="#">19PH212</a>	Basics of Solid State Devices	3	0	2	4	-
10	BS	<a href="#">19PH213</a>	Nano Science for Electrical Engineers	3	0	0	3	-
11	ES	<a href="#">19ME302</a>	Engineering Drawing	2	0	2	3	-
12	ES	<a href="#">19ME306</a>	Basic Civil and Mechanical Engineering	3	0	0	3	-
13	ES	<a href="#">19EE301</a>	Electric Circuits and Networks	3	0	2	4	19MA202
14	ES	<a href="#">19EE302</a>	Embedded Programming for Electrical Engineers	3	0	2	4	-
15	ES	<a href="#">19CS304</a>	Object Oriented Programming for Embedded Applications	3	0	2	4	19EE302
16	ES	<a href="#">19ME308</a>	Power Plant Technology	3	0	0	3	-
17	ES	<a href="#">19CS301</a>	Problem Solving and Python Programming	3	0	2	4	-
18	PC	<a href="#">19EE401</a>	Electromagnetic Theory	3	0	0	3	19MA207
19	PC	<a href="#">19EE402</a>	Transformers and DC Machines	3	0	2	4	19EE301/ 19EE401
20	PC	<a href="#">19EE403</a>	AC Machines	3	0	2	4	19EE402
21	PC	<a href="#">19EE404</a>	Digital Electronics	3	0	2	4	-
22	PC	<a href="#">19EE405</a>	Electronic Circuits	3	0	2	4	19EE301 19PH212
23	PC	<a href="#">19EE406</a>	Measurements and Instrumentation	3	0	2	4	-
24	PC	<a href="#">19EE407</a>	Linear Integrated Circuits and Applications	3	0	2	4	19EE405
25	PC	<a href="#">19EE408</a>	Control Systems	3	0	2	4	19MA202 19EE301
26	PC	<a href="#">19EE409</a>	Electrical Power Transmission System	3	0	0	3	19EE301
27	PC	<a href="#">19EE410</a>	Power System Analysis	3	0	2	4	19MA207 19EE409
28	PC	<a href="#">19EE411</a>	Power Electronics	3	0	2	4	19PH212
29	PC	<a href="#">19EE412</a>	Microprocessor and Microcontroller Laboratory	0	0	4	2	19EE404
30	PC	<a href="#">19EE413</a>	Power System Operation and Control	3	0	0	3	19EE410
31	PC	<a href="#">19EE414</a>	Digital Signal Processing	3	0	2	4	19EE412/ 19MA214
32	PC	<a href="#">19EE415</a>	High Voltage Engineering	3	0	0	3	19EE409
33	PC	<a href="#">19EE416</a>	Renewable Energy Systems I	3	0	2	4	-
34	PC	<a href="#">19EE417</a>	Microcontroller Laboratory (****)	0	0	4	2	19EE404
35	PE	<a href="#">19EE501</a>	Distribution System Engineering	3	0	0	3	19EE409

36	PE	<a href="#">19EE502</a>	Power Electronics Converters	3	0	0	3	19EE411
37	PE	<a href="#">19EE503</a>	Smart Grids	3	0	0	3	19EE413
38	PE	<a href="#">19EE504</a>	Flexible AC Transmission Systems	3	0	0	3	19EE413
39	PE	<a href="#">19EE505</a>	Power System Stability	3	0	0	3	19EE413
40	PE	<a href="#">19EE506</a>	Restructured Power System	3	0	0	3	19EE413
41	PE	<a href="#">19EE507</a>	Power System Reliability	3	0	0	3	19EE413
42	PE	<a href="#">19EE508</a>	Power System Transients	3	0	0	3	19EE415
43	PE	<a href="#">19EE509</a>	Energy Management and Auditing	3	0	0	3	-
44	PE	<a href="#">19EE510</a>	Electric and Hybrid Vehicles	3	0	0	3	19EE408 19EE411 19EE402
45	PE	<a href="#">19EE511</a>	Protection and Switchgear	3	0	0	3	19EE403 19EE411 19EE413
46	PE	<a href="#">19EE512</a>	Utilisation, Safety and Maintenance of Electrical Systems	3	0	0	3	19EE403
47	PE	<a href="#">19EE513</a>	Advances in Electric Power Transmission	3	0	0	3	19EE501
48	PE	<a href="#">19EE514</a>	Microcontroller Based System Design	3	0	0	3	19EE412
49	PE	<a href="#">19EE515</a>	Soft Computing Techniques	3	0	0	3	-
50	PE	<a href="#">19EE516</a>	Computer Aided Design of Electrical Machines	2	0	2	3	19EE403 19PH207
51	PE	<a href="#">19EE517</a>	System Identification and Adaptive Control	3	0	0	3	19EE408
52	PE	<a href="#">19EE518</a>	Digital System Design using FPGA	3	0	0	3	19EE404
53	PE	<a href="#">19EE519</a>	Micro Electro Mechanical Systems	3	0	0	3	-
54	PE	<a href="#">19EE520</a>	Advanced Digital Signal Processing	3	0	0	3	19EE414
55	PE	<a href="#">19EE521</a>	Image Processing	3	0	0	3	19EE414
56	PE	<a href="#">19EE522</a>	Robotics	3	0	0	3	19EE408
57	PE	<a href="#">19EE523</a>	Biomedical Instrumentation	3	0	0	3	-
58	PE	<a href="#">19EE524</a>	Embedded Product Design	3	0	0	3	19EE412
59	PE	<a href="#">19EE525</a>	Renewable Energy Systems II	3	0	0	3	19EE416
60	PE	<a href="#">19EC307</a>	Communication Engineering	3	0	0	3	-
61	OE	<a href="#">19AG601</a>	Principles of Crop Production	2	0	2	3	-
62	OE	<a href="#">19AG514</a>	Food Packaging Technology	2	0	2	3	-
63	OE	<a href="#">19AG509</a>	Human Engineering and Safety	2	0	2	3	-
64	OE	<a href="#">19AG424</a>	Remote Sensing and GIS Applications	2	0	2	3	-
65	OE	<a href="#">19AG421</a>	Dairy and Food Engineering	2	0	2	3	-
66	OE	<a href="#">19BM601</a>	Fundamentals of Nutrition	3	0	0	3	-
67	OE	<a href="#">19BM602</a>	Biomedical Waste Management	3	0	0	3	-
68	OE	<a href="#">19BM603</a>	Healthcare Technologies	3	0	0	3	-
69	OE	<a href="#">19BM604</a>	Prosthetic Engineering	3	0	0	3	-
70	OE	<a href="#">19BM605</a>	Medical Devices	3	0	0	3	-
71	OE	<a href="#">19BM606</a>	Biology for Engineers	3	0	0	3	-
72	OE	<a href="#">19CE510</a>	Integrated Water Resources Management	3	0	0	3	-
73	OE	<a href="#">19CE521</a>	Air Pollution Engineering	3	0	0	3	-
74	OE	<a href="#">19CE525</a>	Traffic Engineering	3	0	0	3	-
75	OE	<a href="#">19CE527</a>	Construction Engineering and Occupational Safety	3	0	0	3	-
76	OE	<a href="#">19CE528</a>	Contract Laws and Regulations	3	0	0	3	-
77	OE	<a href="#">19CS601</a>	Database Management Systems	3	0	0	3	-
78	OE	<a href="#">19CS602</a>	Business Intelligence and its Applications	3	0	0	3	-
79	OE	<a href="#">19CS603</a>	Object Oriented Analysis and Design	3	0	0	3	-
80	OE	<a href="#">19CS516</a>	Software Testing and Quality Assurance	3	0	0	3	-
81	OE	<a href="#">19CS525</a>	Industrial IOT	3	0	0	3	-
82	OE	<a href="#">19EC601</a>	Electronic Packaging	3	0	0	3	-
83	OE	<a href="#">19EC602</a>	Introduction to Micro Electro Mechanical Systems	3	0	0	3	-

84	OE	<a href="#">19EC603</a>	Fuzzy Logic Systems and ANN	3	0	0	3	-
85	OE	<a href="#">19EC604</a>	Consumer Electronics	3	0	0	3	-
86	OE	<a href="#">19EC605</a>	Electronic System Design	3	0	0	3	-
87	OE	<a href="#">19EC606</a>	Drones for Agriculture	3	0	0	3	-
88	OE	<a href="#">19EI601</a>	Electrical and Electronic Measurements	3	0	0	3	-
89	OE	<a href="#">19EI602</a>	Instrumentation and Control Systems	3	0	0	3	-
90	OE	<a href="#">19EI504</a>	Environmental Instrumentation	3	0	0	3	-
91	OE	<a href="#">19EI508</a>	SCADA Systems and Applications	3	0	0	3	-
92	OE	<a href="#">19EI511</a>	Telemetry and Tele Control	3	0	0	3	-
93	OE	<a href="#">19BY201</a>	Introduction to Biology	2	0	0	2	-
94	OE	<a href="#">19ME505</a>	Computer Aided Design	2	0	2	3	-
95	OE	<a href="#">19ME511</a>	Automobile Engineering	2	0	2	3	-
96	OE	<a href="#">19ME524</a>	Sustainable and Green Manufacturing	2	0	2	3	-
97	OE	<a href="#">19ME529</a>	Process Planning and Cost Estimation	2	0	2	3	-
98	OE	<a href="#">19ME531</a>	Intellectual Property Rights	2	0	2	3	-
99	OE	<a href="#">19ME601</a>	Mechatronics and Robotics	2	0	2	3	-
100	OE	<a href="#">19ME602</a>	Hydraulic Drives and Controls	2	0	2	3	-
101	OE	<a href="#">19ME533</a>	3D Printing Processes	3	0	2	4	-
102	OE	<a href="#">19MD501</a>	Tele Health Technology	3	0	0	3	-
103	OE	<a href="#">19MD509</a>	Bio MEMS	3	0	0	3	-
104	OE	<a href="#">19MD512</a>	Medical Wearable Systems	3	0	0	3	-
105	OE	<a href="#">19MD601</a>	Biomedical Sensors and Measurements	3	0	0	3	-
106	OE	<a href="#">19MD602</a>	Biomedical Optics	3	0	0	3	-
107	OE	<a href="#">19CH503</a>	Energy Technology	3	0	0	3	-
108	OE	<a href="#">19CH505</a>	Green Technology	3	0	0	3	-
109	OE	<a href="#">19CH511</a>	Food Technology	3	0	0	3	-
110	OE	<a href="#">19CH512</a>	Drugs and Pharmaceutical Technology	3	0	0	3	-
111	OE	<a href="#">19CH516</a>	Corrosion Technology	3	0	0	3	-
112	OE	<a href="#">19IT517</a>	Data Security	3	0	0	3	-
113	OE	<a href="#">19IT518</a>	Game Theory	3	0	0	3	-
114	OE	<a href="#">19IT519</a>	Data Analysis using R Programming	3	0	0	3	-
115	OE	<a href="#">19IT520</a>	Linux Fundamentals	3	0	0	3	-
116	OE	<a href="#">19IT521</a>	Internet Technologies	3	0	0	3	-
117	OE	<a href="#">19IT522</a>	Fundamentals of Databases	3	0	0	3	-
118	OE	<a href="#">19EN601</a>	Creative Writing	2	0	0	2	-
119	OE	<a href="#">19EN602</a>	English through Media	2	0	0	2	-
120	OE	<a href="#">19EN603</a>	Introduction to Design	0	0	4	2	-
121	OE	<a href="#">19EN604</a>	Design Thinking	2	0	0	2	-
122	OE	<a href="#">19EN605</a>	Modern Trends in Physical Education and Sports Sciences	0	0	4	2	-
123	OE	<a href="#">19EN606</a>	Psychology for Professionals	2	0	0	2	-
124	OE	<a href="#">19EN607</a>	Heritage Studies	0	0	4	2	-
125	OE	<a href="#">19EN608</a>	Mime Theatre Art	0	0	4	2	-
126	OE	<a href="#">19EN609</a>	Gender Sensitization	2	0	0	2	-
127	OE	<a href="#">19EN610</a>	French Basic	0	0	4	2	-
128	OE	<a href="#">19EN611</a>	French Advanced	0	0	4	2	19EN610
129	OE	<a href="#">19EN612</a>	German Basic	0	0	4	2	-
130	OE	<a href="#">19EN613</a>	German Advanced	0	0	4	2	19EN612
131	OE	<a href="#">19EN614</a>	Japanese Basic	0	0	4	2	-
132	OE	<a href="#">19EN615</a>	Japanese Advanced	0	0	4	2	19EN614
133	OE	<a href="#">19EN616</a>	Yoga and Meditation	0	0	2	1	-
134	OE	<a href="#">19EN617</a>	Product Design for Future	0	0	4	2	-
135	OE	<a href="#">19EN618</a>	Indian Astronomy and Mathematics	2	0	0	2	-

136	OE	<a href="#">19EN619</a>	Inventions and Discoveries	2	0	0	2	-
137	OE	<a href="#">19EN620</a>	Mandarin	0	0	4	2	-
138	OE	<a href="#">19EN621</a>	Spanish Basic	0	0	4	2	-
139	OE	<a href="#">19EN622</a>	Spanish Advanced	0	0	4	2	19EN621
140	OE	<a href="#">19EN623</a>	Dream, Draw and Create	0	0	4	2	-
141	OE	<a href="#">19MA601</a>	Resource Management Techniques	3	0	0	3	-
142	OE	<a href="#">19MA602</a>	Statistics for Engineers	3	0	0	3	-
143	OE	19EC621	Introduction to Internet of Things (NPTEL)	0	0	0	2	-
144	OE	19EC611	Introduction to Machine Learning (NPTEL)	0	0	0	2	-
145	EEC	19EE701	Mini Project	0	0	4	2	-
146	EEC	19EE702	Project Work Phase I	0	0	4	2	-
147	EEC	19EE703	Project Work Phase II	0	0	12	6	-
148	EEC	<a href="#">19EY701</a>	Soft Skills	0	0	2	1	-
149	EEC	<a href="#">19EY702</a>	Creative Skills for Communication	0	0	2	1	-
150	EEC	<a href="#">19EY703</a>	System of Numerical and Logical Terminologies	0	0	2	1	-
151	EEC	<a href="#">19EY704</a>	Advanced Quantitative and Logical Reasoning	0	0	2	1	-
152	EEC	<a href="#">19EY705</a>	Employment Enhancement Skills	0	0	2	1	-
153	EEC	<a href="#">19EY706</a>	Company Specific Assessments for Employability	0	0	2	1	-
154	MC	<a href="#">19MC801</a>	Professional Ethics	3	0	0	0	-
155	MC	<a href="#">19MC802</a>	Environmental Science	3	0	0	0	-
156	MC	<a href="#">19MC803</a>	Constitution of India	3	0	0	0	-
157	MC	19MC804	Internship/Entrepreneurship/Consultancy	0	0	0	2	-
158	MC	19MC805	Inplant Training	0	0	0	1	-
159	MC	19MC806	Paper Publication	0	0	0	1	-
160	MC	19MC807	National Service Scheme	0	0	0	0	-
161	MC	19MC808	National Sports Organization	0	0	0	0	-
162	MC	19MC809	Youth Red Cross	0	0	0	0	-

<b>CREDIT SUMMARY</b>				
<b>CATEGORY</b>	<b>REGULAR</b>		<b>LATERAL ENTRY</b>	
	<b>Credits</b>	<b>Credit%</b>	<b>Credits</b>	<b>Credit%</b>
Humanities and Social Science Courses	10	6.17	6	4.7
Basic Science Courses	26	16.05	7	5.4
Engineering Science Courses	25	15.43	15	11.6
Professional Core Courses	58	35.8	58	45.0
Professional Elective Courses	15	9.26	15	11.6
Open Elective Courses	12	7.41	12	9.3
Employability Enhancement Courses	16	9.88	16	12.4
<b>Total</b>	<b>162</b>	<b>100</b>	<b>129</b>	<b>100</b>
Mandatory Courses	4		4	

**LEGEND**

****	2021Batch onwards
	Courses exempted for Lateral Entry students