



# SAVEETHA ENGINEERING COLLEGE

**AUTONOMOUS**


Affiliated to Anna University | Approved by AICTE

**REGULATIONS 2019**  
**FLEXIBLE CHOICE BASED CREDIT SYSTEM**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**B.E. Civil Engineering**  
**CURRICULUM**

S.No.	Category	Course Code	Course Title	Contact Hours per Week			Credits	Prerequisite
				L	T	P		
1	HS	<a href="#">19EN101</a>	Communicative English	3	0	2	4	-
2	HS	<a href="#">19EN102</a>	Technical English	3	0	2	4	-
3	HS	<a href="#">19MS151</a>	Principles of Management	3	0	0	3	-
4	HS	<a href="#">19MS152</a>	Total Quality Management	3	0	0	3	-
5	BS	<a href="#">19MA201</a>	Calculus and Matrix Algebra	3	1	0	4	-
6	BS	<a href="#">19MA205</a>	Differential Equations and Laplace Transforms	3	1	0	4	19MA201
7	BS	<a href="#">19MA211</a>	Statistics and Numerical Methods	3	0	2	4	-
8	BS	<a href="#">19PH201</a>	Basics of Engineering Physics	3	0	0	3	-
9	BS	<a href="#">19PH209</a>	Physics for Civil Engineering	3	0	2	4	19PH201
10	BS	<a href="#">19CY203</a>	Chemistry for Civil Engineering	3	0	2	4	-
11	BS	<a href="#">19BY202</a>	Introduction to Ecology	2	0	0	2	-
12	ES	<a href="#">19CE301</a>	Engineering Drawing and Modeling	2	0	4	4	-
13	ES	<a href="#">19CE302</a>	Applied Mechanics	3	1	0	4	-
14	ES	<a href="#">19CE303</a>	Fluid Mechanics	3	0	2	4	-
15	ES	<a href="#">19CE304</a>	Building Science and Technology	3	0	2	4	-
16	ES	<a href="#">19CE305</a>	Engineering Geology	3	0	0	3	-
17	ES	<a href="#">19CS301</a>	Problem Solving and Python Programming	3	0	2	4	-
18	ES	<a href="#">19EE306</a>	Basic Electrical, Electronics and Instrumentation Engineering	2	0	2	3	-
19	PC	<a href="#">19CE401</a>	Mechanics of Materials	3	0	2	4	19CE302
20	PC	<a href="#">19CE402</a>	Surveying	3	0	2	4	-
21	PC	<a href="#">19CE403</a>	Soil Mechanics	3	0	2	4	-
22	PC	<a href="#">19CE404</a>	Applied Hydraulic Engineering	2	0	2	3	19CE303
23	PC	<a href="#">19CE405</a>	Concrete Technology	3	0	0	3	-
24	PC	<a href="#">19CE406</a>	Structural Analysis	3	1	0	4	19CE401
25	PC	<a href="#">19CE407</a>	Transportation Engineering	2	0	2	3	-
26	PC	<a href="#">19CE408</a>	Environmental Engineering I	3	0	2	4	19CE404
27	PC	<a href="#">19CE409</a>	Foundation Engineering	3	1	0	4	19CE403
28	PC	<a href="#">19CE410</a>	Water Resources Engineering	3	0	0	3	-
29	PC	<a href="#">19CE411</a>	Design of Reinforced Concrete Elements	2	1	2	4	19CE406
30	PC	<a href="#">19CE412</a>	Survey Camp	0	0	4	2	19CE402
31	PC	<a href="#">19CE413</a>	Advanced Mechanics of Materials	2	1	0	3	19CE406
32	PC	<a href="#">19CE414</a>	Design of Steel Structures	2	1	0	3	19CE406
33	PC	<a href="#">19CE415</a>	Environmental Engineering II	3	0	2	4	19CE408
34	PC	<a href="#">19CE416</a>	Estimation, Costing and Valuation	2	1	0	3	19CE411
35	PC	<a href="#">19CE417</a>	Computer Aided Building Drawing	0	0	4	2	-
36	PE	<a href="#">19CE501</a>	Advanced Structural Analysis	3	0	0	3	-
37	PE	<a href="#">19CE502</a>	Prestressed Concrete Structures	3	0	0	3	-

38	PE	<a href="#">19CE503</a>	Prefabricated Structures	3	0	0	3	-
39	PE	<a href="#">19CE504</a>	Design Studio and Detailing	1	0	4	3	-
40	PE	<a href="#">19CE505</a>	Design of Tall Buildings	3	0	0	3	19CE413
41	PE	<a href="#">19CE506</a>	Industrial Structures	3	0	0	3	19CE413
42	PE	<a href="#">19CE507</a>	Irrigation Engineering and Drawing	3	0	0	3	-
43	PE	<a href="#">19CE508</a>	Groundwater Engineering	3	0	0	3	19CE410
44	PE	<a href="#">19CE509</a>	Coastal Engineering	3	0	0	3	19CE305
45	PE	<a href="#">19CE510</a>	Integrated Water Resources Management	3	0	0	3	-
46	PE	<a href="#">19CE511</a>	Water Resources Systems	3	0	0	3	19CE410
47	PE	<a href="#">19CE512</a>	Geoinformatics Applications	3	0	0	3	19CE402
48	PE	<a href="#">19CE513</a>	Geographical Information System	3	0	0	3	19CE402
49	PE	<a href="#">19CE514</a>	Advanced Surveying	3	0	0	3	19CE402
50	PE	<a href="#">19CE515</a>	Digital Cadastre	3	0	0	3	19CE402
51	PE	<a href="#">19CE516</a>	Ground Improvement Techniques	3	0	0	3	-
52	PE	<a href="#">19CE517</a>	Advanced Foundation Engineering	3	0	0	3	19CE409
53	PE	<a href="#">19CE518</a>	Municipal Solid Waste Management	3	0	0	3	-
54	PE	<a href="#">19CE519</a>	Hazardous Waste Management	3	0	0	3	-
55	PE	<a href="#">19CE520</a>	Environmental Impact Assessment	3	0	0	3	19CE410
56	PE	<a href="#">19CE521</a>	Air Pollution Engineering	3	0	0	3	-
57	PE	<a href="#">19CE522</a>	Data Analytics in Environmental Engineering	3	0	0	3	19CE408
58	PE	<a href="#">19CE523</a>	Instrumentation for Pollution Monitoring and Management	3	0	0	3	-
59	PE	<a href="#">19CE524</a>	Airport Engineering	3	0	0	3	-
60	PE	<a href="#">19CE525</a>	Traffic Engineering	3	0	0	3	-
61	PE	<a href="#">19CE526</a>	Port and Harbour Engineering	3	0	0	3	-
62	PE	<a href="#">19CE527</a>	Construction Engineering and Occupational Safety	3	0	0	3	-
63	PE	<a href="#">19CE528</a>	Contract Laws and Regulations	3	0	0	3	-
64	PE	<a href="#">19CE529</a>	Construction Planning and Scheduling	3	0	0	3	-
65	PE	<a href="#">19CE530</a>	Construction Equipment and Techniques	3	0	0	3	-
66	PE	<a href="#">19CE531</a>	Construction Project Management	3	0	0	3	-
67	PE	<a href="#">19CE532</a>	Material Science and Engineering	3	0	0	3	19CE304
68	PE	<a href="#">19CS501</a>	Machine Learning	3	0	0	3	19MA211/ 19MA212/ 19MA217/ 19MA218/ 19MA207
69	PE	<a href="#">19CS526</a>	R Programming	2	0	2	3	19CS303/ 19CS301
70	PE	<a href="#">19CS519</a>	Data Science	3	0	0	3	19CS301/ 19CS501
71	PE	<a href="#">19CS529</a>	Quantum Computing	3	0	0	3	19CS301/ 19CS303
72	OE	<a href="#">19AG601</a>	Principles of Crop Production	2	0	2	3	-
73	OE	<a href="#">19AG514</a>	Food Packaging Technology	2	0	2	3	-
74	OE	<a href="#">19AG509</a>	Human Engineering and Safety	2	0	2	3	-
75	OE	<a href="#">19AG424</a>	Remote Sensing and GIS Applications	2	0	2	3	-
76	OE	<a href="#">19AG421</a>	Dairy and Food Engineering	2	0	2	3	-
77	OE	<a href="#">19BM601</a>	Fundamentals of Nutrition	3	0	0	3	-
78	OE	<a href="#">19BM602</a>	Biomedical Waste Management	3	0	0	3	-
79	OE	<a href="#">19BM603</a>	Healthcare Technologies	3	0	0	3	-
80	OE	<a href="#">19BM604</a>	Prosthetic Engineering	3	0	0	3	-
81	OE	<a href="#">19BM605</a>	Medical Devices	3	0	0	3	-

82	OE	<a href="#">19BM606</a>	Biology for Engineers	3	0	0	3	-
83	OE	<a href="#">19CS601</a>	Database Management Systems	3	0	0	3	-
84	OE	<a href="#">19CS602</a>	Business Intelligence and its Applications	3	0	0	3	-
85	OE	<a href="#">19CS603</a>	Object Oriented Analysis and Design	3	0	0	3	-
86	OE	<a href="#">19CS516</a>	Software Testing and Quality Assurance	3	0	0	3	-
87	OE	<a href="#">19CS525</a>	Industrial IOT	3	0	0	3	-
88	OE	<a href="#">19EE601</a>	Embedded Based Product Design and Development	3	0	0	3	-
89	OE	<a href="#">19EE602</a>	Electrical Safety	3	0	0	3	-
90	OE	<a href="#">19EE603</a>	Renewable Energy Sources	3	0	0	3	-
91	OE	<a href="#">19EE604</a>	Fundamentals of Electric Power Utilization	3	0	0	3	-
92	OE	<a href="#">19EE605</a>	Industrial Automation and Robotics	3	0	0	3	-
93	OE	<a href="#">19EE606</a>	Solar Photovoltaic Energy	2	0	2	3	-
94	OE	<a href="#">19EC601</a>	Electronic Packaging	3	0	0	3	-
95	OE	<a href="#">19EC602</a>	Introduction to Micro Electro Mechanical Systems	3	0	0	3	-
96	OE	<a href="#">19EC603</a>	Fuzzy Logic Systems and ANN	3	0	0	3	-
97	OE	<a href="#">19EC604</a>	Consumer Electronics	3	0	0	3	-
98	OE	<a href="#">19EC605</a>	Electronic System Design	3	0	0	3	-
99	OE	<a href="#">19EC606</a>	Drones for Agriculture	3	0	0	3	-
100	OE	<a href="#">19EI601</a>	Electrical and Electronic Measurements	3	0	0	3	-
101	OE	<a href="#">19EI602</a>	Instrumentation and Control Systems	3	0	0	3	-
102	OE	<a href="#">19EI504</a>	Environmental Instrumentation	3	0	0	3	-
103	OE	<a href="#">19EI508</a>	SCADA Systems and Applications	3	0	0	3	-
104	OE	<a href="#">19EI511</a>	Telemetry and Tele Control	3	0	0	3	-
105	OE	<a href="#">19BY201</a>	Introduction to Biology	2	0	0	2	-
106	OE	<a href="#">19ME505</a>	Computer Aided Design	2	0	2	3	-
107	OE	<a href="#">19ME511</a>	Automobile Engineering	2	0	2	3	-
108	OE	<a href="#">19ME524</a>	Sustainable and Green Manufacturing	2	0	2	3	-
109	OE	<a href="#">19ME529</a>	Process Planning and Cost Estimation	2	0	2	3	-
110	OE	<a href="#">19ME531</a>	Intellectual Property Rights	2	0	2	3	-
111	OE	<a href="#">19ME601</a>	Mechatronics and Robotics	2	0	2	3	-
112	OE	<a href="#">19ME602</a>	Hydraulic Drives and Controls	2	0	2	3	-
113	OE	<a href="#">19ME533</a>	3D Printing Processes	3	0	2	4	-
114	OE	<a href="#">19MD501</a>	Tele Health Technology	3	0	0	3	-
115	OE	<a href="#">19MD509</a>	Bio MEMS	3	0	0	3	-
116	OE	<a href="#">19MD512</a>	Medical Wearable Systems	3	0	0	3	-
117	OE	<a href="#">19MD601</a>	Biomedical Sensors and Measurements	3	0	0	3	-
118	OE	<a href="#">19MD602</a>	Biomedical Optics	3	0	0	3	-
119	OE	<a href="#">19CH503</a>	Energy Technology	3	0	0	3	-
120	OE	<a href="#">19CH505</a>	Green Technology	3	0	0	3	-
121	OE	<a href="#">19CH511</a>	Food Technology	3	0	0	3	-
122	OE	<a href="#">19CH512</a>	Drugs and Pharmaceutical Technology	3	0	0	3	-
123	OE	<a href="#">19CH516</a>	Corrosion Technology	3	0	0	3	-
124	OE	<a href="#">19IT517</a>	Data Security	3	0	0	3	-
125	OE	<a href="#">19IT518</a>	Game Theory	3	0	0	3	-
126	OE	<a href="#">19IT519</a>	Data Analysis using R Programming	3	0	0	3	-
127	OE	<a href="#">19IT520</a>	Linux Fundamentals	3	0	0	3	-
128	OE	<a href="#">19IT521</a>	Internet Technologies	3	0	0	3	-
129	OE	<a href="#">19IT522</a>	Fundamentals of Databases	3	0	0	3	-
130	OE	<a href="#">19EN601</a>	Creative Writing	2	0	0	2	-
131	OE	<a href="#">19EN602</a>	English through Media	2	0	0	2	-

132	OE	<a href="#">19EN603</a>	Introduction to Design	0	0	4	2	-
133	OE	<a href="#">19EN604</a>	Design Thinking	2	0	0	2	-
134	OE	<a href="#">19EN605</a>	Modern Trends in Physical Education and Sports Sciences	0	0	4	2	-
135	OE	<a href="#">19EN606</a>	Psychology for Professionals	2	0	0	2	-
136	OE	<a href="#">19EN607</a>	Heritage Studies	0	0	4	2	-
137	OE	<a href="#">19EN608</a>	Mime Theatre Art	0	0	4	2	-
138	OE	<a href="#">19EN609</a>	Gender Sensitization	2	0	0	2	-
139	OE	<a href="#">19EN610</a>	French Basic	0	0	4	2	-
140	OE	<a href="#">19EN611</a>	French Advanced	0	0	4	2	19EN610
141	OE	<a href="#">19EN612</a>	German Basic	0	0	4	2	-
142	OE	<a href="#">19EN613</a>	German Advanced	0	0	4	2	19EN612
143	OE	<a href="#">19EN614</a>	Japanese Basic	0	0	4	2	-
144	OE	<a href="#">19EN615</a>	Japanese Advanced	0	0	4	2	19EN614
145	OE	<a href="#">19EN616</a>	Yoga and Meditation	0	0	2	1	-
146	OE	<a href="#">19EN617</a>	Product Design for Future	0	0	4	2	-
147	OE	<a href="#">19EN618</a>	Indian Astronomy and Mathematics	2	0	0	2	-
148	OE	<a href="#">19EN619</a>	Inventions and Discoveries	2	0	0	2	-
149	OE	<a href="#">19EN620</a>	Mandarin	0	0	4	2	-
150	OE	<a href="#">19EN621</a>	Spanish Basic	0	0	4	2	-
151	OE	<a href="#">19EN622</a>	Spanish Advanced	0	0	4	2	19EN621
152	OE	<a href="#">19EN623</a>	Dream, Draw and Create	0	0	4	2	-
153	OE	<a href="#">19MA601</a>	Resource Management Techniques	3	0	0	3	-
154	OE	<a href="#">19MA602</a>	Statistics for Engineers	3	0	0	3	-
155	OE	19CE601	Ground Improvement (NPTEL)	0	0	0	2	-
156	OE	19CE602	Glass in buildings: Design and Applications (NPTEL)	0	0	0	2	-
157	OE	19CE603	Rural Water Resources Management (NPTEL)	0	0	0	2	-
158	OE	19CE604	Municipal Solid Waste Management (NPTEL)	0	0	0	2	-
159	OE	19CE605	Introduction to Multimodal Urban Transportation Systems (NPTEL)	0	0	0	2	-
160	EEC	19CE701	Mini Project	0	0	4	2	-
161	EEC	19CE702	Project Work Phase I	0	0	4	2	-
162	EEC	19CE703	Project Work Phase II	0	0	12	6	-
163	EEC	<a href="#">19EY701</a>	Soft Skills	0	0	2	1	-
164	EEC	<a href="#">19EY702</a>	Creative Skills for Communication	0	0	2	1	-
165	EEC	<a href="#">19EY703</a>	System of Numerical and Logical Terminologies	0	0	2	1	-
166	EEC	<a href="#">19EY704</a>	Advanced Quantitative and Logical Reasoning	0	0	2	1	-
167	EEC	<a href="#">19EY705</a>	Employment Enhancement Skills	0	0	2	1	-
168	EEC	<a href="#">19EY706</a>	Company Specific Assessments for Employability	0	0	2	1	-
169	MC	<a href="#">19MC801</a>	Professional Ethics	3	0	0	0	-
170	MC	<a href="#">19MC802</a>	Environmental Science	3	0	0	0	-
171	MC	<a href="#">19MC803</a>	Constitution of India	3	0	0	0	-
172	MC	19MC804	Internship/Entrepreneurship/Consultancy	0	0	0	2	-
173	MC	19MC805	Inplant Training	0	0	0	1	-
174	MC	19MC806	Paper Publication	0	0	0	1	-
175	MC	19MC807	National Service Scheme	0	0	0	0	-
176	MC	19MC808	National Sports Organization	0	0	0	0	-
177	MC	19MC809	Youth Red Cross	0	0	0	0	-

<b>CREDIT SUMMARY</b>
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CATEGORY	REGULAR		LATERAL ENTRY	
	Credits	Credit%	Credits	Credit%
Humanities and Social Science Courses	11	6.8	3	2.5
Basic Science Courses	25	15.4	6	5.0
Engineering Science Courses	26	16	12	9.9
Professional Core Courses	57	35.2	57	47.1
Professional Elective Courses	15	9.3	15	12.4
Open Elective Courses	12	7.4	12	9.9
Employability Enhancement Courses	16	9.9	16	13.2
Total	<b>162</b>	<b>100%</b>	<b>121</b>	<b>100</b>
Mandatory Courses	4		4	

**LEGEND**

	Courses exempted for Lateral Entry students
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