



SAVEETHA ENGINEERING COLLEGE

AUTONOMOUS


Affiliated to Anna University | Approved by AICTE

REGULATIONS 2019
FLEXIBLE CHOICE BASED CREDIT SYSTEM
DEPARTMENT OF INFORMATION AND TECHNOLOGY
B.Tech. Information Technology
CURRICULUM

S.No.	Category	Course Code	Course Title	Contact Hours per Week			Credits	Prerequisite
				L	T	P		
1	HS	19EN101	Communicative English	3	0	2	4	-
2	HS	19EN102	Technical English	3	0	2	4	-
3	HS	19MS151	Principles of Management	3	0	0	3	-
4	HS	19MS152	Total Quality Management	3	0	0	3	-
5	HS	19MS153	Management and Quality Principles for Engineering	3	0	0	3	-
6	BS	19MA201	Calculus and Matrix Algebra	3	1	0	4	-
7	BS	19MA206	Logic and Combinatorics	3	1	0	4	19MA201
8	BS	19MA212	Algebra and Number Theory	3	1	0	4	19MA201
9	BS	19MA218	Probability and Queueing Theory	3	1	0	4	19MA201
10	BS	19PH206	Physics for Information Technology	3	0	2	4	-
11	BS	19CY205	Principles of Chemistry in Engineering	3	0	2	4	-
12	ES	19CS301	Problem Solving and Python Programming	3	0	2	4	-
13	ES	19CS302	Programming in C	2	0	4	4	-
14	ES	19EE305	Basic Electrical, Electronics and Measurement Engineering	2	0	2	3	-
15	ES	19ME302	Engineering Drawing	2	0	2	3	-
16	ES	19EC303	Digital Principles and System Design	3	0	2	4	-
17	ES	19EC306	Analog and Digital Communication	3	0	2	4	-
18	ES	19CS305	Computer Architecture	3	0	0	3	-
19	PC	19IT401	Information Technology Essentials	3	0	2	4	-
20	PC	19IT402	Game Development Technologies	3	0	2	4	19MA201
21	PC	19CS414	Mobile Application Development	1	0	4	3	19CS404/ 19IT404/ 19CS410
22	PC	19IT404	Web Technology	3	0	2	4	19IT401
23	PC	19IT405	Data Structures using Python	3	0	2	4	19CS301
24	PC	19CS402	Design and Analysis of Algorithms	3	0	0	3	19IT405/ 19CS401
25	PC	19CS404	Database Management System and its Applications	3	0	2	4	19AI301/19AI3 04/19CS301/19 CS302/19CS30 3
26	PC	19CS405	Operating System	3	0	2	4	-
27	PC	19CS406	Computer Networks	3	0	2	4	-
28	PC	19CS408	Software Engineering	3	0	2	4	-
29	PC	19IT406	Grid and Cloud Computing	3	0	2	4	19CS406
30	PC	19CS412	Cryptography and Network Security	3	0	2	4	19CS406
31	PC	19CS413	Artificial Intelligence	3	0	2	4	-
32	PC	19EC408	Microprocessor and Microcontroller	3	0	2	4	19EC303
33	PC	19CS409	Compiler Design	3	0	2	4	-
34	PE	19IT504	Information Storage Management	3	0	0	3	19CS404
35	PE	19IT516	Business Intelligence and Analytics	3	0	0	3	19CS521
36	PE	19CS510	Social Network Analysis	3	0	0	3	19CS413/ 19CS501
37	PE	19CS521	Data Warehousing and Data Mining	3	0	0	3	19CS404
38	PE	19CS523	Information Retrieval	3	0	0	3	19CS501/19CS 413/19AI410/1 9AI405
39	PE	19IT506	E-Learning Techniques	3	0	0	3	-
40	PE	19IT508	TCP/IP Design and Implementation	3	0	0	3	19CS406
41	PE	19IT510	Ethical Hacking	3	0	0	3	19CS412
42	PE	19IT511	DHTML and XML	3	0	0	3	19IT404
43	PE	19IT512	E-Commerce	3	0	0	3	-
44	PE	19CS525	Industrial IOT	3	0	0	3	-
45	PE	19EC508	Ad hoc and Wireless Sensor Networks	3	0	0	3	19EC412/ 19CS406
46	PE	19IT514	Real Time Operating Systems	3	0	0	3	19CS405

47	PE	19IT408	Distributed Computing	3	0	0	3	-
48	PE	19CS511	Natural Language Processing	3	0	0	3	19MA201
49	PE	19CS514	Network Management Systems	3	0	0	3	19CS406
50	PE	19CS515	Block Chain Architecture and its Use Cases	3	0	0	3	19CS412/ 19EC306/ 19EC506
51	PE	19IT502	Enterprise Resource Planning	3	0	0	3	-
52	PE	19IT503	User Interface Design	3	0	0	3	-
53	PE	19IT505	Software Design Patterns	3	0	0	3	19CS408
54	PE	19IT515	Software Agents	3	0	0	3	19CS408
55	PE	19CS504	Software Project Management	3	0	0	3	19CS408
56	PE	19CS516	Software Testing and Quality Assurance	3	0	0	3	-
57	PE	19IT501	Information Theory and Coding Techniques	3	0	0	3	-
58	PE	19IT509	Advanced Algorithms	3	0	0	3	19CS402
59	PE	19IT513	Free Open Source Software	3	0	0	3	-
60	PE	19CS513	Green Computing	3	0	0	3	-
61	PE	19EC414	Embedded Systems	2	0	2	3	19EC408
62	PE	19CS529	Quantum Computing	3	0	0	3	19CS301/ 19CS303
63	PE	19AI403	Introduction to Data Science	2	0	2	3	19AI301/19CS 301
64	PE	19AI412	Web Data Mining	3	0	2	4	-
65	PE	19CS522	Advanced Database Management System	3	0	0	3	19CS404
66	PE	19CS526	R Programming	2	0	2	3	19CS301/ 19CS303
67	PE	19AI516	Bigdata Analytics	2	0	2	3	19AI408/ 19CS410
68	PE	19AI517	Business Analytics	2	0	2	3	-
69	PE	19AI511	Scientific and Engineering Data Visualization	2	0	2	3	-
70	PE	19AI512	NoSQL Database Design	2	0	2	3	19AI301 / 19CS301
71	PE	19AI542	Agile Software Development	3	0	2	4	19CS301
72	PE	19AI405	Fundamentals of Artificial Intelligence	2	0	2	3	19CS301
73	PE	19AI409	Applied Artificial Intelligence	2	0	2	3	19AI301/19MA 220/19AI405/1 9CS301
74	PE	19AI507	Special Topics In Artificial Intelligence	2	0	2	3	-
75	PE	19AI514	Self Driving Car	2	0	4	4	19AI301/19AI3 04/19CS301/19 AI406/19AI410
76	PE	19AI306	Object Oriented Programming using C++	2	0	2	3	19AI304
77	PE	19AI307	Object Oriented Programming using Java	2	0	2	3	19AI304
78	PE	19AI410	Introduction to Machine Learning	2	0	2	3	-
79	PE	19AI411	Neural Networks	2	0	2	3	-
80	PE	19AI413	Deep Learning and its Applications	2	0	2	3	-
81	PE	19AI505	Reinforcement Learning	2	0	2	3	19AI301/19MA 218/19MA211/ 19AI410/19CS 301
82	PE	19AI506	Speech Processing	2	0	2	3	-
83	PE	19AI525	Video Processing	2	0	2	3	19CS301
84	PE	19AI513	Game Programming	2	0	4	4	19AI306/19CS 401
85	PE	19AI503	Computer Vision	2	0	2	3	19AI406/19AI3 01/19CS301
86	PE	19AI530	Control of Robotic Systems	2	0	2	3	-
87	PE	19AI533	Introduction to Robotics	2	0	2	3	-
88	PE	19AI534	Kinematics and Dynamics of Robots	2	0	2	3	-
89	PE	19AI504	Mobile Robotics	2	0	2	3	-
90	PE	19AI535	Robotic Sensors	2	0	2	3	-
91	PE	19AI532	Information Theory for Cyber Security	2	0	2	3	-
92	PE	19AI526	Database Security and Access Control	2	0	2	3	19AI527
93	PE	19AI527	Security Assessment and Risk Analysis	3	0	2	4	-
94	PE	19AI518	Cognitive Systems	3	0	0	3	-
95	PE	19AI537	Computer Graphics For Virtual Reality	2	0	2	3	-
96	PE	19AI509	Concepts of Virtual and Augmented Reality	2	0	2	3	-
97	PE	19AI510	Mobile VR and AI In Unity	2	0	2	3	19AI304/19AI4 10/19AI408/19 CS302

98	PE	19AI539	Mobile User Interface Development	2	0	2	3	19AI306/ 19AI307
99	PE	19AI540	Programming Mobile Devices	2	0	2	3	19AI306/ 19AI307
100	PE	19AI545	Modern Web Application Development	2	0	2	3	19AI306/ 19AI307
101	PE	19AI546	Web Server Programming	2	0	2	3	19AI306/ 19AI307
102	OE	19AG601	Principles of Crop Production	2	0	2	3	-
103	OE	19AG514	Food Packaging Technology	2	0	2	3	-
104	OE	19AG509	Human Engineering and Safety	2	0	2	3	-
105	OE	19AG424	Remote Sensing and GIS Applications	2	0	2	3	-
106	OE	19AG421	Dairy and Food Engineering	2	0	2	3	-
107	OE	19BM601	Fundamentals of Nutrition	3	0	0	3	-
108	OE	19BM602	Biomedical Waste Management	3	0	0	3	-
109	OE	19BM603	Healthcare Technologies	3	0	0	3	-
110	OE	19BM604	Prosthetic Engineering	3	0	0	3	-
111	OE	19BM605	Medical Devices	3	0	0	3	-
112	OE	19BM606	Biology for Engineers	3	0	0	3	-
113	OE	19CE510	Integrated Water Resources Management	3	0	0	3	-
114	OE	19CE521	Air Pollution Engineering	3	0	0	3	-
115	OE	19CE525	Traffic Engineering	3	0	0	3	-
116	OE	19CE527	Construction Engineering and Occupational Safety	3	0	0	3	-
117	OE	19CE528	Contract Laws and Regulations	3	0	0	3	-
118	OE	19CS601	Database Management Systems	3	0	0	3	-
119	OE	19CS602	Business Intelligence and its Applications	3	0	0	3	-
120	OE	19CS603	Object Oriented Analysis and Design	3	0	0	3	-
121	OE	19CS516	Software Testing and Quality Assurance	3	0	0	3	-
122	OE	19CS525	Industrial IOT	3	0	0	3	-
123	OE	19EE601	Embedded Based Product Design and Development	3	0	0	3	-
124	OE	19EE602	Electrical Safety	3	0	0	3	-
125	OE	19EE603	Renewable Energy Sources	3	0	0	3	-
126	OE	19EE604	Fundamentals of Electric Power Utilization	3	0	0	3	-
127	OE	19EE605	Industrial Automation and Robotics	3	0	0	3	-
128	OE	19EE606	Solar Photovoltaic Energy	2	0	2	3	-
129	OE	19EC601	Electronic Packaging	3	0	0	3	-
130	OE	19EC602	Introduction to Micro Electro Mechanical Systems	3	0	0	3	-
131	OE	19EC603	Fuzzy Logic Systems and ANN	3	0	0	3	-
132	OE	19EC604	Consumer Electronics	3	0	0	3	-
133	OE	19EC605	Electronic System Design	3	0	0	3	-
134	OE	19EC606	Drones for Agriculture	3	0	0	3	-
135	OE	19EI601	Electrical and Electronic Measurements	3	0	0	3	-
136	OE	19EI602	Instrumentation and Control Systems	3	0	0	3	-
137	OE	19EI504	Environmental Instrumentation	3	0	0	3	-
138	OE	19EI508	SCADA Systems and Applications	3	0	0	3	-
139	OE	19EI511	Telemetry and Tele Control	3	0	0	3	-
140	OE	19BY201	Introduction to Biology	2	0	0	2	-
141	OE	19ME505	Computer Aided Design	2	0	2	3	-
142	OE	19ME511	Automobile Engineering	2	0	2	3	-
143	OE	19ME524	Sustainable and Green Manufacturing	2	0	2	3	-
144	OE	19ME529	Process Planning and Cost Estimation	2	0	2	3	-
145	OE	19ME531	Intellectual Property Rights	2	0	2	3	-
146	OE	19ME601	Mechatronics and Robotics	2	0	2	3	-
147	OE	19ME602	Hydraulic Drives and Controls	2	0	2	3	-
148	OE	19ME533	3D Printing Processes	3	0	2	4	-
149	OE	19MD501	Tele Health Technology	3	0	0	3	-
150	OE	19MD509	Bio MEMS	3	0	0	3	-
151	OE	19MD512	Medical Wearable Systems	3	0	0	3	-
152	OE	19MD601	Biomedical Sensors and Measurements	3	0	0	3	-
153	OE	19MD602	Biomedical Optics	3	0	0	3	-
154	OE	19CH503	Energy Technology	3	0	0	3	-
155	OE	19CH505	Green Technology	3	0	0	3	-
156	OE	19CH511	Food Technology	3	0	0	3	-
157	OE	19CH512	Drugs and Pharmaceutical Technology	3	0	0	3	-
158	OE	19CH516	Corrosion Technology	3	0	0	3	-
159	OE	19EN601	Creative Writing	2	0	0	2	-

160	OE	19EN602	English through Media	2	0	0	2	-
161	OE	19EN603	Introduction to Design	0	0	4	2	-
162	OE	19EN604	Design Thinking	2	0	0	2	-
163	OE	19EN605	Modern Trends in Physical Education and Sports Sciences	0	0	4	2	-
164	OE	19EN606	Psychology for Professionals	2	0	0	2	-
165	OE	19EN607	Heritage Studies	0	0	4	2	-
166	OE	19EN608	Mime Theatre Art	0	0	4	2	-
167	OE	19EN609	Gender Sensitization	2	0	0	2	-
168	OE	19EN610	French Basic	0	0	4	2	-
169	OE	19EN611	French Advanced	0	0	4	2	19EN610
170	OE	19EN612	German Basic	0	0	4	2	-
171	OE	19EN613	German Advanced	0	0	4	2	19EN612
172	OE	19EN614	Japanese Basic	0	0	4	2	-
173	OE	19EN615	Japanese Advanced	0	0	4	2	19EN614
174	OE	19EN616	Yoga and Meditation	0	0	2	1	-
175	OE	19EN617	Product Design for Future	0	0	4	2	-
176	OE	19EN618	Indian Astronomy and Mathematics	2	0	0	2	-
177	OE	19EN619	Inventions and Discoveries	2	0	0	2	-
178	OE	19EN620	Mandarin	0	0	4	2	-
179	OE	19EN621	Spanish Basic	0	0	4	2	-
180	OE	19EN622	Spanish Advanced	0	0	4	2	19EN621
181	OE	19EN623	Dream, Draw and Create	0	0	4	2	-
182	OE	19MA601	Resource Management Techniques	3	0	0	3	-
183	OE	19MA602	Statistics for Engineers	3	0	0	3	-
184	OE	19CS607	Reinforcement Learning (NPTEL)	0	0	0	2	-
185	OE	19IT602	Social Networks (NPTEL)	0	0	0	2	-
186	OE	19IT603	Ethical Hacking (NPTEL)	0	0	0	2	-
187	OE	19EI603	Introduction to Industry 4.0 and Industry Internet of Things (NPTEL)	0	0	0	2	-
188	OE	19EC611	Introduction to Machine Learning (NPTEL)	0	0	0	2	-
189	OE	19EC616	Data Analytics with Python (NPTEL)	0	0	0	2	-
190	OE	19EC620	Foundations of Cryptography (NPTEL)	0	0	0	2	-
191	EEC	19IT701	Mini Project	0	0	4	2	-
192	EEC	19IT702	Project Work Phase I	0	0	4	2	-
193	EEC	19IT703	Project Work Phase II	0	0	12	6	-
194	EEC	19EY701	Soft Skills	0	0	2	1	-
195	EEC	19EY702	Creative Skills for Communication	0	0	2	1	-
196	EEC	19EY703	System of Numerical and Logical Terminologies	0	0	2	1	-
197	EEC	19EY704	Advanced Quantitative and Logical Reasoning	0	0	2	1	-
198	EEC	19EY705	Employment Enhancement Skills	0	0	2	1	-
199	EEC	19EY706	Company Specific Assessments for Employability	0	0	2	1	-
200	MC	19MC801	Professional Ethics	3	0	0	0	-
201	MC	19MC802	Environmental Science	3	0	0	0	-
202	MC	19MC803	Constitution of India	3	0	0	0	-
203	MC	19MC804	Internship/Entrepreneurship/Consultancy	0	0	0	2	-
204	MC	19MC805	Inplant Training	0	0	0	1	-
205	MC	19MC806	Paper Publication	0	0	0	1	-
206	MC	19MC807	National Service Scheme	0	0	0	0	-
207	MC	19MC808	National Sports Organization	0	0	0	0	-
208	MC	19MC809	Youth Red Cross	0	0	0	0	-

CREDIT SUMMARY				
CATEGORY	REGULAR		LATERAL ENTRY	
	Credits	Credit%	Credits	Credit%
Humanities and Social Science Courses	11	6.83	4	3.0
Basic Science Courses	24	14.91	8	6.1
Engineering Science Courses	25	15.53	19	14.4
Professional Core Courses	58	36.02	58	43.9
Professional Elective Courses	15	9.32	15	11.4
Open Elective Courses	12	7.45	12	9.1
Employability Enhancement Courses	16	9.94	16	12.1
Total	161	100	132	100
Mandatory Courses	4		4	

LEGEND

	Courses exempted for Lateral Entry students
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