



SAVEETHA ENGINEERING COLLEGE

AUTONOMOUS


Affiliated to Anna University | Approved by AICTE

REGULATIONS 2019
FLEXIBLE CHOICE BASED CREDIT SYSTEM
DEPARTMENT OF AGRICULTURE ENGINEERING
B.E. Agriculture Engineering
CURRICULUM

S.No.	Category	Course Code	Course Title	Contact Hours per Week			Credits	Prerequi site
				L	T	P		
1	HS	19EN103	Communication Skills and Personality Development	1	0	2	2	-
2	HS	19AG101	Entrepreneurship Development and Business Management	2	0	2	3	-
3	BS	19AG201	Principles of Agronomy	2	0	2	3	-
4	BS	19AG202	Principles of Soil Science	2	0	2	3	-
5	BS	19AG203	Principles of Horticultural Crops and Plant Protection	1	0	2	2	-
6	BS	19PH203	Engineering Physics	2	0	2	3	-
7	BS	19CY201	Engineering Chemistry	2	0	2	3	-
8	BS	19MA201	Calculus and Matrix Algebra (**)	3	1	0	4	-
9	BS	19MA208	Calculus and Matrices (***)	2	0	2	3	-
10	BS	19MA203	Complex Variables and Differential Equations	2	0	2	3	19MA201 / 19MA208
11	BS	19MA215	Numerical Analysis and Laplace Transformation	2	0	2	3	19MA201
12	ES	19CE301	Engineering Drawing and Modeling	2	0	4	4	-
13	ES	19AG301	Fluid Mechanics and Open Channel Hydraulics	2	0	2	3	-
14	ES	19AG302	Strength of Materials	1	0	2	2	19AG310
15	ES	19AG303	Heat and Mass Transfer for Agricultural Engineers	2	0	0	2	-
16	ES	19AG304	Theory of Machines	2	0	0	2	-
17	ES	19AG305	Thermodynamics, Refrigeration and Air Conditioning	2	0	2	3	19AG303
18	ES	19AG306	Surveying and Levelling	1	0	4	3	-
19	ES	19AG307	Applied Electronics and Instrumentation	2	0	2	3	-
20	ES	19AG308	Machine Design	2	0	0	2	-
21	ES	19AG309	Soil Mechanics for Agricultural Engineering	1	0	2	2	-
22	ES	19AG310	Engineering Mechanics	2	0	2	3	-
23	ES	19CS306	Computer Programming and Data Structures	1	0	4	3	-
24	ES	19CS307	Web Designing and Internet Applications	1	0	2	2	-
25	PC	19AG401	Watershed Hydrology	1	0	2	2	-
26	PC	19AG402	Electrical Machines and Power Utilization	2	0	2	3	-
27	PC	19AG403	Fundamentals of Renewable Energy Sources	2	0	2	3	-
28	PC	19AG404	Irrigation and Drainage Engineering	2	0	2	3	-
29	PC	19AG405	Tractors and Automotive Engines	2	0	2	3	-
30	PC	19AG406	Engineering Properties of Agricultural Produce	1	0	2	2	-
31	PC	19AG407	Farm Building Construction and Cost Estimation	2	0	0	2	-
32	PC	19AG408	Waste and By-Products Utilization	2	0	2	3	-
33	PC	19AG409	Soil and Water Conservation Engineering	2	0	2	3	-
34	PC	19AG410	Watershed Planning and Management	1	0	2	2	19AG401
35	PC	19AG411	Sprinkler and Micro Irrigation Systems	1	0	2	2	19AG404
36	PC	19AG412	Farm Machinery and Equipment I	2	0	2	3	-

37	PC	19AG413	Tractor Systems and Controls	2	0	2	3	19AG405
38	PC	19AG414	Agricultural Structures and Environmental Control	2	0	2	3	-
39	PC	19AG415	Post Harvest Engineering of Cereals, Pulses and Oil Seeds	2	0	2	3	-
40	PC	19AG416	Water Harvesting and Soil Conservation Structures	2	0	2	3	19AG409
41	PC	19AG417	Groundwater, Wells and Pumps	2	0	2	3	-
42	PC	19AG418	Farm Machinery and Equipment II	2	0	2	3	-
43	PC	19AG419	Tractors and Farm Machinery Operation and Maintenance	0	0	4	2	19AG412 / 19AG418
44	PC	19AG420	Post Harvest Engineering of Horticultural Crops	1	0	2	2	-
45	PC	19AG421	Dairy and Food Engineering	2	0	2	3	-
46	PC	19AG422	Precision Farming Techniques for Protected Cultivation	2	0	2	3	-
47	PC	19AG423	Bio-Energy Systems: Design and Applications	2	0	2	3	19AG403
48	PC	19AG424	Remote Sensing and GIS Applications	2	0	2	3	-
49	PE	19AG501	Wasteland Development	2	0	2	3	-
50	PE	19AG502	Information Technology for Land and Water Management	2	0	2	3	-
51	PE	19AG503	Minor Irrigation and Command Area Development	2	0	2	3	19AG404
52	PE	19AG504	Plastic Applications in Agriculture	2	0	2	3	-
53	PE	19AG505	Water Quality and Management Measures	2	0	2	3	-
54	PE	19AG506	Landscape Irrigation Design and Management	2	0	2	3	19AG411
55	PE	19AG507	Mechanics of Tillage and Traction	2	0	2	3	19AG412
56	PE	19AG508	Farm Machinery Design and Production	2	0	2	3	19AG419
57	PE	19AG509	Human Engineering and Safety	2	0	2	3	-
58	PE	19AG510	Tractor Design and Testing	2	0	2	3	19AG413
59	PE	19AG511	Precision Agriculture and System Management	2	0	2	3	19AG422
60	PE	19AG512	Food Quality and Control	2	0	2	3	-
61	PE	19AG513	Food Plant Design and Management	2	0	2	3	-
62	PE	19AG514	Food Packaging Technology	2	0	2	3	-
63	PE	19AG515	Development of Processed Products	2	0	2	3	-
64	PE	19AG516	Process Equipment and Design	2	0	2	3	-
65	PE	19AG517	Floods and Control Measures	2	0	0	0	19AG401
66	OE	19BM601	Fundamentals of Nutrition	3	0	0	3	-
67	OE	19BM602	Biomedical Waste Management	3	0	0	3	-
68	OE	19BM603	Healthcare Technologies	3	0	0	3	-
69	OE	19BM604	Prosthetic Engineering	3	0	0	3	-
70	OE	19BM605	Medical Devices	3	0	0	3	-
71	OE	19BM606	Biology for Engineers	3	0	0	3	-
72	OE	19CE510	Integrated Water Resources Management	3	0	0	3	-
73	OE	19CE521	Air Pollution Engineering	3	0	0	3	-
74	OE	19CE525	Traffic Engineering	3	0	0	3	-
75	OE	19CE527	Construction Engineering and Occupational Safety	3	0	0	3	-
76	OE	19CE528	Contract Laws and Regulations	3	0	0	3	-
77	OE	19CS601	Database Management Systems	3	0	0	3	-
78	OE	19CS602	Business Intelligence and its Applications	3	0	0	3	-
79	OE	19CS603	Object Oriented Analysis and Design	3	0	0	3	-
80	OE	19CS516	Software Testing and Quality Assurance	3	0	0	3	-
81	OE	19CS525	Industrial IOT	3	0	0	3	-

82	OE	19EE601	Embedded Based Product Design and Development	3	0	0	3	-
83	OE	19EE602	Electrical Safety	3	0	0	3	-
84	OE	19EE603	Renewable Energy Sources	3	0	0	3	-
85	OE	19EE604	Fundamentals of Electric Power Utilization	3	0	0	3	-
86	OE	19EE605	Industrial Automation and Robotics	3	0	0	3	-
87	OE	19EE606	Solar Photovoltaic Energy	2	0	2	3	-
88	OE	19EC601	Electronic Packaging	3	0	0	3	-
89	OE	19EC602	Introduction to Micro Electro Mechanical Systems	3	0	0	3	-
90	OE	19EC603	Fuzzy Logic Systems and ANN	3	0	0	3	-
91	OE	19EC604	Consumer Electronics	3	0	0	3	-
92	OE	19EC605	Electronic System Design	3	0	0	3	-
93	OE	19EC606	Drones for Agriculture	3	0	0	3	-
94	OE	19EI601	Electrical and Electronic Measurements	3	0	0	3	-
95	OE	19EI602	Instrumentation and Control Systems	3	0	0	3	-
96	OE	19EI504	Environmental Instrumentation	3	0	0	3	-
97	OE	19EI508	SCADA Systems and Applications	3	0	0	3	-
98	OE	19EI511	Telemetry and Tele Control	3	0	0	3	-
99	OE	19BY201	Introduction to Biology	2	0	0	2	-
100	OE	19ME505	Computer Aided Design	2	0	2	3	-
101	OE	19ME511	Automobile Engineering	2	0	2	3	-
102	OE	19ME524	Sustainable and Green Manufacturing	2	0	2	3	-
103	OE	19ME529	Process Planning and Cost Estimation	2	0	2	3	-
104	OE	19ME531	Intellectual Property Rights	2	0	2	3	-
105	OE	19ME601	Mechatronics and Robotics	2	0	2	3	-
106	OE	19ME602	Hydraulic Drives and Controls	2	0	2	3	-
107	OE	19ME533	3D Printing Processes	3	0	2	4	-
108	OE	19MD501	Tele Health Technology	3	0	0	3	-
109	OE	19MD509	Bio MEMS	3	0	0	3	-
110	OE	19MD512	Medical Wearable Systems	3	0	0	3	-
111	OE	19MD601	Biomedical Sensors and Measurements	3	0	0	3	-
112	OE	19MD602	Biomedical Optics	3	0	0	3	-
113	OE	19CH503	Energy Technology	3	0	0	3	-
114	OE	19CH505	Green Technology	3	0	0	3	-
115	OE	19CH511	Food Technology	3	0	0	3	-
116	OE	19CH512	Drugs and Pharmaceutical Technology	3	0	0	3	-
117	OE	19CH516	Corrosion Technology	3	0	0	3	-
118	OE	19IT517	Data Security	3	0	0	3	-
119	OE	19IT518	Game Theory	3	0	0	3	-
120	OE	19IT519	Data Analysis using R Programming	3	0	0	3	-
121	OE	19IT520	Linux Fundamentals	3	0	0	3	-
122	OE	19IT521	Internet Technologies	3	0	0	3	-
123	OE	19IT522	Fundamentals of Databases	3	0	0	3	-
124	OE	19EN601	Creative Writing	2	0	0	2	-
125	OE	19EN602	English through Media	2	0	0	2	-
126	OE	19EN603	Introduction to Design	0	0	4	2	-
127	OE	19EN604	Design Thinking	2	0	0	2	-
128	OE	19EN605	Modern Trends in Physical Education and Sports Sciences	0	0	4	2	-
129	OE	19EN606	Psychology for Professionals	2	0	0	2	-
130	OE	19EN607	Heritage Studies	0	0	4	2	-
131	OE	19EN608	Mime Theatre Art	0	0	4	2	-
132	OE	19EN609	Gender Sensitization	2	0	0	2	-
133	OE	19EN610	French Basic	0	0	4	2	-
134	OE	19EN611	French Advanced	0	0	4	2	19EN610
135	OE	19EN612	German Basic	0	0	4	2	-
136	OE	19EN613	German Advanced	0	0	4	2	19EN612
137	OE	19EN614	Japanese Basic	0	0	4	2	-
138	OE	19EN615	Japanese Advanced	0	0	4	2	19EN614

139	OE	19EN616	Yoga and Meditation	0	0	2	1	-
140	OE	19EN617	Product Design for Future	0	0	4	2	-
141	OE	19EN618	Indian Astronomy and Mathematics	2	0	0	2	-
142	OE	19EN619	Inventions and Discoveries	2	0	0	2	-
143	OE	19EN620	Mandarin	0	0	4	2	-
144	OE	19EN621	Spanish Basic	0	0	4	2	-
145	OE	19EN622	Spanish Advanced	0	0	4	2	19EN621
146	OE	19EN623	Dream, Draw and Create	0	0	4	2	-
147	OE	19MA601	Resource Management Techniques	3	0	0	3	-
148	OE	19MA602	Statistics for Engineers	3	0	0	3	-
149	EEC	19AG701	Project Work Phase I	0	0	4	2	-
150	EEC	19AG702	Project Work Phase II	0	0	16	8	-
151	EEC	19AG703	Industrial Training	0	0	0	10	-
152	EEC	19AG704	Experiential Learning On - Campus	0	0	0	10	-
153	EEC	19AG705	Skill Development Training I	0	0	0	5	-
154	EEC	19AG706	Skill Development Training II	0	0	0	5	-
155	EEC	19AG707	Educational Tour	0	0	0	2	-
156	EEC	19EY701	Soft Skills	0	0	2	1	-
157	EEC	19EY702	Creative Skills for Communication	0	0	2	1	-
158	EEC	19EY703	System of Numerical and Logical Terminologies	0	0	2	1	-
159	EEC	19EY704	Advanced Quantitative and Logical Reasoning	0	0	2	1	-
160	EEC	19EY705	Employment Enhancement Skills	0	0	2	1	-
161	EEC	19EY706	Company Specific Assessments for Employability	0	0	2	1	-
162	MC	19MC801	Professional Ethics	3	0	0	0	-
163	MC	19MC802	Environmental Science	3	0	0	0	-
164	MC	19MC803	Constitution of India	3	0	0	0	-
165	MC	19MC806	Paper Publication	0	0	0	1	-
166	MC	19MC807	National Service Scheme	0	0	0	0	-
167	MC	19MC808	National Sports Organization	0	0	0	0	-
168	MC	19MC809	Youth Red Cross	0	0	0	0	-

CREDIT SUMMARY

CATEGORY	REGULAR (2019 - 23)		REGULAR (2020 Batch onwards)		LATERAL ENTRY	
	Credits	Credit%	Credits	Credit%	Credits	Credit%
Humanities and Social Science Courses	5	2.6	5	2.9	5	3.4
Basic Science Courses	24	12.6	23	14.1	3	2.0
Engineering Science Courses	34	17.8	34	7.6	13	8.7
Professional Core Courses	65	34	65	38.2	65	43.6
Professional Elective Courses	9	4.7	9	5.3	9	6.0
Open Elective Courses	6	3.1	6	3.5	6	4.0
Employability Enhancement Courses	48	25.1	48	28.2	48	32.2
Total	191	100	190	100	149	100
Mandatory Courses	1		1		1	

LEGEND

**	2019 Batch only
***	2020 Batch onwards
	Courses exempted for Lateral Entry students