



REGULATIONS 2019
FLEXIBLE CHOICE BASED CREDIT SYSTEM
DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING
B.E. Electronics and Instrumentation Engineering
CURRICULUM

S.No	Remarks	Category	Course Code R2024	Course Code R2019	Course Title	Prerequisite	Theory Credits	Practical Credits	Total Credits	CGPA / Non - CGPA	Course Type
1	Exempted for LE, Any 1 for Regular	HS	SH1101	19EN101	Communicative English	-	3	1	4	CGPA	TIP (6 Expts)
2	Exempted for LE, Any 1 for Regular	HS	SH1106	19EN106	English for Engineers	-	3	1	4	CGPA	TIP (6 Expts)
3	Exempted for LE, Option 1 for Regular	HS	NA	19EN102	Technical English	-	3	1	4	CGPA	TIP (6 Expts)
4	Exempted for LE, Option 2 for Regular	HS	SH1107	19EN107	Technical Writing and Presentation	-	0	2	2	CGPA	Practical (10 Expts)
5	Exempted for LE, Option 2 for Regular	HS	SH1105	19EN105	Public Speaking	-	0	3	3	CGPA	Practical (10 Expts)
6		HS	NA	19MS151	Principles of Management	-	3	0	3	CGPA	Theory
7		HS	SH7101	22HS101	தமிழர் மரபு/ Heritage of Tamils	-	1	0	1	CGPA	Theory (Int Only)
8		HS	SH7102	22HS102	தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology	-	1	0	1	CGPA	Theory (Int Only)
9	Exempted for LE	BS	NA	19MA202	Calculus and Laplace Transforms	-	4	0	4	CGPA	Theory
10	Exempted for LE	BS	NA	19MA207	Numerical Methods and Partial Differential Equations	19MA202	4	0	4	CGPA	Theory
11		BS	NA	19MA214	Series and Transforms	19MA202/19MA207	4	0	4	CGPA	Theory
12	Exempted for LE	BS	NA	19PH201	Basics of Engineering Physics	-	3	0	3	CGPA	Theory
13	Exempted for LE	BS	NA	19PH210	Solid State Physics	19PH201	3	1	4	CGPA	TIP (6 Expts)
14	Exempted for LE	BS	NA	19CY207	Applied Chemistry	-	3	1	4	CGPA	TIP (6 Expts)
15		BS	NA	19BY201	Introduction to Biology	-	2	0	2	CGPA	Theory
16	Exempted for LE	ES	NA	19CS301	Problem Solving and Python Programming	-	3	1	4	CGPA	TIP (6 Expts)
17	Exempted for LE	ES	NA	19ME302	Engineering Drawing	-	2	1	3	CGPA	TIP (6 Expts)
18	Exempted for LE	ES	NA	19ME306	Basic Civil and Mechanical Engineering	-	3	0	3	CGPA	Theory
19		ES	NA	19EI301	Analog Circuits and Systems	-	3	1	4	CGPA	TIP (6 Expts)
20	Exempted for LE	ES	NA	19EC301	Electric Circuit Analysis	-	3	1	4	CGPA	TIP (6 Expts)
21		ES	NA	19EE308	Electrical Machines	19EC301	3	1	4	CGPA	TIP (6 Expts)
22		ES	NA	19EC307	Communication Engineering	-	3	0	3	CGPA	Theory
23		PC	NA	19EI401	Electrical Measurements	-	3	1	4	CGPA	TIP (6 Expts)
24		PC	NA	19EI402	Digital Logic Circuits	-	3	1	4	CGPA	TIP (6 Expts)

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25		PC	NA	19EI403	Principles of Signals and Systems	-	3	0	3	CGPA	Theory
26		PC	NA	19EI404	Transducer Engineering	-	3	0	3	CGPA	Theory
27		PC	NA	19EI405	Industrial Instrumentation I	-	3	1	4	CGPA	TIP (6 Expts)
28		PC	NA	19EI417	Linear Control Systems	-	3	0	3	CGPA	Theory
29		PC	NA	19EI406	Embedded Systems and its Architecture	-	3	1	4	CGPA	TIP (6 Expts)
30		PC	NA	19EI407	Analytical Instruments	-	3	0	3	CGPA	Theory
31		PC	NA	19EI408	Virtual Instrumentation	-	2	1	3	CGPA	TIP (6 Expts)
32		PC	NA	19EI409	Electronic Instrumentation	-	3	0	3	CGPA	Theory
33		PC	NA	19EI410	Process Control	19EI417	3	1	4	CGPA	TIP (6 Expts)
34		PC	NA	19EI411	Industrial Instrumentation II	19EI405	3	1	4	CGPA	TIP (6 Expts)
35		PC	NA	19EI412	Power Plant Instrumentation	-	3	0	3	CGPA	Theory
36		PC	NA	19EI413	Industrial Automation	19EI410	3	1	4	CGPA	TIP (6 Expts)
37		PC	NA	19EI414	Computer Control of Processes	19EI410	3	0	3	CGPA	Theory
38		PC	NA	19EI415	Industrial Data Networks	-	3	0	3	CGPA	Theory
39		PC	NA	19EI416	Biomedical Instrumentation and Measurement	-	3	0	3	CGPA	Theory
40		PE	NA	19EI502	Fiber Optics and Laser Instruments	-	3	0	3	CGPA	Theory
41		PE	NA	19CH521	Chemical Process Instrumentation	-	3	0	3	CGPA	Theory
42		PE	NA	19EI505	Robotics and Automation	-	3	0	3	CGPA	Theory
43		PE	NA	19EI506	System Identification	19EI414	3	0	3	CGPA	Theory
44		PE	NA	19EI507	Advanced Process Control	19EI410	3	0	3	CGPA	Theory
45		PE	NA	19EI509	Process Control for Food Engineering	-	3	0	3	CGPA	Theory
46		PE	NA	19EI510	Introduction to VLSI Design	19EI402	3	0	3	CGPA	Theory
47		PE	EC1503	19EC503	Digital Image Processing	19EC409 / EC1409	3	0	3	CGPA	Theory
48		PE	NA	19EI513	Applied Soft Computing	19EI414	3	0	3	CGPA	Theory
49		PE	CS1305	19CS305	Computer Architecture	-	3	0	3	CGPA	Theory
50		PE	CS1501	19CS501	Machine Learning	19MA212/ 19MA218	3	0	3	CGPA	Theory
51		PE	NA	19EI514	Introduction to Radar	-	3	0	3	CGPA	Theory
52		PE	NA	19CH507	Disaster Management	-	3	0	3	CGPA	Theory
53		PE	CE0523	19CE523	Instrumentation for Pollution Monitoring and Management	-	3	0	3	CGPA	Theory

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54		PE	NA	19EI515	Instrumentation and Control in Petrochemical Industries	19EI412	3	0	3	CGPA	Theory
55		PE	NA	19EI516	Instrumentation and Control in Iron and Steel Industries	19EI412	3	0	3	CGPA	Theory
56		PE	CS1524	19CS524	Deep Learning	19CS501	3	0	3	CGPA	Theory
57		PE	CS1526	19CS526	R Programming	19CS301/19CS303	2	1	3	CGPA	TIP (6 Expts)
58		PE	CS1519	19CS519	Data Science	19CS301/19CS501	3	0	3	CGPA	Theory
59		PE	CS1520	19CS520	Big Data Analytics	19CS411/19CS519	3	0	3	CGPA	Theory
60		PE	CS1529	19CS529	Quantum Computing	19CS301/19CS303	3	0	3	CGPA	Theory
61		PE	CS1531	19CS531	Virtual Reality	19CS401/19CS301	3	0	3	CGPA	Theory
62		PE	CS3307	19AI307	Object Oriented Programming using Java	19AI304	2	1	3	CGPA	TIP (6 Expts)
63		PE	CS3404	19AI404	Analysis of Algorithms	19AI301	2	1	3	CGPA	TIP (6 Expts)
64		PE	CS1404	19CS404	Database Management System and its Applications	19AI301/19AI304/19CS301/19CS302/1	3	1	4	CGPA	TIP (6 Expts)
65		PE(Honours)	NA	19EI501	Aircraft Systems and Instruments	-	3	0	3	CGPA	Theory
66		PE(Honours)	NA	19EI503	Ultrasonic Instrumentation	-	3	0	3	CGPA	Theory
67		PE(Honours)	NA	19EI504	Environmental Instrumentation	-	3	0	3	CGPA	Theory
68		PE(Honours)	NA	19EI508	SCADA Systems and Applications	-	3	0	3	CGPA	Theory
69		PE(Honours)	NA	19EI511	Telemetry and Tele Control	-	3	0	3	CGPA	Theory
70		PE(Honours)	NA	19EI512	Sensors and Data Acquisition	-	3	0	3	CGPA	Theory
71		PE(Honours)	NA	19EI517	Instrumentation and Control in Paper Industries	19EI412	3	0	3	CGPA	Theory
72		OE	XXXXXX	19XXXXXX	Open Electives	-	0	0	0	CGPA	Theory
73		OE	XXXXXX	19XXXXXX	Online Courses	-	0	0	0	CGPA	Experiential Learning
74		EEC	NA	19EI701	Mini Project	-	0	2	2	CGPA	Project (Int Only)
75		EEC	NA	19EI702	Project Work Phase I	-	0	2	2	CGPA	Project (Int Only)
76		EEC	NA	19EI703	Project Work Phase II	19EI702	0	6	6	CGPA	Project
77	Any 1	EEC	NA	19EY701	Softskills	-	0	1	1	CGPA	Practical (6 Expts)
78	Any 1	EEC	SH6708	19EY708	Career Development Skills	NIL	1	0	1	CGPA	Theory (Int Only)
79	Any 1	EEC	NA	19EY702	Creative Skills for Communication	-	0	1	1	CGPA	Practical (6 Expts)
80	Any 1	EEC	SH6709	19EY709	Reasoning Ability	NIL	1	0	1	CGPA	Theory (Int Only)
81	Option 1	EEC	NA	19EY703	System of Numerical and Logical Terminologies	-	0	1	1	CGPA	Practical (6 Expts)
82	Option 1	EEC	NA	19EY704	Advanced Quantitative and Logical Reasoning	-	0	1	1	CGPA	Practical (6 Expts)

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83	Option 2	EEC	SH6710	19EY710	Quantitative Ability I	NIL	1	0	1	CGPA	Theory (Int Only)
84	Option 2	EEC	SH6711	19EY711	Quantitative Ability II	SH6710 /19EY710	1	0	1	CGPA	Theory (Int Only)
85	Any 1	EEC	NA	19EY705	Employment Enhancement Skills	-	0	1	1	CGPA	Practical (6 Expts)
86	Any 1	EEC	SH6712	19EY712	Employment Enrichment Skills	19EY702 / 19EY709 / SH6709	1	0	1	CGPA	Theory (Int Only)
87	Any 1	EEC	NA	19EY706	Company Specific Assessments For Employability	-	0	1	1	CGPA	Practical (6 Expts)
88	Any 1	MC	SH6713	19EY713	Placement Readiness Assessment	19EY704 / 19EY711/SH 6711	1	0	1	CGPA	Theory (Int Only)
89		EEC	SH6707	19EY707	Paper Publication	-	0	0	1	NON-CGPA	Experiential Learning (Int Only)
90		MC	NA	19MC801	Professional Ethics	-	0	0	0	NON - CGPA	Theory (Int Only)
91		MC	NA	19MC802	Environmental Science	-	0	0	0	CGPA	Theory (Int Only)
92		MC	NA	19MC803	Constitution of India	-	0	0	0	CGPA	Theory (Int Only)
93		MC	NA	19MC804	Internship/Entrepreneurship/Consultancy	-	0	0	2	NON-CGPA	Experiential Learning (Int Only)
94		MC	NA	19MC805	Inplant Training	-	0	0	1	Non - CGPA	Experiential Learning (Int Only)
95	Any 1	MC	SH6803	19MC807	National Service Scheme	-	0	0	0	NON-CGPA	Experiential Learning (Int Only)
96	Any 1	MC	SH8807	19MC808	National Sports Organization	-	0	0	0	NON-CGPA	Experiential Learning (Int Only)
97	Any 1	MC	SH8808	19MC809	Youth Red Cross	-	0	0	0	NON-CGPA	Experiential Learning (Int Only)

BATCH: 2021- 2025		
Category	Credits to be Earned (Regular)	Credits to be Earned (Lateral Entry)
Humanities and Science	11	3
Basic Science	25	6
Engineering Science	25	11
Professional Core	58	58
Professional Electives	15	15
Open Electives	12	12
Employability Enhancement Courses	16	16
Mandatory Courses	3	3
TOTAL	165	124