

E.G.S. PILLAY ENGINEERING COLLEGE (Autonomous)

Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai
Accredited by NAAC with 'A' Grade | Accredited by NBA (CIVIL, CSE, ECE, EEE, IT, MECH)
NAGAPATTINAM – 611 002



Curriculum – R2019

B.E ELECTRONICS AND COMMUNICATION ENGINEERING

Year	Semester	L	T	P	Credit	CA	ES	Marks
I	I	11	2	8	16	360	440	800
	II	13	2	12	20	510	490	1000
II	III	19	4	6	21	510	390	900
	IV	21	2	4	21	540	460	1000
III	V	18	6	4	20	540	460	1000
	VI	19	2	4	22	540	460	1000
IV	VII	20	0	6	24	640	460	1100
	VIII	9	0	14	16	170	230	400
Total		130	18	58	160	3810	3390	7200

- ✓ Total Credits to be earned for the award of the Degree : 160
- ✓ Total Credits to be earned by lateral entry students : 124

ATTESTED

Dr. S. RAMABALAN, M.E., Ph.D.,
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Thethi, Nagore - 611 002.
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Curriculum – R2019

B.E ELECTRONICS AND COMMUNICATION ENGINEERING

First Year – First Semester

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1901MA104	Engineering Mathematics –I (Linear Algebra, Calculus and Partial differentiation)	3	2	0	4	40	60	100	BSC
1901CH102	Chemistry for Electronic Engineers	3	0	0	3	40	60	100	BSC
1901GEX03	Programming for Problem Solving	3	0	0	3	40	60	100	ESC
1901ENX01	English for Engineers	2	0	0	2	40	60	100	HSSC
Laboratory Course									
1901GEX52	Computer Programming Laboratory	0	0	2	1	50	50	100	ESC
1901GE151	Engineering Intelligence I	0	0	2	1	50	50	100	ESC
1901CHX51	Engineering Chemistry Laboratory	0	0	2	1	50	50	100	BSC
1901HSX51	Communication Skill Laboratory	0	0	2	1	50	50	100	HSSC
Total		11	2	8	16	360	440	800	

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B.E ELECTRONICS AND COMMUNICATION ENGINEERING

First Year – Second Semester

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1901MA204	Engineering Mathematics –II (Calculus, Ordinary Differential Equations and Complex Variable)	3	2	0	4	40	60	100	BSC
1901PH202	Semiconductor Physics and Optoelectronics	3	0	0	3	40	60	100	BSC
1901GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100	ESC
1901GEX02	Engineering Graphics	2	0	2	3	50	50	100	ESC
1901GE201	Engineering Exploration	2	0	0	2	40	60	100	ESC
Laboratory Course									
1901GE254	Computer Hardware and IT Essentials Laboratory	0	0	2	1	50	50	100	ESC
1901GE252	Engineering Intelligence II	0	0	2	1	100	--	100	ESC
1901GEX51	CAD Laboratory	0	0	2	1	50	50	100	ESC
1901GEX53	Basic Electrical and Electronics Engineering Laboratory	0	0	2	1	50	50	100	ESC
1901PHX51	Engineering Physics Laboratory	0	0	2	1	50	50	100	BSC
Total		13	2	12	20	510	490	1000	

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B.E ELECTRONICS AND COMMUNICATION ENGINEERING**Second Year – Third Semester**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1901MA301	Engineering Mathematics – III (Transforms and Linear algebra)	3	2	0	4	40	60	100	BSC
1902EC304	Biology for Engineers	3	0	0	3	40	60	100	ESC
1902CS306	Object Oriented Programming and Data Structures	2	0	2	3	50	50	100	ESC
1902EC301	Electron Devices	3	0	0	3	40	60	100	PCC
1902EC302	Circuits and Networks	2	2	0	3	40	60	100	PCC
1902EC303	Digital Electronics	2	0	2	3	50	50	100	PCC
Laboratory Course									
1902EC351	Devices & Circuits Laboratory	0	0	2	1	50	50	100	PCC
1904GE351	Life Skills: Verbal ability	2	0	0	1	100	-	100	EEC
1901MCX02	Constitution of India	2	0	0	0	100	-	100	MC
Total		19	4	6	21	510	390	900	

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B.E ELECTRONICS AND COMMUNICATION ENGINEERING**Second Year – Fourth Semester**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1901MA402	Probability Theory and Stochastic Processes	3	0	0	3	40	60	100	BSC
1902EC401	Electronics Circuits	3	0	0	3	40	60	100	PCC
1902EC402	Signals and Systems	2	2	0	3	40	60	100	PCC
1902EC403	Electromagnetic Fields	3	0	0	3	40	60	100	ESC
1902EC404	Analog Integrated Circuits	3	0	0	3	40	60	100	PCC
1902EC405	Microprocessors and Microcontrollers	3	0	0	3	40	60	100	PCC
Laboratory Course									
1902EC451	Electronics and Integrated Circuits Laboratory	0	0	2	1	50	50	100	PCC
1902EC452	Microprocessors and Microcontrollers Laboratory	0	0	2	1	50	50	100	PCC
1904GE451	Life Skills: Verbal Reasoning	2	0	0	1	100	-	100	EEC
1901MCX01	Environmental Studies	2	0	0	0	100	-	100	MC
Total		21	2	4	21	540	460	1000	

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B.E ELECTRONICS AND COMMUNICATION ENGINEERING**Third Year – Fifth Semester**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1902EC501	Analog Communication	3	0	0	3	40	60	100	PCC
1902EC502	Digital Signal Processing	2	2	0	3	40	60	100	PCC
1902EC503	Transmission Lines and Wave guides	2	2	0	3	40	60	100	PCC
1902EC504	Control Systems	2	2	0	3	40	60	100	PCC
1902EC505	Computer Networks	2	0	0	2	40	60	100	PCC
	Professional Elective - I	3	0	0	3	40	60	100	PEC
Laboratory Course									
1902EC551	Digital Signal Processing Laboratory	0	0	2	1	50	50	100	PCC
1902EC552	Computer Networks Laboratory	0	0	2	1	50	50	100	PCC
1901MCX03	Essence of Indian Traditional Knowledge	2	0	0	0	100	-	100	MC
1904GE551	Life Skills: Aptitude I	2	0	0	1	100	-	100	EEC
Total		18	6	4	20	540	460	1000	

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B.E ELECTRONICS AND COMMUNICATION ENGINEERING**Third Year – Sixth Semester**

Course Code	Course Name	L	T	P	C	Maximum Marks			category
						CA	ES	Total	
Theory Course									
1902EC601	Antenna and Waveguide Propagation	2	2	0	3	40	60	100	PCC
1902EC602	VLSI Design	3	0	0	3	40	60	100	PCC
1902EC603	Digital Communication	3	0	0	3	40	60	100	PCC
	HSS Elective I	3	0	0	3	40	60	100	HSSC
	Open Elective I	3	0	0	3	40	60	100	OEC
	Professional Elective – II	3	0	0	3	40	60	100	PEC
Laboratory Course									
1902EC651	VLSI Design Laboratory	0	0	2	1	50	50	100	PCC
1902EC652	Analog & Digital Communication Laboratory	0	0	2	1	50	50	100	PCC
	Industrial Visit Presentation	0	0	0	1	100	-	100	EEC
1904GE651	Life Skills: Aptitude II & GD	2	0	0	1	100	-	100	EEC
Total		19	2	4	22	540	460	1000	

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B.E ELECTRONICS AND COMMUNICATION ENGINEERING**Forth Year – Seventh Semester**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1902EC701	Microwave Engineering	3	0	0	3	40	60	100	PCC
1902EC702	Optical Communication and Networks	3	0	0	3	40	60	100	PCC
1902EC703	Digital Image Processing	3	0	0	3	40	60	100	PCC
	HSS Elective II	3	0	0	3	40	60	100	HSSC
	Open Elective II	3	0	0	3	40	60	100	OEC
	Professional Elective - III	3	0	0	3	40	60	100	PEC
Laboratory Course									
1902EC751	Microwave and Optical Laboratory	0	0	2	1	50	50	100	PCC
1902EC752	Digital Image Processing Laboratory	0	0	2	1	50	50	100	PCC
1904EC653	Internship / In-plant Training	0	0	0	1	100	-	100	EEC
1904GE751	Life skills: Comprehensive Viva	2	0	0	2	100	-	100	EEC
1904GE753	Mini Project	0	0	2	1	100	-	100	EEC
Total		20	0	6	24	640	460	1100	

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**B.E ELECTRONICS AND COMMUNICATION ENGINEERING****Forth Year – Eighth Semester**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1901MGX01	Universal Human Values and Ethics	3	0	0	3	40	60	100	HSSC
	Professional Elective – IV	3	0	0	3	40	60	100	PEC
	Professional Elective – V	3	0	0	3	40	60	100	PEC
Laboratory Course									
1904EC851	Project Work	0	0	14	7	50	50	100	EEC
Total		9	0	14	16	170	230	400	

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Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
PROFESSIONAL ELECTIVES – I									
1903EC001	Computer Architecture and Organization	3	0	0	3	40	60	100	PEC
1903EC002	Advanced Microcontrollers	3	0	0	3	40	60	100	PEC
1903EC003	Measurement and Instrumentation	3	0	0	3	40	60	100	PEC
1903EC004	Display Systems	3	0	0	3	40	60	100	PEC
1903EC005	Renewable Energy Engineering	3	0	0	3	40	60	100	PEC
PROFESSIONAL ELECTIVES – II									
1903EC006	Radar and Navigation Aids	3	0	0	3	40	60	100	PEC
1903EC007	Automotive Electronics	3	0	0	3	40	60	100	PEC
1903EC008	Internet of Things	3	0	0	3	40	60	100	PEC
1903EC009	Biomedical Engineering	3	0	0	3	40	60	100	PEC
1903EC010	Information Coding Techniques	3	0	0	3	40	60	100	PEC
PROFESSIONAL ELECTIVES – III									
1903EC011	Micro Electronics	3	0	0	3	40	60	100	PEC
1903EC012	Robotics	3	0	0	3	40	60	100	PEC
1903EC013	Network Security	3	0	0	3	40	60	100	PEC
1903EC014	Soft Computing	3	0	0	3	40	60	100	PEC
1903EC015	Advanced Digital Signal Processing	3	0	0	3	40	60	100	PEC
PROFESSIONAL ELECTIVES – IV									
1903EC016	Machine Learning and Pattern recognition	3	0	0	3	40	60	100	PEC
1903EC017	Embedded System	3	0	0	3	40	60	100	PEC
1903EC018	Multimedia Communication	3	0	0	3	40	60	100	PEC
1903EC019	Wireless Communication	3	0	0	3	40	60	100	PEC
1903EC020	High Speed Switching Networks	3	0	0	3	40	60	100	PEC
PROFESSIONAL ELECTIVES – V									
1903EC021	Nano Electronics	3	0	0	3	40	60	100	PEC
1903EC022	Opto Electronic Devices	3	0	0	3	40	60	100	PEC
1903EC023	Speech Processing	3	0	0	3	40	60	100	PEC
1903EC024	Microwave Integrated Circuits	3	0	0	3	40	60	100	PEC
1903EC025	Satellite Communication	3	0	0	3	40	60	100	PEC
HSS Elective - I									
1901MGX01	Total Quality Management	3	0	0	3	40	60	100	PEC
1901MGX02	Project Management and Finance	3	0	0	3	40	60	100	PEC
1901MGX03	Operations Research	3	0	0	3	40	60	100	PEC
1901MGX04	Principles of Management	3	0	0	3	40	60	100	PEC
HSS Elective - II									
1901HS001	Innovation & Entrepreneurship fundamentals	3	0	0	3	40	60	100	PEC
1901HS002	Intellectual Property Rights for Engineers	3	0	0	3	40	60	100	PEC
1901HS003	Startup Entrepreneurship	3	0	0	3	40	60	100	PEC
1901HS004	Business Model Innovation	3	0	0	3	40	60	100	PEC
ONE CREDIT COURSES									
1904EC001	Electromagnetic Interference and Compatibility	1	0	0	1	40	60	100	EEC
1904EC002	Digital System Design and Testing	1	0	0	1	40	60	100	EEC
1904EC003	Optical Networks	1	0	0	1	40	60	100	EEC
1904EC004	RF MEMS	1	0	0	1	40	60	100	EEC
1904EC005	Digital Switching and Transmission	1	0	0	1	40	60	100	EEC
1904EC006	ARM Processors	1	0	0	1	40	60	100	EEC
1904EC007	Mobile Computing	1	0	0	1	40	60	100	EEC
1904EC008	R Statistical Analysis	1	0	0	1	40	60	100	EEC
1904EC009	Python for Everybody	1	0	0	1	40	60	100	EEC
1904EC010	Introduction to HDL	1	0	0	1	40	60	100	EEC

(OPEN ELECTIVES) – ODD Semester

The courses listed below are offered by the Department of Electronics and Communication Engineering for students of other Departments.

1903EC017	Embedded Systems	3	0	0	3	40	60	100	OEC
1903EC007	Automotive Electronics	3	0	0	3	40	60	100	OEC
1903EC026	Mobile Communication	3	0	0	3	40	60	100	OEC
1903EC004	Display systems	3	0	0	3	40	60	100	OEC
1903EC027	Analog and Digital Communication	3	0	0	3	40	60	100	OEC

(OPEN ELECTIVES) – Even Semester

The courses listed below are offered by the Department of Electronics and Communication Engineering for students of other Departments.

1903EC028	Medical Electronics	3	0	0	3	40	60	100	OEC
1903EC029	High Speed Networks	3	0	0	3	40	60	100	OEC
1903EC030	Generations of Communication Technology	3	0	0	3	40	60	100	OEC
1903EC031	Optical Networks	3	0	0	3	40	60	100	OEC
1903EC025	Satellite Communication	3	0	0	3	40	60	100	OEC

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