



# E.G.S. PILLAY ENGINEERING COLLEGE (AUTONOMOUS)

NAGAPATTINAM – 611 002. TAMILNADU, INDIA

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

(Accredited by NAAC with 'A' Grade and NBA)

Email: principal@egspec.org website: www.egspec.org Ph: 04365-251112

## Content Focusing

## B.E – Electrical and Electronic Engineering

OFFERING 2019-2020				
S.NO	Name of the course	Course Code	Activities/ Content with direct bearing on employability/ Entrepreneurship/ skill development	Year of Introduction ( During the last five years)
1.	Engineering Mathematics-I (Calculus and Differential Equations)	1901MA103	SKILL DEVELOPMENT : DIFFERENTIAL CALCULUS, INTEGRAL CALCULUS, ORDINARY DIFFERENTIAL EQUATIONS, FOURIER SERIES, APPLICATION OF PARTIAL DIFFERENTIAL EQUATIONS	2019-2020
2.	Wave, Optics and Electromagnetism	1901PH102	EMPLOYABILITY: WAVES, NON-DISPERSIVE TRANSVERSE AND LONGITUDINAL WAVES, WAVE OPTICS, ELECTROSTATICS, MAGNETOSTATICS	2019-2020
3.	Electric Circuit Analysis	1901GE101	EMPLOYABILITY: DC CIRCUITS, AC CIRCUITS, NETWORK THEOREMS, RESONANT CIRCUITS, COUPLED CIRCUITS, TRANSIENT ANALYSIS, TWO PORT NETWORKS	2019-2020
4.	Engineering Intelligence I	1901GE151	SKILL DEVELOPMENT : ACTIVITIES ON FUNDAMENTALS OF INTER-PERSONAL COMMUNICATION , ACTIVITIES ON READING COMPREHENSION, ACTIVITIES ON PRESENTATION SKILLS, ACTIVITIES ON WRITING SKILLS, ACTIVITIES ON SOFT SKILLS	2019-2020
5.	CAD Lab	1901GEX51	EMPLOYABILITY:TWO-DIMENSIONAL DRAWING, EDITING, LAYERING AND DIMENSIONING - COORDINATE SYSTEMS-DRAWING PRACTICE - ORTHOGRAPHIC VIEWS OF SIMPLE SOLIDS USING CAD SOFTWARE	2019-2020
6.	Basic Electrical and Electronics Engineering Lab	1901GEX53	EMPLOYABILITY:WIRING, ENERGY METER, LOGIC GATES,AC AND DC CIRCUITS	2019-2020
7.	Engineering Physics Lab	1901PHX51	EMPLOYABILITY: WAVES, NON-DISPERSIVE TRANSVERSE AND LONGITUDINAL WAVES, WAVE OPTICS, ELECTROSTATICS, MAGNETOSTATICS	2019-2020

ATTESTED

  
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	Engineering Mathematics-II (Linear Algebra, Transform Calculus and Numerical Methods)	1901MA203	SKILL DEVELOPMENT : MATRICES, TRANSFORM CALCULUS, SOLUTION OF ALGEBRAIC AND TRANSCENDENTAL EQUATIONS, NUMERICAL METHODS OF ORDINARY DIFFERENTIAL EQUATIONS, NUMERICAL METHODS OF PARTIAL DIFFERENTIAL EQUATIONS	2019-2020
9.	Applied Chemistry	1901CH202	SKILL DEVELOPMENT : ELECTROCHEMISTRY, POLARISATION AND OVER POTENTIAL, CONVENTIONAL ENERGY RESOURCES AND NON CONVENTIONAL ENERGY RESOURCES , STORAGE DEVICES, POWER PLANTS AND TRANSMISSION MATERIALS	2019-2020
10.	Programming for Problem Solving	1901GEX03	EMPLOYABILITY: INTRODUCTION TO PROGRAMMING, BASICS OF C PROGRAMMING, ARRAYS AND STRINGS, FUNCTIONS AND POINTERS, STRUCTURES & FILE PROCESSING	2019-2020
11.	English for Engineers	1901ENX01	SKILL DEVELOPMENT : FOCUS ON LANGUAGE (VOCABULARY AND GRAMMAR), LISTENING SKILLS, SPEAKING SKILL, READING SKILLS, WRITING SKILLS	2019-2020
12.	Engineering Exploration	1901GE201	SKILL DEVELOPMENT : WHAT IS ENGINEERING?, ENGINEERING DESIGN, DEFINING PROBLEMS AND BRAINSTORMING, COMMUNICATING SOLUTION, MODELING AND TESTING FINAL OUTPUT, CIVIL ENGINEERING, MECHANICAL ENGINEERING: , ELECTRICAL ENGINEERING, COMPUTER ENGINEERING	2019-2020
13.	Engineering Intelligence II	1901GE252	SKILL DEVELOPMENT : VOCABULARY BULIDING, COMMUNICATION WORKSHOP, INTERPERSONAL SKILLS, LEADERSHIP& EMPLOYABILITY SKILLS, RESUME BUILDING	2019-2020
14.	Engineering Chemistry Lab	1901CHX51	SKILL DEVELOPMENT : ELECTROCHEMISTRY, POLARISATION AND OVER POTENTIAL, CONVENTIONAL ENERGY RESOURCES AND NON CONVENTIONAL ENERGY RESOURCES , STORAGE DEVICES, POWER PLANTS AND TRANSMISSION MATERIALS	2019-2020
15.	Basic Workshop Lab	1901GE253	SKILL DEVELOPMENT :CARPENTERY , LATH,	2019-2020

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			WELDING , PLUMBING,WIRING	
16.	Computer Programming Lab	1901GEX52	EMPLOYABILITY: INTRODUCTION TO PROGRAMMING, BASICS OF C PROGRAMMING, ARRAYS AND STRINGS, FUNCTIONS AND POINTERS, STRUCTURES & FILE PROCESSING	2019-2020
17.	Communication Skill Lab	1901HSX51	SKILL DEVELOPMENT : FOCUS ON LANGUAGE (VOCABULARY AND GRAMMAR), LISTENING SKILLS, SPEAKING SKILL, READING SKILLS, WRITING SKILLS	2019-2020
18.	Engineering Mathematics-III	1701MA301	SKILL DEVELOPMENT : FOURIER SERIES, FOURIER TRANSFORMS, PARTIAL DIFFERENTIAL EQUATIONS, APPLICATIONS OF PARTIAL DIFFERENTIAL EQUATIONS, TRANSFORMS AND DIFFERENCE EQUATIONS	2018-2019
19.	Electron Devices and Circuits	1702EE301	EMPLOYABILITY: DIODES, BIPOLAR JUNCTION TRANSISTOR CIRCUITS, FIELD EFFECT TRANSISTOR CIRCUITS, DIFFERENTIAL AND POWER AMPLIFIERS, FEEDBACK AMPLIFIERS AND OSCILLATORS	2018-2019
20.	Digital Electronics	1702EE302	EMPLOYABILITY: NUMBER SYSTEM AND BOOLEAN ALGEBRA, COMBINATIONAL CIRCUITS, SYNCHRONOUS SEQUENTIAL CIRCUITS, ASYNCHRONOUS SEQUENTIAL CIRCUITS, MEMORY DEVICES, PROGRAMMABLE LOGIC DEVICES AND LOGIC FAMILIES	2018-2019
21.	Electromagnetic Theory	1702EE303	EMPLOYABILITY: INTRODUCTION TO VECTOR CALCULUS, STATIC ELECTRIC FIELDS, MAGNETOSTATICS, FORCE, TORQUE AND INDUCTANCE, MAXWELLS EQUATIONS AND TIME VARYING FIELDS	2018-2019
22.	Power Plant Engineering	1702EE304	EMPLOYABILITY: COAL BASED THERMAL POWER PLANTS , HYDRO POWER PLANTS, DIESEL AND GAS POWER PLANTS, NUCLEAR POWER PLANTS, POWER FROM RENEWABLE ENERGY	2018-2019
23.	Electrical Machinery-I	1702EE305	EMPLOYABILITY: INTRODUCTION TO MACHINERY CONCEPTS, DC GENERATOR, DC MOTOR, TRANSFORMER, TESTING & APPLICATIONS OF ELECTRICAL MACHINES	2018-2019

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24.	Electrical Machinery Laboratory-I	1702EE351	EMPLOYABILITY: DC SERIES MOTOR, DC SHUNT MOTOR, DC COMPOUND MOTOR, TRANSFORMER	2018-2019
25.	Electron Devices and Circuits Laboratory	1702EE352	EMPLOYABILITY: DIODES, BIPOLAR JUNCTION TRANSISTOR CIRCUITS, FIELD EFFECT TRANSISTOR CIRCUITS, DIFFERENTIAL AND POWER AMPLIFIERS, FEEDBACK AMPLIFIERS AND OSCILLATORS	2018-2019
26.	Life Skills: Soft Skills	1704GE351	SKILL DEVELOPMENT : INTRODUCTION TO SOFT SKILLS, TEAM VS TRUST, SELLING ONESELF, CORPORATE ETIQUETTES, LEARNING BY PRACTICE	2018-2019
27.	Numerical Methods and Statistics	1701MA403	SKILL DEVELOPMENT : INTERPOLATION AND APPROXIMATION, NUMERICAL DIFFERENTIATION, NUMERICAL INTEGRATION, SOLUTION OF ALGEBRAIC AND TRANSCENDENTAL EQUATIONS, TESTING OF HYPOTHESIS	2018-2019
28.	Measurements and Instrumentation	1702EE401	EMPLOYABILITY: INTRODUCTION OF MEASURING INSTRUMENTS, ELECTRICAL AND ELECTRONICS INSTRUMENTS, COMPARISON METHODS OF MEASUREMENTS, STORAGE AND DISPLAY DEVICES, TRANSDUCERS AND DATA ACQUISITION SYSTEMS	2018-2019
29.	Linear Integrated Circuits	1702EE402	EMPLOYABILITY: FABRICATION OF INTEGRATED CIRCUITS, OPERATIONAL AMPLIFIER, APPLICATIONS OF OPERATIONAL AMPLIFIER, SIGNAL CONVERTERS, SPECIAL FUNCTION INTEGRATED CIRCUITS	2018-2019
30.	Transmission and Distribution	1702EE403	EMPLOYABILITY: INTRODUCTION TO TRANSMISSION AND DISTRIBUTION SYSTEM, PARAMETERS OF TRANSMISSION LINE, MODELLING AND PERFORMANCE OF TRANSMISSION LINES, INSULATORS AND UNDERGROUND CABLES, MECHANICAL DESIGN OF LINES AND GROUNDING	2018-2019
31.	Electrical Machinery-II	1702EE404	EMPLOYABILITY: SYNCHRONOUS GENERATOR, SYNCHRONOUS MOTOR, THREE PHASE	2018-2019

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			INDUCTION MOTOR, STARTING AND SPEED CONTROL OF THREE PHASE INDUCTION MOTOR ,SINGLE PHASE INDUCTION MOTOR & FRACTIONAL HORSE POWER MOTOR	
32.	Communication Engineering	1702EC406	EMPLOYABILITY: DIGITAL TRANSMISSION,CELLULAR COMMUNICATION,SAMPLING AND QUANTIZATION, ANGLE MODULATION SYSTEMS AMPLITUDE MODULATION SYSTEMS	2018-2019
33.	Electrical Machinery Laboratory-II	1702EE451	EMPLOYABILITY: SYNCHRONOUS GENERATOR, SYNCHRONOUS MOTOR, THREE PHASE INDUCTION MOTOR, STARTING AND SPEED CONTROL OF THREE PHASE INDUCTION MOTOR ,SINGLE PHASE INDUCTION MOTOR & FRACTIONAL HORSE POWER MOTOR	2018-2019
34.	Analog and Digital Integrated Circuits Laboratory	1702EE452	EMPLOYABILITY:SYNCHRONOUS SEQUENTIAL CIRCUITS, ASYNCHRONOUS SEQUENTIAL CIRCUITS, MEMORY DEVICES, PROGRAMMABLE LOGIC DEVICES AND LOGIC FAMILIES	2018-2019
35.	Life Skills: Verbal Ability	1704GE451	SKILL DEVELOPMENT : COMPREHENSION ABILITY, VOCABULARY USAGE, BASIC GRAMMAR AND ERROR DETECTION, REARRANGEMENT AND GENERAL USAGE, APPLICATION OF VERBAL ABILITY	2018-2019
36.	Electrical Machine Design	1702EE501	EMPLOYABILITY: INTRODUCTION TO MACHINE DESIGN, DC MACHINES, TRANSFORMERS, INDUCTION MOTORS, SYNCHRONOUS MACHINE	2019-2020
37.	Linear Control Systems	1702EE502	EMPLOYABILITY: SYSTEMS AND THEIR REPRESENTATION, TIME RESPONSE, FREQUENCY RESPONSE, STABILITY AND COMPENSATOR DESIGN, STATE VARIABLE ANALYSIS	2019-2020
38.	Power Electronics	1702EE503	EMPLOYABILITY: POWER SEMICONDUCTOR DEVICES, PHASE- CONTROLLED CONVERTERS, DC TO DC CONVERTER, INVERTERS, AC TO AC CONVERTERS	2019-2020
39.	Special Electrical Machines	1703EE001	EMPLOYABILITY: SYNCHRONOUS RELUCTANCE MOTOR, STEPPER MOTORS, SWITCHED	2019-2020

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			RELUCTANCE MOTORS, PERMANENT MAGNET BRUSHLESS DC MOTORS, PERMANENT MAGNET SYNCHRONOUS MOTOR	
40.	Electrical Safety and Management	1703EE002	EMPLOYABILITY: RULES & REGULATIONS, INSTALLATION AND EARTHING OF EQUIPMENTS, SAFETY MANAGEMENT AND FIRST AID, FIRE EXTINGUISHERS, ENERGY MANAGEMENT & ENERGY AUDITING	2019-2020
41.	Object Oriented Programming	1702CS504	EMPLOYABILITY: INTRODUCTION TO OOP'S AND C++, CONSTRUCTORS, EXCEPTION HANDLING AND INHERITANCE, OVERVIEW OF JAVA, EXCEPTION HANDLING IN JAVA	2019-2020
42.	Measurement and Control Laboratory	1702EE551	EMPLOYABILITY: STORAGE AND DISPLAY DEVICES, TRANSDUCERS AND DATA ACQUISITION SYSTEMS, CONTROLLER, TRANSFER FUNCTION	2019-2020
43.	Life Skills: Aptitude-I	1704GE551	SKILL DEVELOPMENT : INTRODUCTION TO NUMBER SYSTEM, BASIC SHORTCUTS OF ADDITION, MULTIPLICATION, DIVISION, RATIO AND PROPORTION, AVERAGES, PERCENTAGES, PROFIT AND LOSS, CODING AND DECODING, DIRECTION SENSE, NUMBER AND LETTER SERIES NUMBER AND LETTER ANALOGIES, ODD MAN OUT	2019-2020
44.	Object Oriented Programming Laboratory	1702CS554	EMPLOYABILITY: INTRODUCTION TO OOP'S AND C++, CONSTRUCTORS, EXCEPTION HANDLING AND INHERITANCE, OVERVIEW OF JAVA, EXCEPTION HANDLING IN JAVA	2019-2020
45.	Industrial Economics	1701MGX02	EMPLOYABILITY: INTRODUCTION, DEMAND AND SUPPLY, PRODUCTION AND COST, MARKET STRUCTURE, INTRODUCTION TO MACRO ECONOMICS AND FINANCIAL ACCOUNTING	2019-2020
46.	Solid State Drives	1702EE601	EMPLOYABILITY: DRIVE CHARACTERISTICS, DC MOTOR DRIVE, INDUCTION MOTOR DRIVE, SYNCHRONOUS MOTOR DRIVE, CLOSED LOOP CONTROL OF DC DRIVE	2019-2020
47.	Power System Analysis	1702EE602	EMPLOYABILITY: POWER SYSTEM MODEL, LOAD FLOW ANALYSIS, SYMMETRICAL COMPONENTS, SHORT CIRCUIT ANALYSIS, STABILITY ANALYSIS	2019-2020

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