



# 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

	Techniques		NONLINEAR PROGRAMMING (ONE DIMENSIONAL) , NONLINEAR PROGRAMMING , DYNAMIC PROGRAMMING AND HEURISTIC TECHNIQUES FOR OPTIMIZATION	
20.	Elective IV - Recent trends in power conversion Technology	1703PE001	EMPLOYABILITY: SWITCHING TECHNIQUES, DC – DC CONVERTERS, ADVANCES IN INVERTERS, MATRIX CONVERTER, HARMONIC MITIGATIONS	2018-2019
21.	Elective V- Environmental Engineering and Pollution Control	1703EV020	EMPLOYABILITY	2018-2019
22.	Project Work Phase-I	1704PE301	EMPLOYABILITY/ENTREPRENEURSHIP/SKILL DEVELOPMENT	2018-2019
23.	Project Work Phase-II	1704PE401	EMPLOYABILITY/ENTREPRENEURSHIP/SKILL DEVELOPMENT	2018-2019

## Content Focusing

### M.E – Power electronics and Drives

#### OFFERING 2019-2020

S.N O	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.	Applied Mathematics for Electrical Engineers	1701PE101	EMPLOYABILITY: ONE DIMENSIONAL RANDOM VARIABLES, TWO DIMENSIONAL RANDOM VARIABLE, INTRODUCTION TO LINEAR PROGRAMMING (LP), INVENTORY MODELS,	2017-2018

ATTESTED

Dr. S. RAMABALAN, M.E., Ph.D.,  
PRINCIPAL

E.G.S. Pillay Engineering College,  
Thethi, Nagore - 611 002.  
Nagapattinam (Dt) Tamil Nadu.



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			SIMULATION AND DECISION THEORY, FOURIER SERIES	
2.	Power Semiconductor Devices and Recent Advancements	1701PE102	EMPLOYABILITY: INTRODUCTION, POWER DIODES, THYRISTORS, POWER TRANSISTORS, IGBTs AND MODERN POWER DEVICES	2017-2018
3.	Analysis of Power Converters	1701PE103	EMPLOYABILITY: SINGLE PHASE AC-DC CONVERTER, THREE PHASE AC-DC CONVERTER, DC-DC CONVERTERS, AC VOLTAGE CONTROLLERS, CYCLOCONVERTERS	2017-2018
4.	Analysis of Inverters	1701PE104	EMPLOYABILITY: BASIC INVERTERS, VOLTAGE SOURCE INVERTERS, CURRENT SOURCE AND IMPEDANCE SOURCE INVERTERS, MULTILEVEL INVERTERS, RESONANT INVERTERS	2017-2018
5.	Modelling and Analysis of Electrical Machines	1701PE105	EMPLOYABILITY: CONCEPTS OF ROTATING MACHINES, INDUCTION MACHINE MODELING, SYNCHRONOUS MACHINE MODELING, SYNCHRONOUS MACHINE MODELING, SPECIAL MACHINES	2017-2018
6.	Solar and Energy Storage System	1703PE012	EMPLOYABILITY: INTRODUCTION, STAND ALONE PV SYSTEM, GRID CONNECTED PV SYSTEMS, ENERGY STORAGE SYSTEMS, APPLICATIONS	2017-2018
7.	Power Electronic Circuits Laboratory	1704PE106	EMPLOYABILITY: SINGLE PHASE AC-DC CONVERTER, THREE PHASE AC-DC CONVERTER, DC-DC CONVERTERS, AC VOLTAGE CONTROLLERS, CYCLOCONVERTERS	2017-2018
8.	Power Electronics Simulation Laboratory	1704PE107	EMPLOYABILITY: SINGLE PHASE AC-DC CONVERTER, THREE PHASE AC-DC CONVERTER, DC-DC CONVERTERS, AC VOLTAGE CONTROLLERS, CYCLOCONVERTERS, MULTI LEVEL INVERTER	2017-2018
9.	Communication Skills Lab I	1704PE108	SKILL DEVELOPMENT : GRAMMAR AND VOCABULARY, LISTENING, SPEAKING, READING, WRITING	2017-2018
10.	Research Methodology	1701PE201	EMPLOYABILITY/SKILL DEVELOPMENT : INTRODUCTION, SCALES AND SAMPLING, HYPOTHESIS TESTING, MULTIVARIATE	2017-2018

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			STATISTICAL TECHNIQUES, RESEARCH REPORT	
11.	Solid State DC Drives	1701PE202	EMPLOYABILITY: DC MOTORS FUNDAMENTALS AND MECHANICAL SYSTEMS, CONVERTER CONTROL, CHOPPER CONTROL , CLOSED LOOP CONTROL, DIGITAL CONTROL OF DC DRIVE	2017-2018
12.	Solid State AC Drives	1701PE203	EMPLOYABILITY: INTRODUCTION TO INDUCTION MOTORS, VSI AND CSI FED INDUCTION MOTOR CONTROL, ROTOR CONTROLLED INDUCTION MOTOR DRIVES , FIELD ORIENTED CONTROL, SYNCHRONOUS MOTOR DRIVES	2017-2018
13.	Power Quality Issues and Solutions	1701PE204	EMPLOYABILITY: INTRODUCTION, SHORT INTERRUPTIONS AND LONG INTERRUPTIONS, VOLTAGE SAGS AND TRANSIENTS , HARMONICS, POWER QUALITY SOLUTIONS	2017-2018
14.	Modelling and Design of SMPS	1701PE205	EMPLOYABILITY: STEADY-STATE CONVERTER ANALYSIS, CONVERTER DYNAMICS, CONTROLLER DESIGN, DESIGN OF MAGNETICS, RESONANT CONVERTERS	2017-2018
15.	Power Converters For Solar and Wind Energy Conversion System	1703PE002	EMPLOYABILITY: PHOTOVOLTAIC ENERGY CONVERSION, WIND ENERGY SYSTEMS, GRID CONNECTED WECS AND SECS, DISTRIBUTED POWER GENERATION SYSTEMS	2017-2018
16.	Electrical Drives Laboratory	1701PE206	EMPLOYABILITY: CONVERTER CONTROL, CHOPPER CONTROL , CLOSED LOOP CONTROL, DIGITAL CONTROL OF DC DRIVE	2017-2018
17.	Technical Seminar	1701PE207	SKILL DEVELOPMENT	2017-2018
18.	Communication Skills Lab II	1701PE208	EMPLOYABILITY/SKILL DEVELOPMENT :WRITING, SPEAKING	2017-2018
19.	Elective III- Optimization Techniques	1703PE018	EMPLOYABILITY: INTRODUCTION TO OPTIMIZATION, LINEAR PROGRAMMING , NONLINEAR PROGRAMMING (ONE DIMENSIONAL) , NONLINEAR PROGRAMMING , DYNAMIC PROGRAMMING AND HEURISTIC TECHNIQUES FOR OPTIMIZATION	2018-2019
20.	Elective IV - Recent trends in power	1703PE001	EMPLOYABILITY: SWITCHING TECHNIQUES, DC – DC CONVERTERS, ADVANCES IN INVERTERS,	2018-2019

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	conversion Technology		MATRIX CONVERTER, HARMONIC MITIGATIONS	
21.	Elective V- Environmental Engineering and Pollution Control	1703EV020	EMPLOYABILITY	2018-2019
22.	Project Work Phase-I	1704PE301	EMPLOYABILITY/ENTREPRENEURSHIP/SKILL DEVELOPMENT	2018-2019
23.	Project Work Phase-II	1704PE401	EMPLOYABILITY/ENTREPRENEURSHIP/SKILL DEVELOPMENT	2018-2019

## Content Focusing

## M.E – Power electronics and Drives

### OFFERING 2020-2021

S.N O	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.	Applied Mathematics for Electrical Engineers	1701PE101	EMPLOYABILITY: ONE DIMENSIONAL RANDOM VARIABLES, TWO DIMENSIONAL RANDOM VARIABLE, INTRODUCTION TO LINEAR PROGRAMMING (LP), INVENTORY MODELS, SIMULATION AND DECISION THEORY, FOURIER SERIES	2017-2018
2.	Power Semiconductor Devices and Recent Advancements	1701PE102	EMPLOYABILITY: INTRODUCTION, POWER DIODES, THYRISTORS, POWER TRANSISTORS, IGBTs AND MODERN POWER DEVICES	2017-2018
3.	Analysis of Power	1701PE103	EMPLOYABILITY: SINGLE PHASE AC-DC	2017-2018

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