



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

| | 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 |

ATTESTED


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

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| | Converters | | CONVERTER, THREE PHASE AC-DC CONVERTER, DC-DC CONVERTERS, AC VOLTAGE CONTROLLERS, CYCLOCONVERTERS | |
| 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 STATISTICAL TECHNIQUES, RESEARCH REPORT | 2017-2018 |
| 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 | 2017-2018 |

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| | | | CONTROL, ROTOR CONTROLLED INDUCTION MOTOR DRIVES , FIELD ORIENTED CONTROL, SYNCHRONOUS MOTOR DRIVES | |
| 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 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 |

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| Project Work Phase-II | 1704PE401 | EMPLOYABILITY/ENTREPRENEURSHIP/SKILL DEVELOPMENT | 2018-2019 |
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Content Focusing

M.E – Power electronics and Drives

OFFERING 2021-2022

| 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. | Modelling and Analysis of Electrical Machines | 2101PE101 | EMPLOYABILITY: BASIC CONCEPTS OF MODELING, DC MACHINE MODELING, TRANSFORMER MODELING, INDUCTION MACHINE MODELING, SPECIAL MACHINES | 2021-2022 |
| 2. | Analysis and Design of Power Converters | 2102PE102 | EMPLOYABILITY:SINGLE PHASE AC-DC CONVERTER, THREE PHASE AC-DC CONVERTER, DC-DC CONVERTERS, AC VOLTAGE CONTROLLERS, CYCLOCONVERTERS | 2021-2022 |
| 3. | Analysis and Design of Inverters | 2102PE103 | EMPLOYABILITY:BASIC INVERTERS, VOLTAGE SOURCE INVERTERS, CURRENT SOURCE AND IMPEDANCE SOURCE INVERTERS, MULTILEVEL INVERTERS, RESONANT INVERTERS | 2021-2022 |
| 4. | Program Elective – I Solar And Energy Storage System | 2103PE004 | EMPLOYABILITY: INTRODUCTION , STAND ALONE PV SYSTEM, GRID CONNECTED PV SYSTEMS, ENERGY STORAGE SYSTEMS, APPLICATIONS | 2021-2022 |
| 5. | Program Elective – II Power Quality | 2103PE006 | EMPLOYABILITY: INTRODUCTION, SHORT INTERRUPTIONS AND LONG INTERRUPTIONS, | 2021-2022 |

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