



GAYATRI VIDYA PARISHAD COLLEGE OF ENGINEERING FOR WOMEN

Madhurawada , Visakhapatnam

(Affiliated to JNTUK, Approved by AICTE, NEW DELHI)

Department of Electrical and Electronics Engineering

Details of Innovative Methodologies

S. NO.	FACULTY NAME	YEAR/ SEM	COURSE NAME	INNOVATION USED	METHODOLOGY ADOPTED	OUTCOME
1	Dr R V S Lakshmi Kumari	2022-23 III-I	Power Systems 2	Python programming in the analysis of the problems related to Power Systems	Used python programming in analysing the inductance and capacitance calculations of transmission lines	Students are able to get the interest in programming languages which will be beneficial for their placement. And moreover they can integrate the software knowledge in their core subjects.
2	Mr M Krishna	2021-22 IV-II	Project work	Developed Hybrid Electric Vehicle	Hardware implementation of Hybrid Electric Vehicle as a part of final year project	Students able to understand the design and implementation of electric vehicle
3	M.Krishna Dr A.Hema Chandra	2020-21 III-II	Hardware Model	Solar tree for electric vehicle charging	Hardware implementation of power electronic converters for renewable power applications	Students able to understand the design methods for power electronic converters.
4	Dr.P.Devendra Y.Ramu	2019-20 III-II	Power electronics Lab	Design of DC-DC power converter	Hardware implementation of DC-DC power converters for renewable power applications	Students able to understand the design methods for DC-DC power converters for different configurations.

5	Dr.RVS LakshmiKumari D. Srinivas Reddy	2019-20 II-I	Electrical Circuits Lab	Verification of Network theorems	Simulation approach for verification of Network theorems	Analysis of Electrical networks.
6	Dr P Devendra	2018-19 IV-II	Project work	IOT Based Energy Monitoring System	Hardware implementation of Energy Monitoring System	Students are able to develop the smart meters for monitoring of energy
7	Mr M Krishna	2018-19 IV-II	Project work	Design of MPPT charge controller for Off-Grid solar PV system.	Developed hardware model of charge controller for 300 W solar PV system	Students are able to develop the hardware model for implementing effective charge controller using MPPT techniques.
8	M. Krishna	2018-19 II-I	Basic electrical circuits	Mentored the students in NPTEL course On Basic Electrical Circuits.	Guided the students while solving the Assignment problems.	Students able to understand the subject in a better way by doing the course under his guidance.
9	Dr. P.Devendra M. Krishna V. Sree Vidhya	2018-19 III-I	Power electronics LAB	Simulation experiments are carried out along with hardware experiments.	Simulation Of power electronic converters.	Analytical capability of students improved using simulation tools.
10	Dr.RVS Lakshmi Kumari	2018-19 III-I	Power Systems-II	Demonstration of Power transmission equipment during instruction	Teaching Power systems-II with real time power system components.	Better understanding of power system equipment.
11	Dr.P.Devendra M.Krishna	2018-19 III-I	Power Electronics	Design of driver circuit for power semiconductor devices	Demonstrated design of driver circuits for switching on power IGBT.	Better understanding of driver circuit and switching on power IGBT.

12	Dr.P.Devendra M.Krishna	2018-19 III-I	Power Electronics	Hands on experience with microcontroller	Generation of pulse waveform through Aurdino board and to control power semiconductor devices.	Understood usage and coding of Aurdino microcontrollers.
13	V.Sreevidhya	2018-19 III-II	Energy Audit and Conservation & Management	Campus Energy Audit	Case study of energy audit in the institution	Students able to understand Energy conservation methods and energy calculation.
14	Dr.P.Devendra N.Veekshitha	2018-19 II -I	Electrical Circuits Lab	Verification of Network theorems	Simulation approach for verification of Network theorems	Analysis of Electrical networks.
15	M.Krishna	2017-18 IV –I	Renewable Energy	Study of Solar PV characteristics.	Demonstration of Solar PV characteristics for renewable power applications.	Students were able to understand the working of Solar PV Panel.
16	M.Krishna	2017-18 III –II	Hybrid Power Plant	Case study of hybrid renewable power generation with Wind and Solar power generation.	Demonstration of Hybrid Wind and Solar power generation for off-grid application.	Students were able to understand the operation of solar and wind power generation and importance of hybrid renewable power generation.

Availability of Innovative Methodologies for peer review

S. NO.	INNOVATION METHOD	METHODOLOGY ADOPTED	OUTCOME	AVAILABL E FOR PEER REVIEW AND CRITIC
1	Designing and implementation of Hybrid Electric Vehicle	Hardware implementation of electric drive for conventional vehicle	Students able to understand the designing and implementation of electric vehicle	Yes

2	Solar tree for electric vehicle charging	Hardware implementation of power electronic converters for renewable power applications	Students able to understand the design methods for power electronic converters.	Yes
3.	Design of DC-DC power converter	Hardware implementation of DC-DC power converters for renewable power applications	Students able to understand the design methods for DC-DC power converters for different configurations.	Yes
4.	Verification of Network theorems	Simulation approach for verification of Network theorems	Analysis of Electrical networks.	Yes
5	Mentored the students in NPTEL course On Basic Electrical Circuits.	Guided the students while solving the Assignment problems.	Students able to understand the subject in a better way by doing the course under his guidance.	Yes
6.	Simulation experiments are carried out along with hardware experiments.	Simulation Of power electronic converters.	Analytical capability of students improved using simulation tools.	Yes
7	Demonstration of Power transmission equipment during instruction	Teaching Power systems-II with real time power system components.	Better understanding of power system equipment.	Yes
8.	Design of driver circuit for power semiconductor devices	Demonstrated design of driver circuits for switching on power IGBT.	Better understanding of driver circuit and switching on power IGBT.	Yes
9.	Hands on experience with microcontroller	Generation of pulse waveform through Aurdino board and to control power semiconductor devices.	Understood usage and coding of Aurdino microcontrollers.	Yes
10.	Campus Energy Audit	Case study of energy audit in the institution	Students able to understand Energy	Yes

			conservation methods and energy calculation.	
11	Verification of Network theorems	Simulation approach for verification of Network theorems	Analysis of Electrical networks.	Yes
12.	Study of Solar PV characteristics.	Demonstration of Solar PV characteristics for renewable power applications.	Students were able to understand the working of Solar PV Panel.	Yes
13.	Case study of hybrid renewable power generation with Wind and Solar power generation.	Demonstration of Hybrid Wind and Solar power generation for off-grid application.	Students were able to understand the operation of solar and wind power generation and importance of hybrid renewable power generation.	Yes