

Methodist College of Engineering and Technology
Department of Electrical and Electronics Engineering

Academic Year: 2020-21

Annual Report

Date of Submission: 7 March 2022

HOD-EEE: Mrs. Y. Mastanamma

No. of faculty members: 12 (1 Professor + 2 Associate Professors + 9 Assistant Professors)

No. of Lab Assistants: 03

I. List of Patents by Faculty and Students:

Sl. No.	Name of the Faculty	Title of the Working models / Products	Patent details (if any)	Academic Year	Remarks
1.	Dr. Raghu Chandra Garimella Mr. J. Ramesh Babu Mrs. Y.Mastanamma & Students	AVIDYUTA DVICHAKRAVAHANA – AN ELECTRIC BICYCLE	INDIAN (Published)	2021-22	-
2.	Dr. Raghu Chandra Garimella Mr. J. Ramesh Babu Mrs. Y.Mastanamma & Students	VIDYUTHA TRAYA CHAKRA VAHANA –A HYBRID ELECTRICAL CYCLE	INDIAN (published)		-
3.	Dr. Raghu Chandra Garimella Mrs. Y.Mastanamma Mr. J.Ramesh Babu & Students	ABHIGNA VIDYUT SAMPUTAH- A SMART ELECTRIC EXTENSION BOX	INDIAN (Published)		Awaiting Examination
4.	Dr. Raghu Chandra Garimella Mrs. Y.Mastanamma Mr. J.Ramesh Babu& Students	A SMART ELECTRIC EXTENSION BOX	AUSTRALIAN (Filed)		-
5.	Dr. Raghu Chandra Garimella Nane Swarnadh Satapathi Mrs. Y mastanamma	Bitti Astita Nagarata Nistantri Samvidha - A Wall Mounted Smart Wiring System	Australian (Granted)		http://pericles.ipaustralia.gov.au/ols/auspat/quickSearch.do?queryString=2021106337&resultsPerPage=
6.	Dr. Raghu Chandra Garimella Namburi Nireekshan	Unnamed Aerial Vehicle (Uav) Based Sanitizing System	Australian (Granted)		https://pericles.ipaustralia.gov.au/ols/auspat/quickSearch.do?queryString=2021106335&resultsPerPage=
7.	Dr. Raghu Chandra Garimella Nane Swarnadh Satapathi Mrs. Y mastanamma	Parinata Vidyt Samyutanam- An Advanced Electric Extension Box	Australian (Granted)		http://pericles.ipaustralia.gov.au/ols/auspat/quickSearch.do?queryString=2021104789&resultsPerPage=
8.	Dr. Raghu Chandra Garimella P. RajiniKanth	WIRELESS MONITORING OF PV MODULE CHARACTERISTICS	Australian (Published)	http://pericles.ipaustralia.gov.au/ols/auspat/quickSearch.do?queryString=2021103489&resultsPerPage=	
9.	Dr. Raghu Chandra Garimella P. RajiniKanth	PUNARUPAYOGA DHANDA DIPA VYAVASTHA – A SYSTEM THAT ILLUMINATES FAILED FLUORESCENT TUBE LIGHT WITHOUT A CHOKE OR BALLAST	Australian (Granted)	Awaiting Examination	
10.	Dr. Raghu Chandra Garimella& Students	ELECTRONIC LIQUID DISPENSER WITH TEMPERATURE DETECTOR	Indian (Design Patent)	Amended Examination	

11.	Dr. Raghu Chandra Garimella Namburi Nireekshana Jarapala Ramesh Babu & Students	REMOTE CONTROLLED AIR VEHICLE BASED SANITIZING SYSTEM WITH PAYLOAD CARRIER	Indian (Published)	2020-21	Awaiting Examination
12.	Dr. Raghu Chandra Garimella & Students	SENSOR OPERATED AUTOMATIC POTION (S.O.A.P.) DISPENSER	Australian (Granted)		https://patents.google.com/patent/AU2020102940A4/en?q=AU2020102940A4
13.	Dr. Raghu Chandra Garimella & Students	DRONEBOT – A HEXACOPTER BASED PERSONAL ASSISTANT	Australian (Granted)		https://patents.google.com/patent/AU2020102662A4/en?q=AU2020102662A4
14.	Dr. Raghu Chandra Garimella Dr. Prabhu G. Benakop N. Nireekshan J. Ramesh Babu & Students	MICROCONTROLLER BASED INFINITESIMAL NEUTRALIZED INFECTIOUS CIDE (M.I.N.I. CIDE)	Indian (Published)		Amended Examination
15.	Dr. Raghu Chandra Garimella Bhavani Shankar T. Raghavendra Nayak Khethavath	Portable Hybrid Power Bank	Australian Patent (Granted)		https://patents.google.com/patent/AU2020100836A4/en?q=AU2020100836A4
16.	Dr. Raghu Chandra Garimella Bhavani Shankar T. Raghavendra Nayak Khethavath	Solar Powered Hybrid Energy Bank	Indian Patent (Granted)		https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewPDF

II. Activities/Events/ Placements related to EEE Students:

1. Total number of workshops / programs conducted by the department during the academic Year 2020-21.

S.No.	Title of the Program	Date(s) conducted	Students group	No. of Participants	Sponsored by institute/self	Benefit to the students
1	WEBINAR ON RENEWABLE ENERGY SOURCES USING MATLAB	28-05-2020	ALL EEE students	92	ONLINE MODE	YES
2	RENEWABLE ENERGY SCENARIO IN INDIA	30-05-2020	ALL EEE students	110	ONLINE MODE	YES
3	INDIA-THE RISE OF ELECTRIC VECHICLES	25-05-2021	ALL EEE students	120	ONLINE MODE	YES

3. Training and Placements details (during Academic Year 2020-2021):

S. No.	Organization name	Total
1	HCL	6

4. Real Time Projects by the Department:

Many of the projects are of Real time, students with their interest and enthusiasm have done many projects. List of projects is given below

- 1) MICROCONTROLLER BASED UV GERMICIDE
- 2) ELECTRIC TRICYCLE
- 3) SOLAR BASED ELECTRIC VEHICLE WITH ULTRA SONIC SENSOR AND LDR
- 4) ELECTRIC KART
- 5) SMART HYBRID SOLAR HELMET
- 6) A NOVAL TYPE OF MULTI-FUNCTIONAL 6 PROPELLER AERIAL VEHICLE
- 7) HAND MOVEMENT BASED HOME APPLIANCES CONTROL SYSTEM USING MEMS SENSOR
- 8) HOME AUTOMATION WITH SOLAR TRACKING SYSTEM
- 9) SCROLLING DIGITAL ALARM DISPLAY FOR SWITCH YARD/POWER HOUSE USING BLUETOOTH
- 10) VOICE CONTROLLED AUTOMATIC DUSTBIN
- 11) ULTRASONIC BRAKING BASED SOLAR VEHICLE WITH LIGHT DEPENDENT RESISTOR
- 12) SOLAR GROSS CUTTER
- 13) VEHICLE TRACKING SYSTEM USING GPS &GSM
- 14) REMOTE CONTROLLED AIR VEHICLE BASED SANITIZING SYSTEM WITH PAY LOAD CARRIE

5. Result Analysis during last Academic Year i.e., 2020-2021, I Sem & II Sem:

Semester-I

Sl. No.	Semester	Appeared	Passed	Fail	Pass%
1	III Sem	57	35	22	61.4
2	V Sem	70	47	23	67.14

Semester-II

Sl. No.	Semester	Appeared	Passed	Fail	Pass%
1	IV Sem	57	36	21	63.15
2	VI Sem	70	52	18	74.28
3	VIII Sem	61	58	03	95.08

II. Faculty Activities:

1. Details of the Seminars/ Conferences / Workshops /Refresher Courses / Orientation Courses/ FDPs attended during the academic year 2020-21

Sl. No.	Name of the Faculty	Name of the FDP	Organized by	Date(s) and Duration
1.	A. Archana	MOODLE Learning Management System	JNTU COLLEGE OF ENGINEERING SULTANPUR AND SPOKEN TUTORIAL PROJECT, IIT BOMBAY	10-15 June 2020 and one week
2.	A. Archana	Technological Advances in Power Switching Converters for Renewable Sources and Fuel Cell Technology for E-vehicles	BAPATLA ENGINEERING COLLEGE	01-06-2020 to 05-06-2020 and 5 days
3.	N. Nireekshan	Recent trends in renewable energy sources and their integration to smart grid	ST. PETER'S ENGINEERING COLLEGE	23.11.2020 to 28.11.2020
4.	N. Nireekshan	Recent advances in electrical engineering (raee-2020)	VEMU INSTITUTE OF TECHNOLOGY	03-06-2020 to 07-06-2020
5.	N. Nireekshan	Advances and Challenges In Industrial Automation, E-vehicles, Product and Process Controls Manufacturing in Electrical and Electronics Engineering	QIS COLLEGE OF ENGINEERING AND TECHNOLOGY	3.06.2020 to 7.06.2020.
6.	N. Nireekshan	Recent Trends in Power Systems	SHARAD INSTITUTE OF TECHNOLOGY COLLEGE OF ENGINEERING YADRAV	22nd June 2020 to 26th June 2020

7.	N. Nireekshan	Recent Strategies on Micro- and Smart-Grid Technologies	GMR INSTITUTE OF TECHNOLOGY, RAJAM	June 15 - 19, 2020
8.	N. Nireekshan	Technological Advances in Power Switching Converters for Renewable Energy Sources and Fuel Cell Technology for E-vehicles	BAPATLA ENGINEERING COLLEGE, BAPATLA	01-06-2020 to 05-06-2020
9.	N. Nireekshan	Industrial relevance of electrical engineering	BVRIT HYD	15 TH TO 20 TH JUNE 2020
10.	N. Nireekshan	Electric power grid modernization trends, Challenges and opportunities	KITS, GUNTUR	09/06/2020 to 13/06/2020.
11.	Rajini Kanth P.	One week FDP on “Recent trends in Power systems”	SHARAD INSTITUTE IF TECHNOLOGY, MAHARASHTRA	22 nd to 26 th June, 2020
12.	Rajini Kanth P.	Effective role of teachers in enhancing standards of technical education	Geethanjali Institute of science and technology.	6th June 2020
13.	Rajini Kanth P.	Research challenges and application of computational tools in electrical engineering	Vignan's Nirula Institute of technology and science	10th to 15th Aug 2020
14.	Rajini Kanth P.	Energy Engineering	AICTE ATAL	21st to 25th Sep 2020
15.	Rajini Kanth P.	Recent trends in renewable energy sources and their integration to smart grid	St.Peter's Engineering college	23rd to 28 th Nov 2020
16.	Rajini Kanth P.	Power system dynamics, control and monitoring	NPTEL-AICTE	Jan to April 2021 (12 weeks)

17.	Rajini Kanth P.	Industrial training in data science using python	NSIC hyderabad	1st July to 15th July 2021
18.	Rajini Kanth P.	Online Certification course "Computer Aided Power System Analysis	NPTEL, IIT Roorkee	12 Weeks
19.	Rajini Kanth P.	Online Certification course "Fundamentals Of Artificial Intelligence"	NPTEL, IIT Roorkee	12 Weeks
20.	Rajini Kanth P.	Online Certification course "Power System Dynamics, Control and Monitoring"	NPTEL, IIT Roorkee	12 Weeks
21.	Y. Mastanamma	A Five Day Faculty Development Programme on "Novel Technologies in Electrical Engineering	MAHAVEER INSTITUTE OF SCIENCE AND TECHNOLOGY, HYDERABAD	10.08.2020 to 14.08.2020
22.	Y. Mastanamma	A Five Day Faculty Development Programme on "Recent Trends in Electrical Engineering	VISHNU INSTITUTE OF TECHNOLOGY, BHIMAVARAM	08.06.2020 to 12.6.2020
23.	Y. Mastanamma	Introduction to web development	SPOORTHY ENGINEERING COLLEGE ,HYD.	17th to 19th July 2020
24.	Y. Mastanamma	National Level webinar on Current trends in research & innovation, research paper publications, IPR and patents, research projects fundraising for faculty of HEI	Institute of Academic excellence,Hyderabad & CETED,Telangana State	27 th to 31 August 2021 (1 week)
25.	V. Saketha	One week FDP on "Recent trends in Power systems"	SHARAD INSTITUTE IF TECHNOLOGY, MAHARASHTRA	22 nd to 26 th June, 2020

26.	K. Pulla Reddy	Technological Advances in Power Switching Converters for Renewable Energy Sources and Fuel Cell Technology for E-vehicles	BAPATLA ENGINEERING COLLEGE	01-06-2020 to 05-06-2020
27.	K. Pulla Reddy	Recent Challenges and Emerging Techniques on Microgrid	DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING,G.NARAYANAMMA INSTITUTE OF TECHNOLOGY AND SCIENCE (FOR WOMEN)	16th to 20th June 2020 with a score of 65%
28.	K. Pulla Reddy	Reliability and its Applications to Power systems and Drives	University college of Engineering,Osmania university,Hyderabad	26th to 27th June ,2020
29.	K. Pulla Reddy	Recent Trends in management	GATES INSTITUTE OF TECHNOLOGY,ANANTAPUR	13-7-2020 to 19-07-2020
30.	K. Pulla Reddy	Latest Trends on Solar CELL Technology	HYDERABAD INSTITUTE OF ELECTRICAL ENGINEERS	6th June 2021
31.	K. Pulla Reddy	Challenges And Advanced Trends In Micro Grid And Smart Grid	Stanley College of Engineering & Technology for Women,Hyderabad	30-8-2021 to 3-09-2021
32.	A. Archana	“Fundamentals of Geographic Information System”	METHODIST College of Engineering and Technology	06-June-2020/ 1 Day
33.	A. Archana	Now and Future: Climate Change and Food Systems	METHODIST College of Engineering and Technology	06-June-2020/ 1 Day
34.	A. Archana	“Intellectual Property Rights and Patents	Vaageswari College of Engineering	16-June-2020/ 1 Day
35.	A. Archana	Grid connection of Renewable Energy Generation- Challenges and Solutions	Nalla Narasimha Reddy Education Society’s Group of Institutions	15.7.2020/ 1 Day
36.	CVR Sriilalit Narayana	Electrical Engineering in Industry	Bharat Institute of Engineering and Technology	25 th ,27 th and 29 th June 2020 3 days

37.	CVR Sriilalit Narayana	Research Opportunities in Electrical Engineering	Tirumala Engineering College	1 st June to 5 th June 2020 6 days
38.	CVR Sriilalit Narayana	Outcome Based Education	University college of Engineering , Hyderabad	12 th to 14 th August 2020 3 days
39.	CVR Sriilalit Narayana	Recent Trends in Electrical Engineering	Vishnu Institute of Technology	8 th to 12 th June 2020 5 days
40.	CVR Sriilalit Narayana	Recent Trend sin Power Systems	Sharad Institute of Technology	22 June to 26 th June 2020 5 days
41.	CVR Sriilalit Narayana	Technological Advances in Power switching converters	Bapatla Engineering College	1 st June to 6 th June 2020 6 days
42.	CVR Sriilalit Narayana	Workshop on MATLAB and SIMULINK	New Horizon College of Engineering	1 st Sept to 4 th Sept 2020 4days
43.	CVR Sriilalit Narayana	Crypto Currencies and Block Chain	Chalapathi Institute of Engineering and Technology	19 th Aug 2020
44.	CVR Sriilalit Narayana	Recent Development s in Nano Structured Metals	IFERP	25 OCT 2020
45.	CVR Sriilalit Narayana	Transformation of Business Operations in Industry	IFERP	31 OCT 2020
46.	CVR Sriilalit Narayana	Optical Wireless Communication – Challenges	IFERP	3 OCT 2020
47.	CVR Sriilalit Narayana	Personality Development and Winning Attitude	IFERP	18 Sept 2020
48.	CVR Sriilalit Narayana	Latest Trends in Nano Technology	IFERP	10 Sept 2020
49.	CVR Sriilalit Narayana	Scope Opportunities and Challenges in Electric Vehicles	IFERP	12 Sept 2020
50.	CVR Sriilalit Narayana	Technology Based Teaching in Class Room	IFERP	10 Sept 2020
51.	CVR Sriilalit Narayana	Basic Design Concepts of Substation and Switch yard	G Narayanamma Institute of Technology & Science	6 th June 2020

52.	CVR Sriilalit Narayana	Power Converters Configuration and Applications	G Narayanamma Institute of Technology & Science	4 th June 2020
53.	CVR Sriilalit Narayana	Fundamentals of GIS	Methodist College of Engineering & Technology	6 th June 2020
54.	CVR Sriilalit Narayana	Believe in power of mentoring	PSR Engineering College	5 th June 2020
55.	CVR Sriilalit Narayana	Solar Energy – Introduction and current trends	Poornima Institute of Engineering & Technology	4 th June 2020
56.	CVR Sriilalit Narayana	Nuances in NAAC	Visvesvaraya Technological University	14 th AUG 2020
57.	CVR Sriilalit Narayana	Lighting Systems Concepts	HIEE	16 th July 2020
58.	N. Nireekshan	Power converters topologies in renewable energy source	EEE,NADIMPALLY STYANARAYANA RAJU ,AP	6 TH JUNE 2020
59.	N. Nireekshan	Road map to get a quality patent	DEPT OF EEE,AMET CHENNAI	13 TH JUNE 2020
60.	N. Nireekshan	Power conditioning system for remote microgrid and reliability assessment	JERUSALEM COLLEGE OF ENGINEERING	13 TH JUNE 2020
61.	N. Nireekshan	Recent trends in power systems	SHARAD INSTITUTE OF TECHNOLOGY COLLEGE OF ENGINEERING	26 TH JUNE 2020
62.	E. Saidulu	Webinar on Power converters control configurations and applications.	G.Narayanamma institute of technology and engineering.	4 th June 2020/1 day
63.	E. Saidulu	Webinar on Power converter topologies in renewable energy sources.	Nadimpalli satyanarayana raju institute of technology.	6 th June 2020/1 day
64.	E. Saidulu	Webinar on PFC Based AC-DC LED Driver Circuits.	VAAGDEVI College of engineering.	8 th June 2020/1 day
65.	E. Saidulu	Webinar on Effective role of teachers in enhancing standards of technical education.	Geethanjali institute of science and technology.	6 th June 2020/1 day
66.	J.Ramesh Babu	Teaching and Learning Tools Setup and Assessments for Next Generation	B V Raju Institute of Technology	12-14 May-2020

67.	J.Ramesh Babu	Renewable Energy Sources Using MATLAB	Methodist College of Engineering and Technology	28 –may-2020
68.	J.Ramesh Babu	World Intellectual Property Rights(IPR)	Crescent institute of science and technology	26-May-2020
69.	J.Ramesh Babu	Outcome based education OBC	Sinhgad institute of technology and science	7-May-2020
70.	J.Ramesh Babu	e-vehicles for sustainable transportation	Geethanjali institute of science and technology	14-May-2020
71.	J.Ramesh Babu	Online Teaching Methods	AQHTIO-CE000086	13-May-2020
72.	J.Ramesh Babu	Electric vehicles	Attended	ATAL-Fr.C.Rodrigue Institute of Technology
73.	J.Ramesh Babu	Hybrid Electric Vehicles and Battery Management Systems	Attended	CVR college of Engineering
74.	J.Ramesh Babu	Electric vehicles	Attended	ATAL-K S Rangasamy college of Technology
75.	J.Ramesh Babu	Trends and challenges of hybrid electric drive utilities in transport sector	Attended	Chaitanya Bharathi Institute of Technology
76.	J.Ramesh Babu	Thermal Power and Energy Engineering	Attended	NITTTR, Chennai

2. Details of Research Publications (during Academic Year 2020-2021):

Sl. No.	Title of paper	Name of the author/s	Name of journal	ISBN/ISSN number
1	A Novel Proficient Secure Routing Strategy In Mobile Ad Hoc Frame Using Heuristic-Based Load Balancing Protocol	T.V. Suresh Kumar, Dr. Prabhu G Benakop	Solid State Technology	0038-111X
2	Direct-Driven Permanent Magnet Synchronous Generator Based Wind Energy Conversion System with A Neutral-Point Clamped Grid-Side	Y. Mastanamma, Dr. D. Subbarayudu	The International journal of analytical and experimental modal analysis	ISSN NO:0886-93672

Sl. No.	Title of paper	Name of the author/s	Name of journal	ISBN/ISSN number
	Converter			
3	Image processing based assessment of explosive energy distribution in mine blast - Case study	Raghu Chandra Garimella, Rajasekhar Ballari, and Rama Sastry Vedala	Advances and Applications in Mathematical Sciences	ISSN 0974-6803
4	Designing an efficient forecasting routing protocol to secure the mobile ad hoc network communication	T.V. Suresh Kumar and Dr. Prabhu G Benakop	Bulletin Monumental	e-ISSN 0007-473X
5	A Secure Routing Protocol for MANET using Neighbor Node Discovery and Multi Detection Routing Protocol	T.V. Suresh Kumar and Dr. Prabhu G Benakop	International Journal of Engineering Trends and Technology (IJETT) – Volume 68 Issue 7 - July 2020	ISSN: 2231-5381
6	CmosRf Transceiver For Wireless Sensor Networks In Medical Field	Chandrasekhar Kandagatla , Dr.Prabhu G. Benakop	International Journal of Future Generation Communication and Networking	ISSN:2233-7857
7	CMOS Applications and Implementation Procedure of Wireless Multimedia Sensor Network	Chandrasekhar Kandagatla, Dr. Prabhu G. Benakop	Design Engineering	ISSN:119342
8	Progress in Biomedical Field with an Advancement of CMOS RF Transceiver Using Wireless Sensor Network	Chandrasekhar Kandagatla, Dr. Prabhu G. Benakop	Design Engineering	ISSN:119343

3. Mrs. Y.Mastanamma, Associate Professor had submitted her Ph.d. Thesis and waiting for Viva-Voce.
4. HOD-EEE has attended BOS meetings which were conducted online by Osmania University and given suggestions for AICTE curriculum.

Y.Mastanamma

Head of the dept-EEE