

DEPARTMENT NAME:

ELECTRICAL ENGINEERING DEPARTMENT

Report for October -December 2021

I. DETAILS OF ME/PhD PROGRAMMES

ME Subjects	Batches	Name of the Faculty
Virtual Instrumentation	Regular Batch 2020	Dr. Lini Mathew
Energy Management	Regular Batch 2020	Dr. Poonam Syal
IoT Enabled Industrial Automation	Regular Batch 2021	Dr. Ritula Thakur
Power Electronics Devices and Circuits	Regular Batch 2021	Dr Shimi S.L
Measurement Sciences and Techniques	Regular Batch 2021	Mr Ashish
Process Dynamics & Control	Regular Batch 2021	Dr. Piush Verma
Digital Signal Processing	Regular Batch 2021	Dr. Lini Mathew
Preliminary Thesis	Regular Batch 2020	Dr. Lini Mathew, Dr. Piush Verma, Dr. Ritula Thakur, Dr. Shimi S.L, Dr. Poonam Syal
EEE – 9307 Industrial Electronics	PhD Scholar (Mrs. Soujanya)	Dr Shimi S.L

II.

A. STUDENT TRAINING ORGANIZED

Sr. No.	Name of the Course alongwith dates & place	No. of weeks	Participation		Total No. of Participants
			Poly	Engg.	
1	Hands on practice on Electrical Engineering Software Tools 15 th November to 10 th December, 2021 Coordinator - Dr. Shimi S.L	4		2 (external) 4 (M.E students)	6

B. INTERNATIONAL CONFERENCES ORGANIZED

Sr. No.	Name of the Seminar/Conference	Total

C. NATIONAL CONFERENCES ORGANIZED:

Sr. No.	Name of the Seminar/Conference	Total

III WORKSHOPS CONDUCTED (OTHER THAN CURRICULUM DEVELOPMENT WORKSHOPS):

Sr. No.	Name of the Workshop alongwith dates and venue	Total No. of participants
1	ANSYS Solution for Electric Vehicle organized in collaboration with ARK Infosolution Pvt. Ltd and ANSYS on December 17 th . 2021	48
2	Induction Training for Newly Recruited Technicians during 15 th November to 16 th December 2021	2

IV. INSTRUCTIONAL MATERIAL DEVELOPMENT

Sr. No.	Type of Instructional Material Developed	Author(s) /Team	Project Completed In progress	Specific Achievements during the year	Target date of completion
PRINT MATERIAL					
NON-PRINT MATERIAL					

INSTRUCTIONAL MATERIAL DEVELOPMENT

Type of Instructional Material	No. Completed during 2021-22	Remarks (if any)
PRINT :		
Text Books		
Lab. Manuals		
Teachers' Manual	1	Real Time Simulation and Modeling of Buck Converter
Modules		
Readers		
Any other (Please specify)		
NON-PRINT :		
Video Films		
CAI Packages		
Experimental Kits		
Charts		
Any other (Please specify)		

Information above to be given only in case of completed Learning Resources. Title of the material(s) (topics/subjects as the case may be) should also be given.

V. CURRICULUM DEVELOPMENT

A. CURRICULA DESIGNED:

B. CURRICULA REVISED:

1			
2			

C. CURRICULUM DEVELOPMENT WORKSHOPS:

Sr. No.	Name of Curriculum	Number of Subjects/Course	Beneficiary States	Participation		
					Ind.	Others
1.	Dr. Ritula Thakur participated in Online workshop on Automation & Robotics on November 12, 2021 for finalising study scheme of Haryana state.	Finalizing Study scheme	Haryana			

VI. RESEARCH AND DEVELOPMENT

Sr. No.	Name of Project	Team	Beneficiary State	Status of Project completed/ In progress	Specific work done during the year	Target date of completion
A. RESEARCH STUDIES (PhD)						
1	Award of PhD thesis titled "Performance Evaluation of Hybrid Power Flow Controller in Comparison to Unified Power Flow Controller"	Anjali Atul Bhandakkar, Dr. Lini Mathew		Completed	Awarded PhD	
2.	Research proposal titled "Data Driven Monitoring and Intelligent Control of an Autonomous Microgrid with WECS-BESS-FC Hybrid System and Demand Side Response" for possible funding under Research Scheme on Power (RSOP), to CPRI, Bangalore.	Dr. Ritula Thakur		Submitted		

B. DEVELOPMENT PROJECTS						
1.	Test Methods for Conducted Emissions from EV charging Installations connected to Grid submitted to SERB, New Delh	Dr. Shimi S.L and Prof. Lini Mathew	All States	Submitted	Prepared Project Proposal	
2.	Laboratory and On-road EV test system partnership proposal by spoke institute for working with UIET as hub under SDIC-PU	Dr. Shimi S.L and Prof. Lini Mathew	All States	Submitted	Prepared Project Proposal	
C. DISSERTATION FOR MASTER'S DEGREE PROGRAMMES FINAL THESIS COMPLETED						
1	Prediction of Load for Different Interval of Time using Convolution Neural Networks [CNN]	Deepak Sharma, Ritula Thakur		Completed		30.09.2021
2	A Low Cost and Easy to operate Automaton for Mushrooms	PK Angral, Ritula Thakur		Completed		01.10.2021
3.	An Improved Current Control Charging Scheme Using Neuro Fuzzy and FOPID based MPPT System for EV Charging	Ravindra Panchariya, Poonam Syal		Completed		02.11.2021
4.	Synchro Phasor Technology and Optimal Allocation of PMUs	Kauleshwar Pandey, Lini Mathew		Completed		20.12.2021
PRELIMINARY THESIS COMPLETED						
1.	Power Quality Improvement of Induction Motor Drive Using HBCC Technique	Wasim Mohiuddin Syed, Ritula Thakur		Final Thesis in progress		12.10.2021
2.	Genetic Algorithm and Modified African Buffalo Optimisation based Optimal Placement of DG in Distribution Network.	Anil Verma, Ritula Thakur		Final Thesis in progress		31.12.2021

VII. EXTENSION SERVICES AND CONSULTANCY

Sr. No.	Name of Project	Team	Beneficiary Organization	Status of Project Completed/in Progress	Specific work done during the year
A. EXTENSION SERVICES PROJECTS:					
1	Evaluated PhD Thesis and Acted as External Examiner in PhD viva voce of Mr. Ajay Sharma, on 23 rd November 2021.	Dr.Lini Mathew	Dr. A.P.J. Abdul Kalam Technical University, Uttar Pradesh	Completed	Submitted Examiner Report
2.	Evaluated PhD Thesis of	Dr.Lini	Faculty of	Completed	Submitted Examiner

	Mr. Gyanesh Singh, in December 2021.	Mathew	engineering & Technology, Jamia Milia Islamia, New Delhi		Report on the PhD Thesis
3.	PhD thesis evaluator of Ms Shubham Gargrish titled "Development of Augmented Reality Based Geometry Learning Assistant and its Impact On Students' Memory Retention" in December 2021	Dr. Piush Verma	Chitkara University, Punjab	Completed	Submitted Examiner Report on the PhD Thesis
4.	Technical Program Committee (TPC) member for ICSTACE2021 (International Conference on Sustainable Technology and Advanced Computing in Electrical Engineering),	Dr. Ritula Thakur	EED SVNIT Surat, Gujarat, India,		Reviewed 6 papers and arranged other reviewers.
5.	Delivered expert session on "Smart grid for a green future" in webinar organised by Chaitanaya Barathi Institute of Technology (CBIT), Hyderabad on 23rd October, 2021.	Dr. Ritula Thakur	Chaitanaya Barathi Institute of Technology (CBIT), Hyderabad		
6.	Acted as external examiner in Phd Viva voce of Ms. Shivani Abrol, LPU University on 1st November, 2021.	Dr. Ritula Thakur	LPU University Jalandhar, Punjab		
7.	Attended Board of Studies meeting for finalizing syllabus of B.E (Electrical) at GNE, Ludhiana on 22nd November, 2021.	Dr. Ritula Thakur	GNE, Ludhiana, Punjab		
8.	Examiner for recruitment of Technicians at ISTC, Chandigarh during 26-28 November, 2021.	Dr. Ritula Thakur	ISTC, Chandigarh		
9.	Conducted expert session on Smart Grid: Needs, Challenges & Research Scope" on 14.12.2021 in AICTE-ISTE sponsored online program on Big Data Analytics for Smart Grid conducted by Shri Krishna College of Engineering and Technology, Coimbatore	Dr. Ritula Thakur	Shri Krishna College of Engineering and Technology, Coimbatore		
10.	Contributed as a Primary Evaluator by evaluating various projects in Toyathon 2021.	Dr. Ritula Thakur			
11.	Submitted Special Session	Dr. Ritula			

	on Improvement of Grid Resilience using Energy Intelligence in ICICCS 2022 conducted by Sreenidhi Institute of Science and Technology, Hyderabad.	Thakur			
12.	Prepared question papers for final examination of Punjab University on subjects: (i) IoT based Industrial Automation. (ii) FACTS		Panjab University, Chandigarh		
13.	Member of screening committee for the interview of Project Associate	Dr. Shimi S.L	CSIO, Chandigarh	Completed	Expert committee
14.	Panjab University Paper setter for (i) Power Electronics Devices and Circuits (ii) Artificial Intelligence Techniques for Power system and (iii) Virtual Instruments	Dr. Shimi S.L	Panjab University	Completed	Paper setter
15.	2021 IEEE 4 th International Conference on Computing , Power and Communication Technologies, September 24-26, 2021	Dr. Shimi S.L	All States	Completed	TPC member and session Chair
B. CONSULTANCY PROJECTS:					

VIII. TRAINING PROGRAMMES ATTENDED BY THE INSTITUTE FACULTY/STAFF

Sr. No.	Title of Training Programme	Period of Training	Venue	Attended by
1	Designing Formative Assessments for Effective Learning Outcomes (Quality Ecosystem Through NEP-2020 by Turn tin South Asia.	8 th October 2021	Webinar	Dr. Piush Verma
2	Fire Due to Short Circuit and Role of Earthing by Shrig Gopal Kumar Expert Electrical Engg. Director of Cape Electric	30 th October 2021	Webinar	Dr. Piush Verma
3	Attended Programme for Education Leaders and Educators to learn about Global trends across the Education Sector Organized by New South Wales Govt. and India Didactics Associations.	14 th Dec. 2021	Webinar	Dr. Piush Verma
4	Haryana Vidut Prasaran Nigam Limited, Panchkula	25 th October, 2021 to 8 th November, 2021	220 kV Substation, Madanpur, Panchkula	Dr. Shimi S.L

5	Energy Efficiency and conservation	27.12.2021	Mahatma Gandhi State Institute of Public Administration, Chandigarh	Dr. Shimi S.L
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IX. IN-HOUSE TRAINING PROGRAMMES

Sr. No.	Title of Training Programme	Period of Training	Attended by
1.	Refresher Training on Google Workspace Features	24 th November 2021 (One day)	Dr. Piush Verma
2.	Workshop on “ANSYS Solution for Electric Vehicle” organized by ARK Info solutions Ltd. at NITTTR, Chandigarh on 17th Dec '2021.	17 th December, 2021 (One day)	Dr. Ritula Thakur
3.	Ansys Solution for Electric Vehicle organized in collaboration with ARK Infosolution Pvt. Ltd and Ansys on December 17 th , 2021	17 th December, 2021 (One day)	Dr. Shimi S.L

X. OTHER CONTRIBUTIONS INCLUDING INDIVIDUAL CONTRIBUTION

A. PATENTS/COPYRIGHT

Sr. No	Name of Patents/Copyright	Author (s) Name

B. PAPERS PUBLISHED BY THE INSTITUTE FACULTY: SCI JOURNAL

Sr. No	Name of the Paper Published	Author (s) Name
1.	Diagnosis of Supraharmonics-related problems based on the effects on electrical equipment, Electric Power Systems Research, Vol. 195, 2021, 107179, ISSN 0378-7796, https://doi.org/10.1016/j.epr.2021.107179 . (SCI)	Ángela Espín-Delgado, Sarah Rönnerberg, Shimi Sudha Letha, Math Bollen

C. PAPERS PUBLISHED BY THE INSTITUTE FACULTY: INTERNATIONAL JOURNAL OTHER THAN SCI JOURNALS

Sr. No.	Name of the Paper Published	Author (s) Name
1.	Management of Reactive power in industrial installation and economic analysis, published in American Institute of Physics, Vol. 23757, page 34-42, Impact factor 1.2, Scopus Journal .	Raj Kumar Saini, Devender Kumar Saini, Rajeev Gupta, Piush Verma, R.P. Dwivedi, Ashwani Sharma, Pankaj Vaidya
1.	Optimal PMU Allocation by flower pollination with Levy Fitness function, Design Engineering, Issue. 7, pp. 3294-3305, Year 2021. (Scopus)	Shivani Chaudhary, Dr. Ritula Thakur,

**D. PAPERS PUBLISHED BY THE INSTITUTE FACULTY:
NATIONAL JOURNAL**

Sr. No	Name of the Paper Published	Author (s) Name

**E. PAPERS PUBLISHED / PRESENTED IN:
INTERNATIONAL CONFERENCES/SEMINARS**

Sr. No	Title of the Paper Presented/Accepted along with Name of the Conference/Seminar (venue, with date)	Author (s) Name
1.	A Review on Demand Side Management Schemes for Optimized Energy Utilization in Smart Grids, International Conference on Emerging Technologies: AI, IoT and CPS for Science & Technology Applications, NITTTR, Chandigarh, 6-7 September 2021 (Scopus)	Ashok K. Muthria and Lini Mathew
2.	False Data Injection Attack Clearance in Microgrid Load Frequency Control, International Conference on Emerging Technologies: AI, IoT and CPS for Science & Technology Applications, NITTTR, Chandigarh, 6-7 September 2021 (Scopus)	Vikas Pandey and Lini Mathew
3.	Performance of Three Phase Induction Motor voltage variations- A Review, International Conference on Emerging Technologies: AI, IoT and CPS for Science & Technology Applications, NITTTR, Chandigarh, 6-7 September 2021 (Scopus)	Raj K. Saini, Dr.Piush Verma, Devender K. Saini and Rajeev Gupta
4.	Review of Recent Approaches to Eliminate Various Pseudo Fault Outages in Hydro Power Plants, International Conference on Emerging Technologies: AI, IoT and CPS for Science & Technology Applications, NITTTR, Chandigarh, 6-7 September 2021 (Scopus)	Deepika Sood and PiushVerma
5.	Review on Rotor Inter Turn Fault Detection in Hydro Generator, International Conference on Emerging Technologies: AI, IoT and CPS for Science & Technology Applications, NITTTR, Chandigarh, 6-7 September 2021 (Scopus)	Atul Chadda and PiushVerma
6.	Review Paper on Diagnostics Study of Dry Transformer, International Conference on Emerging Technologies: AI, IoT and CPS for Science & Technology Applications, NITTTR, Chandigarh, 6-7 September 2021 (Scopus)	Pankaj Kumar and Piush Verma
7.	Model for Disturbance Estimation during Transient in an Islanded Microgrid, International Conference on “Recent Trends in Renewable Energy and Advancement in Engineering and Technology (RTREAET-2021)”, Mewat Engineering College, Nuh, Haryana, 28-29 December, 2021.	Yogesh Chauhan, Ritula Thakur, Shivaji Karad, Amir Hussain,
8.	“Arduino Microcontroller and IOT based systems for environment control of mushroom farms”, International Conference on “Recent Trends in Renewable Energy and Advancement in Engineering and Technology (RTREAET-2021)”, Mewat Engineering College, Nuh, Haryana, 28-29 December, 2021.	P.K.Angral, Ritula Thakur

NATIONAL CONFERENCES/SEMINARS

Sr.No.	Title of the Paper Presented/Accepted along with Name of the Conference/Seminar (venue, with date)	Author (s) Name