

Department of Electrical Engineering
EE-401 Final Year Design Project
Project List



F/SOP FYDP/02/00

Batch <u>2021</u>	Semester <u>Fall 2024</u>
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S.no.	Project title	Student name	Supervisor/co-supervisor	Industry
1	Improving Transient stability in transmission lines using facts devices along with synchro-phasor technology	Muhammad Uzair Rashid Muhammad Mudassir Sanaullah Zaeem Ali	Dr. Muhammad Ali Memon	
2	Solar Powered Weather Station	Muhammad Usman Muhammad Ahmed Sohail Iqbal Syed Tahami Talib Umrao	Ms. Shahnaz Tabassum	
3	Enhanced Hybrid Renewable Energy System with Solar Tracking for Optimal Solar Power Generation and Wind Energy Integration	Abdul Rehman Ansari Zakir Ullah Simrah Shahid Amna Ahmed Khan	Ms. Najia Naveed	
4	Smart energy meter using IOT, Load control and bill prediction using python algorithm	Kabir ahmed siddiqui Muhammad moiz khan Alina Mallick Anabia Shahid	Dr. Raja Masood Larik	
5	Accurate state of charge (SoC) estimation for Lithium-ion batteries using Deep Learning techniques	Ushna Asim Ilsa Kashif Wardah Mushtaq Zahra Khan	Mr. Hammad Uddin	
6	Design of Low-Power Vision Sensor Node Using FPGA for Object Detection	NAWAB NAVEED TALHA ANIS MUHAMMAD HASHAAM MUHAMMAD OMER AHMED SIDDIQUI	Prof. Dr. Saad Ahmed Qazi	DreamBig Semiconductors

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EE-401 Final Year Design Project
Project List



F/SOP FYDP/02/00

7	Modeling, analysis & mitigation of transformer energization effect on power system using PSCAD	Aleshba Rauf Daniya Khalid Ayesha Azeem Areeba Yaseen	Dr. Muhammad Mohsin Aman	
8	Development and Enhancement of a Circuit Breaker Test Bench with Integrated Measurement System	Nafees Touheed Saim Ahmed Atta Ur rehman Mahnoor Iqbal	Dr. Muhammad Mohsin Aman	
9	ACCURATE FAULT LOCATION METHOD FOR MULTIPLE FAULTS IN TRANSMISSION NETWORK	S.M Zargham Jafri Ahmed Hasan S. Umar Ahmed M. Umar Nadeem	Dr. Abdul Ghani Abro	
10	A Comparative Analysis of Residential Three-Phase Distribution Systems and Split-Phase distribution Systems for Karachi	Aban Khan Ayesha Arif Wareesha Shaikh Naima Mansoor Syed	Ms. Najia Naveed	K - Electric
11	Model Wireless Power Transfer-Enabled Wound Rotor Synchronous Motor Framework to Optimize Rotor Efficiency of Electric Vehicles	Arisha Sundus Rumaisa Shakeel Fatima Khan Syed Sharjeel Saleem	Dr. Umbrin Sultana	
12	End-to-End machine learning for rapid fault detection in Series compensated transmission lines	Uraiba Rameesa Fatima Aleesha Anum Rameesha Qadir	Mr. Fezan Rafique	

Department of Electrical Engineering
EE-401 Final Year Design Project
Project List



F/SOP FYDP/02/00

13	Single line to ground fault detection via wavelet transform method, to design protection devices	Syeda Maryum Muskaan Iqbal Dua Abbas Umaima Maqsood	Dr. Beenish Sultana	
14	Design and Implementation of An Artificial Neural Network-based MPPT Algorithm for Optimization of Solar PV System	Hafiz Muhammad Abrar Shams Shayan Mumtaz Muhammad Taha Sana Noor	Ms. Aiman Najeeb	
15	5 axis CNC machine: Control design of simultaneous operation of all axis with updated software and mechanical structure.	Sameed Ansar Ahmed Mubasshir Ali Sheikh Muhammad Bilal Muhammad Uzair Irfan	Dr. Riaz uddin	
16	Innovative Integration of Solar PV and Battery Storage Systems for Energy Efficiency: A Project with Reon Company	Waleed Ali Asra Asif Umer Iqbal Umair Sheikh	Dr. Raja Masood	REON ENERGY LIMITED
17	Implementation of Control Algorithm for Watch-Dog Robot of Haptics Lab at NED University: Experimental Validation of Kinematic Control and GAIT Control Strategy	Abdul Rafay Khan Muhammad Umer Baig Ateeb Ahmed Qureshi Muhammad Adil Haider	Dr. Riaz uddin	
18	Development and Optimization of Pakistan's Generation Fleet and Transmission System Model Using PyPSA	HASSAAN BIN ARIF Zeeshan Haider ABDUL RAFEH SAAD BAIG	Dr. Muhammad Mohsin Aman	Mak power
19	Advanced Server-Based NILM System for Optimized Energy Monitoring in Large Residential Consumer Networks.	Usama Mohsin Aisha Subha Ansari Sourah Yousuf Syed Abshar Ali	Mr. Muhammad Hassan ul Haq	

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 EE-401 Final Year Design Project
Project List



F/SOP FYDP/02/00

20	Enhanced SoC Charge Estimation for Lithium-Ion Batteries using Time-Varying Parameters through Extended Kalman Filters	Syeda Hammah Ahmed Muzna Sajid Hanfi Laiba Aqeel Amber Ali	Mr. Muhammad Uzair Khan
21	To Optimally Set and Compare Restrained and High Impedance Differential Relays for Multi-terminal Transmission Lines in an IEEE Bus System	Syed Muhammad Dawood Daniyal Masood Muhammad Faiz Usman Abbasi	Dr. Abdul Ghani Abro
22	Design and Implementation of 250-500Watts DC-DC Full-Bridge Phase Shift Converter with automated feedback control for enhanced Regenerative Braking efficiency.	Tooba Rashid Ayesha Ashfaq Waniya Fatima Kainat Arshad	Ms. Aiman Najeeb
23	Enhance Energy Monitoring System for Data Acquisition & using Machine Learning for Predictive Analysis	Duaa Fatima Seerat Nasrullah Nimra Nadeem Romaisa Farooq	Ms. Najia Naveed
24	Experimental Implementation of Kinematic Control and GAIT Control Strategy for Biped Humanoid Robot of Haptics Lab at NEDUET	Abdul Kabeer Abbas Khan Abdullah Sultan Alvia Fatima Wania Ansari	Dr. Riaz uddin
25	Design of BiPAP Machine: Extension of Existing CPAP Machine Haptics Lab at NED University to BiPaP feature for respiratory syndrome Patients.	Hiba Hashmi Bisma Zaman Yumna Munir Syed Muhammad Qaim Rizvi	Dr. Riaz uddin

Department of Electrical Engineering
EE-401 Final Year Design Project
Project List



F/SOP FYDP/02/00

26	IoT-based health monitoring and fault detection of industrial AC induction motor for efficient predictive maintenance	Syed Noorul Yousufuddin Syed Muhammad Samar Mehdi Abdullah Bin Saleem Syed Jawwad Riaz	Dr. Muhammad Ali Memon	
27	Dynamic Power Optimization for Smart Homes: Real-Time Controlling of Appliances in Response to Utility GRID signals.	Muhammad Wasam khan Hassan raza Hasnain Raza Fareh kamran	Dr. Raja Masood Larik	
28	Design and Implementation of Isolated Bidirectional Dual Active Bridge Converter	Syeda Ayesha Tirmizi Ammar Humna Asad Hafsa Zaveri	Ms. Aiman Najeeb	
29	FPGA-Based Enhanced Machine Vision Pipeline for Metal Surface Anomalies	Fehmina Anusha Khan Dur e Sameen Fatima	Prof. Dr. Saad Ahmed Qazi	DreamBig Semiconductors
30	Design and Implementation of Dual Axis Solar Tracker with H-Cascaded Multilevel Inverter	Usman Ahmed Siddiqui Ayesha Khurram Zarmin Khan Arhumm Khan Guddaro	Dr. Raja Masood Larik	Amreli Steels
31	Desktop application for crack analysis of solar panel using EL and thermal imaging	AREEBA AFTAB JAWERIA SAIM UDDIN MUHAMMAD SUFYAN	Dr. Muhammad Mohsin Aman	
32	State of Charge (SOC) Estimation For Lithium Ion Battery Using Model Based Technique	Sana Irfan Fatima Tariq Neha Alvi Eesha Farooqui	Mr. Hammad Uddin	

