

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Monitoring and Control System for a Power Transformer Using SCADA

A research project submitted to the Northern Technical University / Mosul Polytechnic College as part of the requirements for obtaining a Diploma in Electrical Technologies

PREPARED BY STUDENTS:

- Hussein Sulaiman Najm Ayoub
- Abdulrahman Ahmad Khaz'al
- Marwah Muyassar Jassim
- Nour Al-Huda Abdullah Ahmad
- Ali Abdulqadir Awwad
- Muhammad Bashar Hayawi
- Othman Saeed Hammad
- Mustafa Salwan Rashid

SUPERVISED BY:

- Assistant Lecturer Laith Abduljabbar Hamdi
- Assistant Lecturer Karam Samir Qasim

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Design and Implementation of a Solar Panel Cleaning System with Hybrid Manual Control Using Spray Nozzle Technology

*A research project submitted to Northern Technical University / Mosul Polytechnic
College as part of the requirements for obtaining a Diploma in Electrical
Technologies*

PREPARED BY:

Laith Nizar Ahmad
Mustafa Salam Hamoud
Muhammad Khuzair Sultan
Ali Hussein Abbas
Omar Muhammad Saleh
Ahmad Muhammad Sate'
Ahmad Nasir Mahmoud
Othman Mufid Abdulkhaliq

SUPERVISED BY:

Dr. Raghad Ghalib Sultan
Hind Younis Sulaiman
Yasser Khalaf Hassan
Safa Taha Yaseen
Nour Ahmad Muhammad

1447 AH | 2026 AD

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Electrical Power Generation Through Walking (Piezoelectric)

*A research project submitted to Mosul Polytechnic College / Department of
Electrical Applications as part of the requirements for obtaining a Diploma in
Electrical Applications*

RESEARCHERS:

Haitham Salim Younis
Ashraf Abdulbasit Muhammad
Fatima Bashar Farooq
Ghusoon Shihab Ahmad
Duha Khalid Abdulwahid
Murshid Dareed Hameed
Laith Fathi Muhammad
Abdulqadir Ammar Ismail

SUPERVISED BY:

Dr. Laith Abduljabbar Hamdi
Dr. Karam Samir Qasim

1447 AH | 2026 AD

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Sustainable Rest Bench Design Powered by Solar Energy

A research project submitted to Northern Technical University / Mosul Polytechnic College / Department of Electrical Technologies as part of the requirements for obtaining a Diploma in Electrical Technologies

PREPARED BY:

Abdullah Muhammad Hamid
Yazan Safwan Sabah
Hussam Abdulsalam Ahmad
Muhammad Ayoub Abid
As'ad Mar'i Hassan
Younis Muhammad Ibrahim
Saeed Abdulmuhsin Aziz
Mo'men Sayel Hamad
Ammar Hazim Muhammad
Omar Yawuz Talib

SUPERVISED BY:

Assoc. Prof. Muhammad Bashar Siddiq
Dr. Zahraa Muhammad Saeed
Lecturer Zeina Tariq Abdulrahman

1447 AH | 2026 AD

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Graduation Project: Using Smart Meters to Improve Power Consumption

*A graduation project submitted to Northern Technical University / Mosul
Polytechnic College / Department of Electrical Technologies*

PREPARED BY STUDENTS:

Ali Hazim Mahmoud
Abdulaziz Othman Abdulaziz
Abdulrahman Ahmad Haza'
Youssef Qais Zuhair
Youssef Ra'ad Abdul رضا

SUPERVISED BY:

Eng. Sanaa Saeed

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Design of a Smart Solar-Powered Bench

*A research project submitted to Northern Technical University / Mosul Polytechnic
College / Department of Electrical Technologies*

PREPARED BY RESEARCHERS:

Muhammad Jarallah Muhammad

Huda Ameer Muhammad

Zakariya Haqqi Ismail

Zahraa Abdulwahab Hamoud

Omar Yasser Salah

Nour Mahmoud Muhammad

Mustafa Hani Abdullah

Ibrahim Muhammad Khalil

SUPERVISED BY:

Lecturer Dawood Saeed

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Electrical Power Generation Through Walking (Piezoelectric)

*A research project submitted to Mosul Polytechnic College / Department of
Electrical Applications as part of the requirements for obtaining a Diploma in
Electrical Applications*

RESEARCHERS:

Haitham Salim Younis
Ashraf Abdulbasit Muhammad
Fatima Bashir Farooq
Ghusoon Shihab Ahmad
Duha Khalid Abdulwahid
Murshid Dareed Hameed
Laith Fathi Muhammad
Abdulqadir Ammar Ismail

SUPERVISED BY:

Dr. Laith Abduljabbar Hamdi
Dr. Karam Samir Qasim

1446 AH | 2026 AD

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Design of a Measurement and Control Board for AC Circuits

*A research project submitted to Mosul Polytechnic College / Department of
Electrical Technologies as part of the requirements for obtaining a Diploma in
Electrical Technologies*

STUDENTS' NAMES:

Hassan Basim Hassan
Muhammad Saleh Abd
Mahmoud Amir Mahmoud
Abdulrahman Ridwan Othman
Amjad Ghafoor Mahmoud

1446 AH

SUPERVISED BY:

Assistant Lecturer Israa Khalooq Saeed
Assoc. Prof. Shadha Yousif Ismail
Assistant Lecturer Zaid Khalaf
Muhammad
Lecturer Zeina Tariq Abdulrahman

2026 AD

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Electrical Power Generation from Speed Bumps

A research project submitted to Northern Technical University / Mosul Polytechnic College / Department of Electrical Technologies

PREPARED BY STUDENTS:

Muhammad Younis Ahmad
Zakariya Ameen Ahmad
Ibrahim Ramadan Abdulkarim
Zakariya Yahya Muhammad Saleh
Abdullah Bassam Shaker
Youssef Ra'id Samir
Muhammad Ibrahim Hassan
Mo'taz Ibrahim Hassan
Muhammad Abdulrahman Muhammad
Mustafa Qasim Saleh
Ahmad Muhammad Ahmad

Abdulrahman Nabil Nazim

SUPERVISED BY:

Prof. Safaa Abduljabbar
Prof. Aseel Sabah

1447 AH | 2026 AD

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH

Northern Technical University

Mosul Polytechnic College

Department of Electrical Technologies

Electrical Power Generation from Speed Bumps

A research project submitted to Northern Technical University / Mosul Polytechnic College / Department of Electrical Technologies

PREPARED BY STUDENTS:

Muhammad Younis Ahmad
Zakariya Ameen Ahmad
Ibrahim Ramadan Abdulkarim
Zakariya Yahya Muhammad Saleh
Abdullah Bassam Shaker
Youssef Ra'id Samir
Muhammad Ibrahim Hassan
Mo'taz Ibrahim Hassan
Muhammad Abdulrahman Muhammad
Mustafa Qasim Saleh
Ahmad Muhammad Ahmad

Abdulrahman Nabil Nazim

SUPERVISED BY:

Prof. Safaa Abduljabbar
Prof. Aseel Sabah

1447 AH | 2025 AD