

REPORT
OF OUTREACH PROGRAM ON
“Hands-on Basic Electronics and Circuit Designing on Bread Boards”

UNDER UNNATHA BHARAT ABHIYAN (UBA)

Organized by Electronics Dept

St Edmund’s College

The Department of Electronics conducted a **two days outreach program** on the 8th and 9th of Sept. 2022, under **UNNATHA BHARAT ABHIYAN (UBA)**. **The program was** on **“HANDS-ON BASIC ELECTRONICS AND CIRCUIT DESIGNING ON BREAD BOARDS”**. It was carried out in **DIENKYNTHONG SECONDARY SCHOOL, MAWJRONG**.

The Program which was a workshop in nature was suggested and arranged by **Br Simon Coelho**, Secretary Governing body, St Edmund’s college and **Dr S Lamare** Principal, St Edmund’s college. The designing and implementation was carried out by the Department of Electronics, St Edmund’s college under the leadership and guidance of **Br Raj Naronah** who despite his busy schedule came all the way from Asansol to help conduct this program. The department unanimously selected Dr Hemen Chandra Medhi to coordinate the program with other staff member along with the Lab assistant to form a support team..

The program was **fully Hands-on** with the active participation from the **1st, 3rd and 5th semester Electronics Major students**.

The Plan was to conduct the program in a **“DO AND LEARN”** manner for two days with the **1st, 3rd and 5th semester students as instructors**. On the first day, the session started at around 12 noon and continued till 5pm. On the second day the program started at around 9am and continued till 1pm.

A total of 10 project were decided which are to be completed in these two days in a Departmental Meeting. The Electronics Major Students of 1st sem. students were trained by Prof Kishore Chakraborty, the 3rd semesters were trained by Prof Bawan P Thangkhiew and the 5th semester by Dr Hemen Medhi.

The students after being trained and mentored formed the main work force to impart training to the students of the school. A total no of 17 students from

Electronics Major formed the working force. It was also decided to keep the instructor student ratio 1:2.as far as possible.

It may be mentioned that all circuits underwent a test run in the Lab so that they work well during the demonstration. A total of 30 workstation were made ready. The workstation comprised of a box containing ,components and tools necessary to complete all the experiments.

The whole team led by Br Raj Narohna reached the Schools around 11.30am and the Principal and staff of the school appreciated our plan and welcomed us .

The Workshop was conducted after dividing the participating students into groups keeping the instructor - student ratio to around 3:4.

The Instructors i.e the Electronics Major student were divided into 6 group with each group having students from 1st,3rd and 5th. Semester.

Students grouping:

GROUP 1	GROUP2	GROUP3	GROUP4	GROUP5	GROUP6
AVISHAAN DAPAN SARKAR	ROUNAK DEB	BASANTA SUNAR	SAIFUL ISLAM MOLLA H	JUHI SHADAP	YOGESH SIKHDEL
CHONGIN HAOLAI	RAHUL MALLICK	DENALVEN MARK PAKYNTEI N SAWIAN	NEHAL GURUN G	PRAMIT DEBBARM A	SENGWAN SANGMA
SUBHANGE E SINHA	PROSPEROU S K KHONGSTIA	TEKHEWE WEZAH		LASANKI SHADAP	GOULALLUNG MUON SINGSON

CONCLUSION

The two days program was successfully completed with active participation of the students and teachers, along with the support from the college management.

The Principal and Staff of the School thanked us and the students showed their gratitude and found the course to be very innovative and informative. It was an eye-opener as they have never experienced it before. They were all very excited and expressed their willingness to take part in many more programs like this. They also had few queries and shared their feeling of being enriched.

Date 8 and 9th of Sept. 2022

	Project	Experiment	Class Incharge	Teacher Incharge
		DAY1		
1.	Conversion of Electrical Energy to Heat energy	(a) DC Battery (b) DC voltage with Multimeter (b) To use a circuit made of Nichrome wire to cut Themocol	1st Sem.	KC
2.	Conversion of Electrical Energy to Mechanical Energy.	(a) Bread Board (b) Battery Eliminator: Connect the Circuit to the Mains to measure DC voltage (c) To make a circuit with Motor and make a fan rotate (d) Show Magnetic Effect of current (e) Relay Connection	1st Sem	KC
3.	Conversion of Electrical Energy to Sound Energy	Simple Buzzer circuit R=2.2KOHMS	1st Sem	KC
4.	Conversion of Electrical Energy to Light Energy	(a) LED Forward bias and Reverse bias (b) Led Intensity change with potentiometer	3rd Sem	BT
5	Change of LED intensity with LDR	(a) LDR,LED and resistance in series	3rd Sem	BT
6.	Delay in the increase of Light Intensity	To make a simple circuit with RC combination and observe the delay (C=100 μ F. 10.	3rd Sem	KC
		DAY 2		
7.	Day / Night switch	Use a LDR to make a simple day night switch with a single transistor and an LED	5th Sem (AVISHAAN DAPAN SARKAR)	BT
8.	Seven Segment Display	(a) Place a 7 Segment display on the bread board. Light up at least 5 different numbers. (Common cathode and 330 ohms resistors) (b) Binary to Decimal conversion using seven segment display(IC 7447)	5th Sem (ROUNAK DEB)	HM
9.	LED display	Use two transistors , two electrolytic caps, two LEDs and resistors to construct Astable multivibrator (BC 547 or CL100)	5th Sem (YOGESH SIKHDEL)	HM
10.	Running light	Using IC555 and IC 4017 decade counter.	5th Sem (SAIFUL ISLAM MOLLAH)	HM

11.	Touch Switch	Using IC 555 and LED make a touch switch	5th Sem (JUHI SHADAP)	HM
12.	Siren	Using IC 555 make a Siren	5th Sem (BASANTA SUNAR)	HM

