

**Benazir Bhutto Shaheed University of Technology
& Skill Development
Khairpur Mirs (66020), Sindh, Pakistan**



Campus Sustainability Report (2021-22)



Engr. Abdul Shakoor Shaikh
Focal Person,
UI GreenMetric World University
Rankings,
BBSUTSD Khairpur Mirs

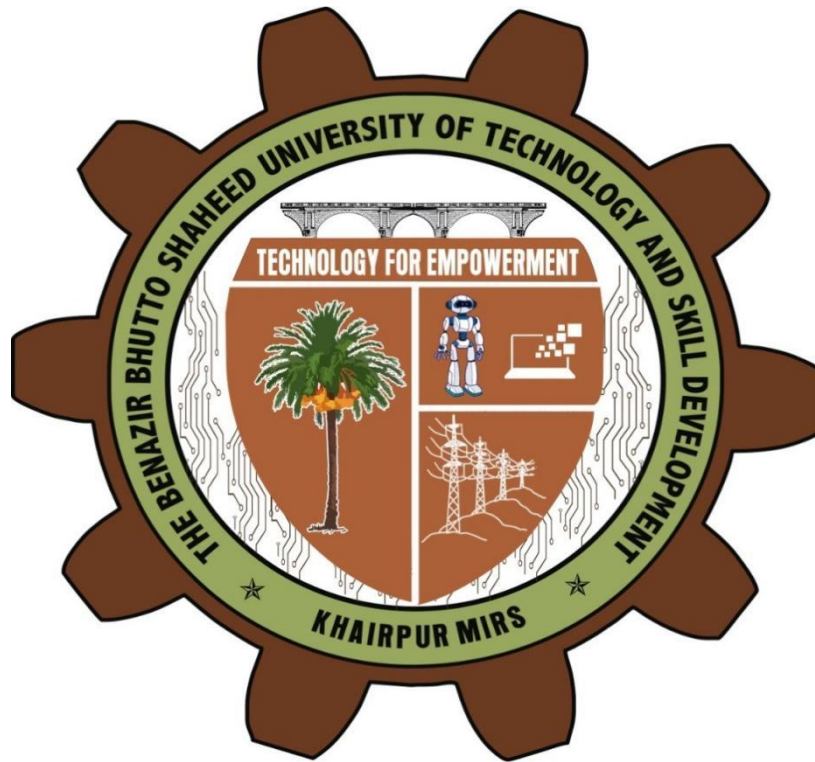
Benazir Bhutto Shaheed University of Technology &
Skill Development (BBSUTSD) Khairpur
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**The Benazir Bhutto Shaheed University of Technology & Skill
Development (BBSUTSD)
Khairpur Mirs**



Campus Sustainability Report 2021-22

BBSUTSD

by

Engr. Abdul Shakoor Shaikh

Contents

1. Introduction	5
2. History	5
3. Vision	6
4. Mission Statement	6
5. Academic Faculties	6
6. General Facilities	7
7. University Achievements	8
8. Scholarships awarded to students	8
9. University Achievements GreenMetric World University Rankings	8
10. Campus sites	9
11. Main campus setting	10
12. Total main campus area (meter ²)	11
13. New Agricultural Land Purchased in 2019	11
14. Total Area Output	11
15. Total campus buildings area (m2)	12
16. Ratio of open space to total area m ²	13
17. Total area on campus covered in forest vegetation (meter ²)	13
18. New Agricultural Land Purchased in 2019	14
19. Total area on campus covered in planted vegetation (meter ²)	14
20. Total area on campus for water absorption besides the forest and planted vegetation (meter ²)	15
21. University budget for sustainability effort (in US Dollars)	17
22. Percentage of operation and maintenance activities of building in one year period	17
23. Campus facilities for disable, special needs and or maternity care	18
24. Security and safety facilities	20
25. Health infrastructure facilities for students, academics and administrative staffs' wellbeing	21
26. Conservation: plant, animal, and wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities	22
27. Energy and Climate Change (EC)	23
28. Energy efficient appliances usage are replacing conventional appliances	23

29. Smart Building implementation	24
30. Renewable energy produce inside campus	27
31. Electricity usage per year (in kilo watt hour)	31
32. Ratio of renewable energy production divided by total energy usage per year	34
33. Elements of green building implementation as reflected in all construction and renovation policy	35
34. Greenhouse gas emission reduction program	37
35. Please Provide Total Carbon Footprint (CO ₂ emission in the last 12 months (2021-22), in metric tons	37
36. Number of innovative program(s) in energy and climate change	38
37. Impactful university program(s) on climate change	40
38. Recycling Program For University Waste	41
39. Program to Reduce The Use of Paper and Plastic in Campus	43
40. Organic Waste Treatment	44
41. Inorganic Waste Treatment	45
42. Toxic Waste Handled	46
43. Water Conservation Program Implementation	48
44. Water Recycling Program Implementation	49
45. The Use of Water Efficient Appliances (Water tap, toilet flush, etc)	49
46. Consumption of treated water	51
47. Water pollution control in campus area	51
48. The total number of vehicles (cars and motorcycles) divided by total campus' population	53
49. Shuttle services	53
50. Zero Emission Vehicles (ZEV) policy on campus	54
51. Ratio of parking area to total campus area	55
52. Program to limit or decrease the parking area on campus for the last 5 years (from 2018 to 2022)	55
53. Number of Transportation Initiatives to Decrease Private Vehicles on Campus	55
54. Pedestrian path policy on campus	58
55. Number of Courses/Subjects Related to Sustainability Offered	59
56. Total research funds dedicated to sustainability research (in US Dollars)	60
57. Total research funds (in US Dollars)	60

58. Number of scholarly publications on sustainability_____	62
59. Number of events related to environment and sustainability_____	62
60. Number of student organizations related to sustainability = 02_____	66
61. Sustainability Report_____	68
62. Number of cultural activities on campus (e.g.Cultural Festival) including virtual activities (if any)_____	68
63. Number of university program(s) to improve teaching and learning_____	75
64. Number of sustainability community services project organized and/or involving students_____	79
65. Number of sustainability-related startups_____	80

Introduction

In 2010, University of Indonesia (UI) developed the UI GreenMetric World University Ranking for universities to share information about their sustainability practices. This ranking system paved the way forward for development of a mechanism through which university could ensure the implementation of best practices pertaining to Sustainable Development Goals (SDGs) set by the United Nations on campus.

Since the first launch of ranking, more universities around the world have increasingly participated in the ranking system including many universities in Pakistan. The Benazir Bhutto Shaheed University of Technology & Skill Development (BBSUTSD) participated in the ranking and was placed on 576th in the entire world and 22nd in Pakistan. This is the first time this university has been positioned in any ranking system. And since then, the BBSUTSD has continued to make improvements in all sectors ranging from conservation of Electricity to being the first university in Sindh province to implement an Official Ban on Plastic Bags on Campus; from observing Tree Plantation Day to development of an Efficient Water Recycling and Water Conservation Program.

This year, the BBSUTSD is trying its best to improve in all areas of ranking particularly the infrastructure. For that, the university has purchased a new land of 28 Acres that will be purely used for Agricultural Purposes initially. Apart from that, the new buildings proposed are set to incorporate all the important aspect Net-Zero Buildings with a particular focus on harvesting Solar Energy from Solar PV cells and conservation of Power giving special attention to lowering its waste usage. Here it is quite important to note that, compared to last year, the consumption of electricity at campus has been reduced to a significantly low level and because of which, considerable amount of money has been saved coupled a great reduction of CO₂ emissions by the campus activities.

Following are the glimpses of activities carried out on campus to ensure implementation of all steps towards Sustainable Campus Initiative.

History

Initially introduced as “Sir Ali Murad Technical Institute” in 1895 by the Khairpur State.

After disintegration of Khairpur State and absorption into Pakistan, Sir Ali Murad Technical Institute was upgraded and renamed as Polytechnic Institute, Khairpur by Government of West Pakistan in the year 1962.

Later, it was again up-graded as “Government College of Technology (GCT) Khairpur Mirs”; with the introduction of B.Tech Program in 1974 by the Government.

Petroleum Technical Training Institute (P.T.T.I) was established 2009-10 in the Premises of Technical College and with the collaboration of Ministry of Petroleum & Natural Resources, Government of Pakistan.

The GCT, Khairpur was upgraded into The Benazir Bhutto Shaheed University of Technology and Skill Development Khairpur Mirs Sindh on April 22nd 2016 by Provincial Assembly Act XIX and PTI, Khairpur was merged into the University.

It is spread over an area of 60 (32+28) acres having sufficient accommodation for classrooms, labs, workshops, Library, Meeting Hall, Administration Block, Students Hostel & Residential accommodation.

Vision

To lead global technological education and embed the market-driven employable and entrepreneurial skills to empower the community

Mission Statement

To empower community with the hands-on technological knowledge through high quality teaching & research environment, innovative tools & techniques, and entrepreneurial & global leadership skills with the consciousness of ethical norms & values

Aim and Objectives

Aim

The main aim of the university is to produce high quality technology graduates equipped with practical hands-on experience needed to serve the community

Objectives

- To produce the skilled personnel to eradicate poverty and uplift the morale of the community
- To provide technical knowledge to the graduates with the state-of-the-art practical skills required for market commercialization
- To equip graduates with the technical entrepreneurial skills
- To produce workforce with global market employability
- To embed latest market-driven skills needed to uplift the society
- To produce skilled workers with the consciousness of ethical norms & cultural values

Academic Faculties

A. Faculty of Engineering Technology (FOET)

B. Faculty of Skill Development (FOSD)

A. Faculty of Engineering Technology

The University offers 4-year undergraduate programs in the following disciplines.

- BSc Civil Engineering Technology
- BSc Electrical Engineering Technology
- BSc Electronics Engineering Technology

- BSc Mechanical Engineering Technology

B. Faculty of Skill Development

The University also offers 3-year Diploma of Associate Engineer (DAE) programs in the following technologies:

- Civil Technology
- Electrical Technology
- Electronics Technology
- Mechanical Technology
- Computer and Information Technology
- Petroleum Technology
- Chemical Technology,
- Refrigeration and Air Conditioning Technology
- Auto & Diesel Technology

General Facilities

#	Name of Facility	Quantity
1	Library	i. Books = 17500 ii. CDs and Animation = 200 iii. Internet facility
2	Senate Hall	For 70 persons
3	Transport	i. Students Busses = 07 (05 new 02 old) ii. AC Coaster = 01 (new to be delivered by company) iii. Car = 03 (01 new 02 old) iv. HiAce Van = 02 (01 new 01 old) v. Suzuki Pickup = 01 (new) vi. Ambulance = 01 (new) vii. Bicycle = 01 (new)
4	Standby Generators	02
5	Student Hostel old (Boys)	For 150 students
6	Girls Hostel	Not available. However, 01 Residential Bungalow declared as Girls Hostel by the authority.
7	Staff Colony	Total Bungalows/Quarters (old) = 30

University Achievements

Scholarships awarded to students

S.#	Scholarships awarded	No. of awardees
1	Ehsaas Scholarship Phase – I 70 Phase – II 59	129
2	HEC Need Based Scholarships	54
3	Khairpur Need-cum-Merit based Scholarships	55
4	Sindh HEC Scholarships	05
5	Punjab Education Endowment Fund (PEEF) Scholarship	01
6	Sindh Education Endowment Fund (SEEF) Scholarship	10
	Total	254

University Achievements

GreenMetric World University Rankings



Campus sites



Inner view of **Main Campus**, BBSUTSD Khairpur located near Chandia Morr, behind Civil Hospital Khairpur.

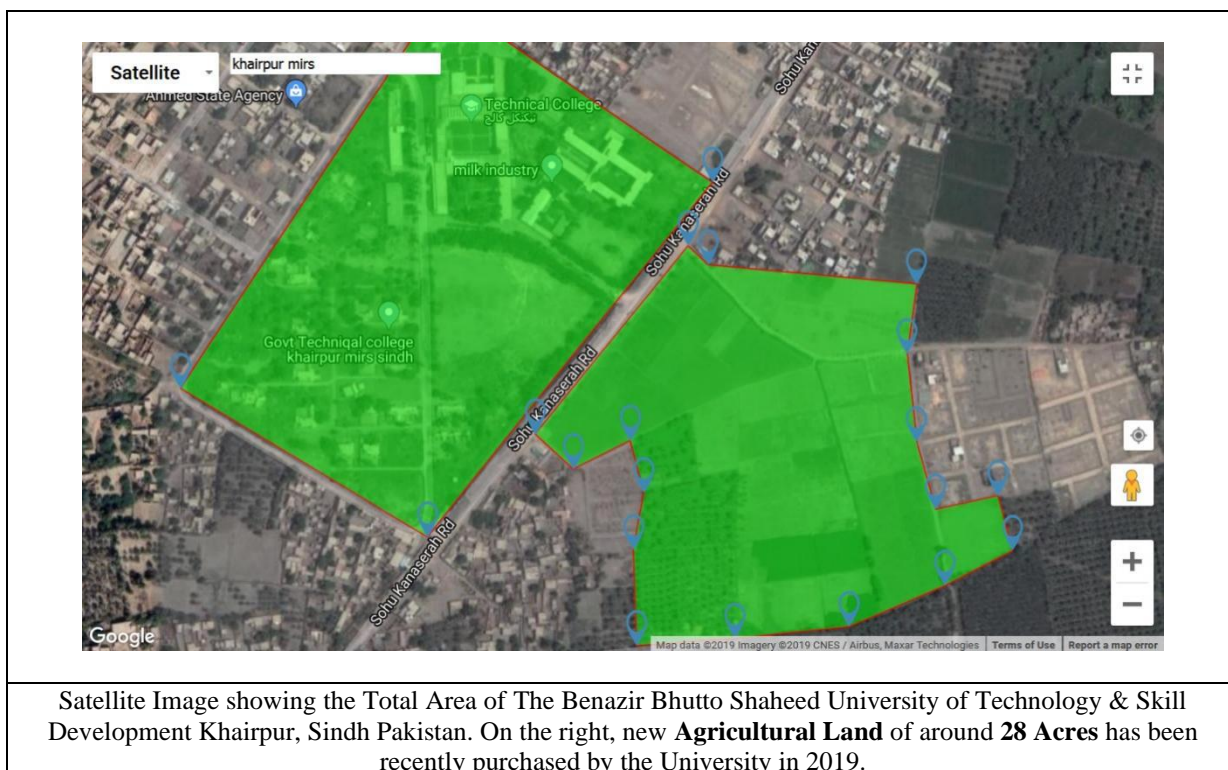
Main campus setting



The BBSUTSD is located behind the main Civil Hospital of Khairpur City near Chandia Mor in District Khairpur, home to more than 2.1 million inhabitants.

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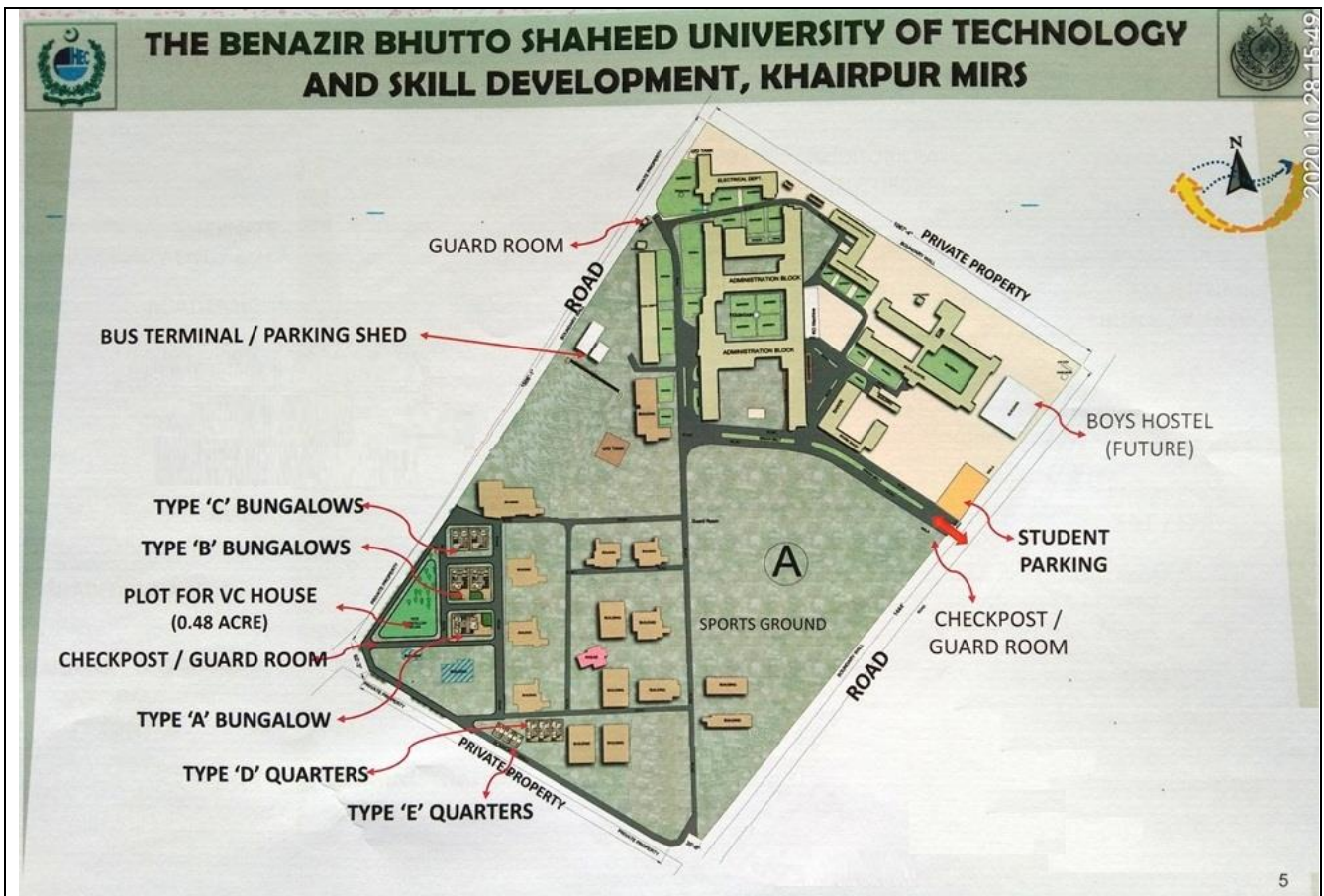
Total main campus area (meter²)



New Agricultural Land Purchased in 2019	Total Area Output
114746.133 m ²	257621.533 m ²
0.115 km ²	0.258 km ²
28.354 Acres	63.659 Acres
11.475 Hectares	25.767 Hectares
1235117.098 Feet ²	2773015.113 Feet ²

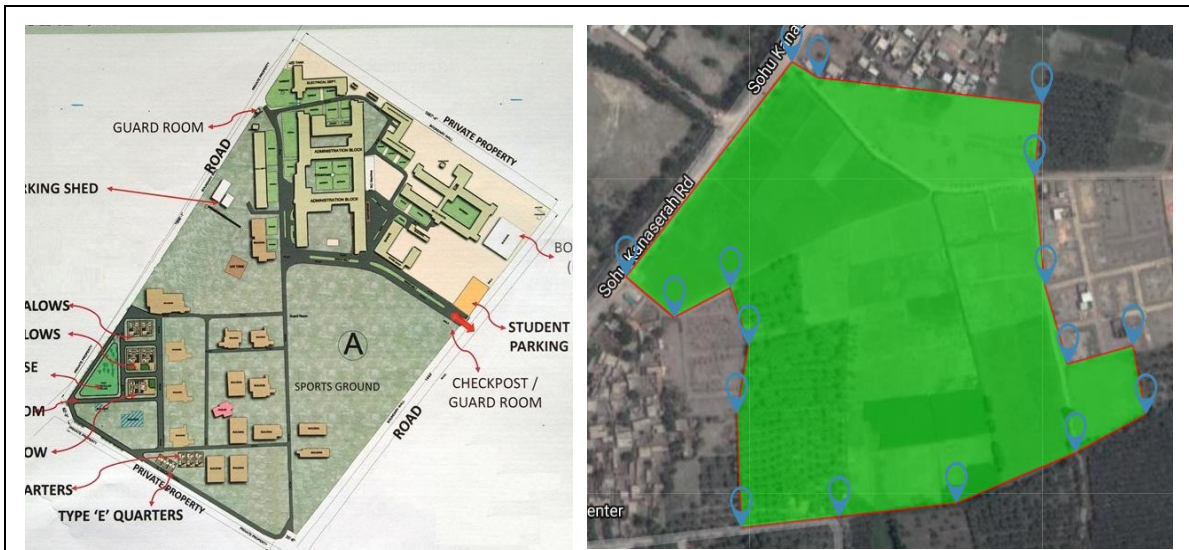
Considering the declining trends in Forestation across the globe owing to increase in population, the BBSUTSD considered it important to pay special attention to the idea of Campus Forestation and take some initiatives to introduce controlled urbanization. For this purpose, new **Agricultural Land** of area **28.354 Acres** has been purchased and till now, it is planned to be used only for agricultural purposes. Later, depending upon the requirement of new buildings, special focus will be paid to construction of Green Buildings so that minimum damage to the environment could be ensured.

Total campus buildings area (m²)



The buildings are constructed in the existing area of the campus with total building coverage of 13,424 sq. m². The development work is proposed however, but owing to recent COVID-19 pandemic, all academic as well as administrative activities were halted for more than 6 months. Later the Academic Activities were resumed as per the instruction of the Government of Sindh, Pakistan, keeping in consideration the strict observance of Covid-19 SOPs at the campus. The image above shows the existing buildings as well as few proposed ones to be constructed in near future.

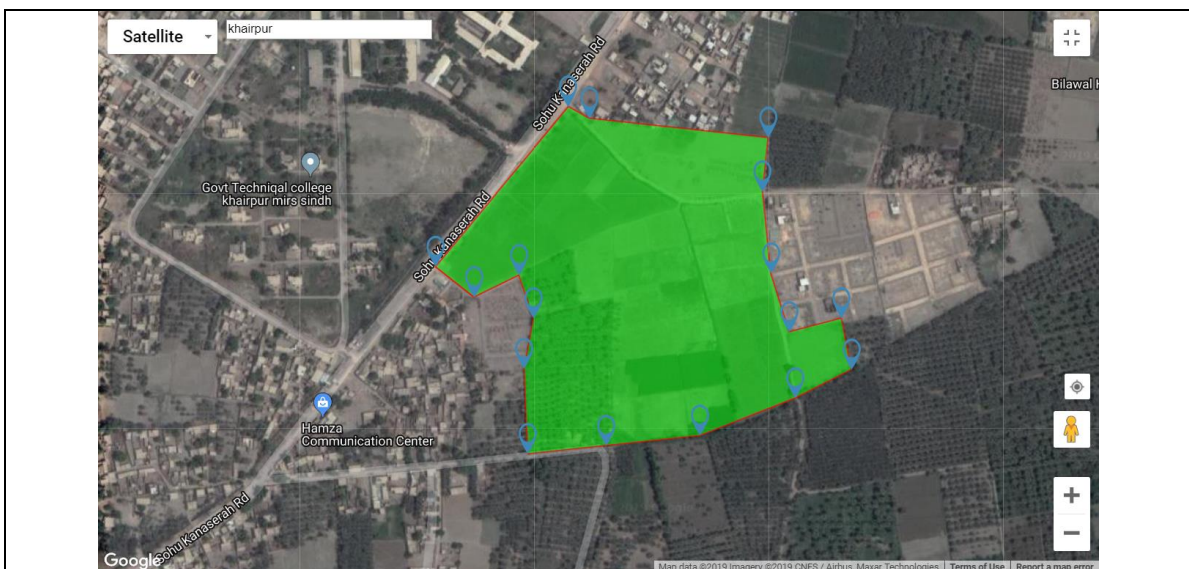
Ratio of open space to total area m²



Images showing the Total Area of The Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur, Sindh Pakistan. On the left is the image showing current plan of university campus where all buildings are located, comprising around 13,424.0 m² along with the green areas comprising of gardens and lawns. On the right, new **Agricultural Land** of around **28 Acres** has been recently purchased by the University in 2019.

Total campus area	257,621.5
Building Area	13,424.0
Open Space Area	244,197.5
Percentage of Open Space Area to total area	94.8 %

Total area on campus covered in forest vegetation (meter²)

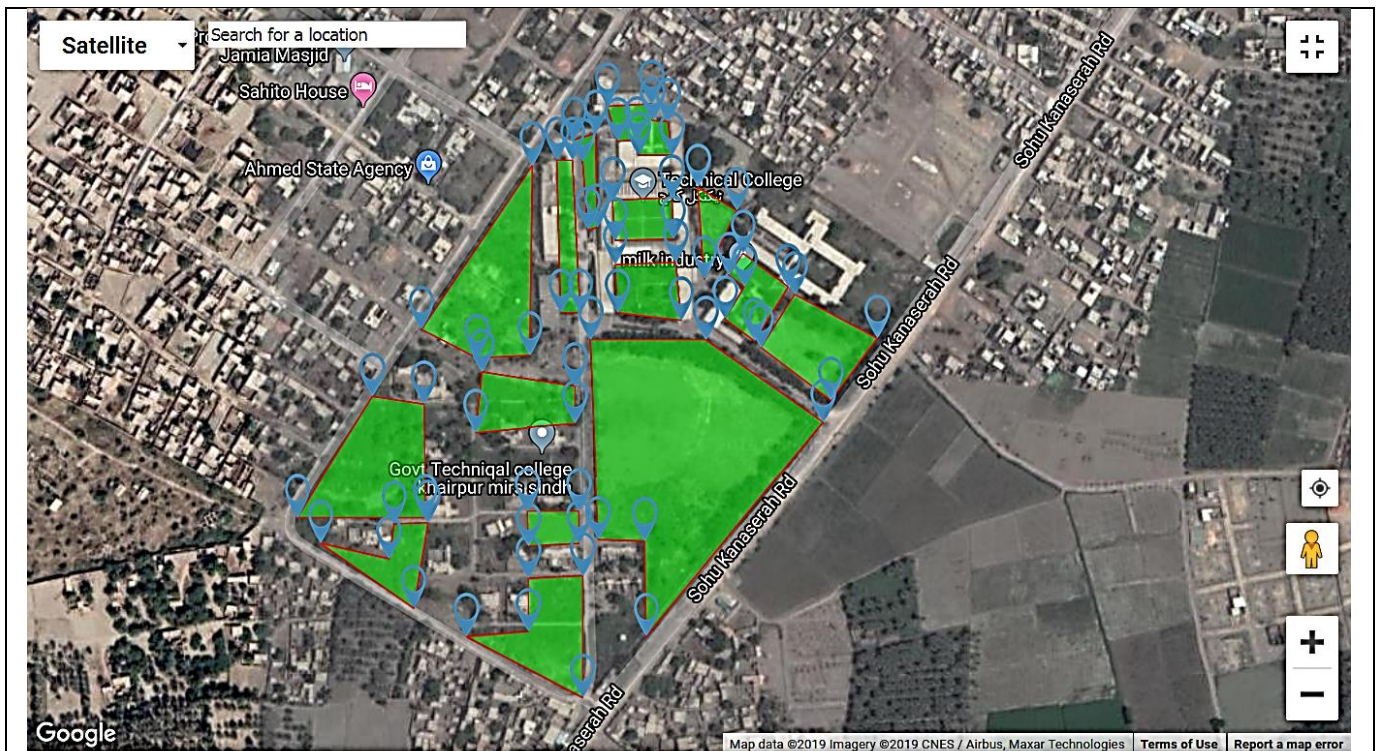


New Agricultural Land Purchased in 2019 by the Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur (BBSUTSD), Sindh, Pakistan

The new land purchased by the university is solely used for agricultural purposes and campus forestation. Furthermore, it is intended that in case of land required for the development of university, a construction of net zero buildings will be ensured.

New Agricultural Land Purchased in 2019	
	114746.133 m ²
	0.115 km ²
	28.354 Acres
	11.475 Hectares
	1235117.098 Feet ²

Total area on campus covered in planted vegetation (meter²)



Area Output

4633.279 m²
 0.005 km²
 1.145 Acres
 0.463 Hectares
 49872.203 Feet²

Total Area Output

67330.728 m²
 0.066 km²
 16.639000000000003 Acres
 6.734000000000001 Hectares
 724741.9110000001 Feet²

Total planted vegetation area: 67,330.728 m²
 Total Area: 129,499 m²
Percentage area: 51%



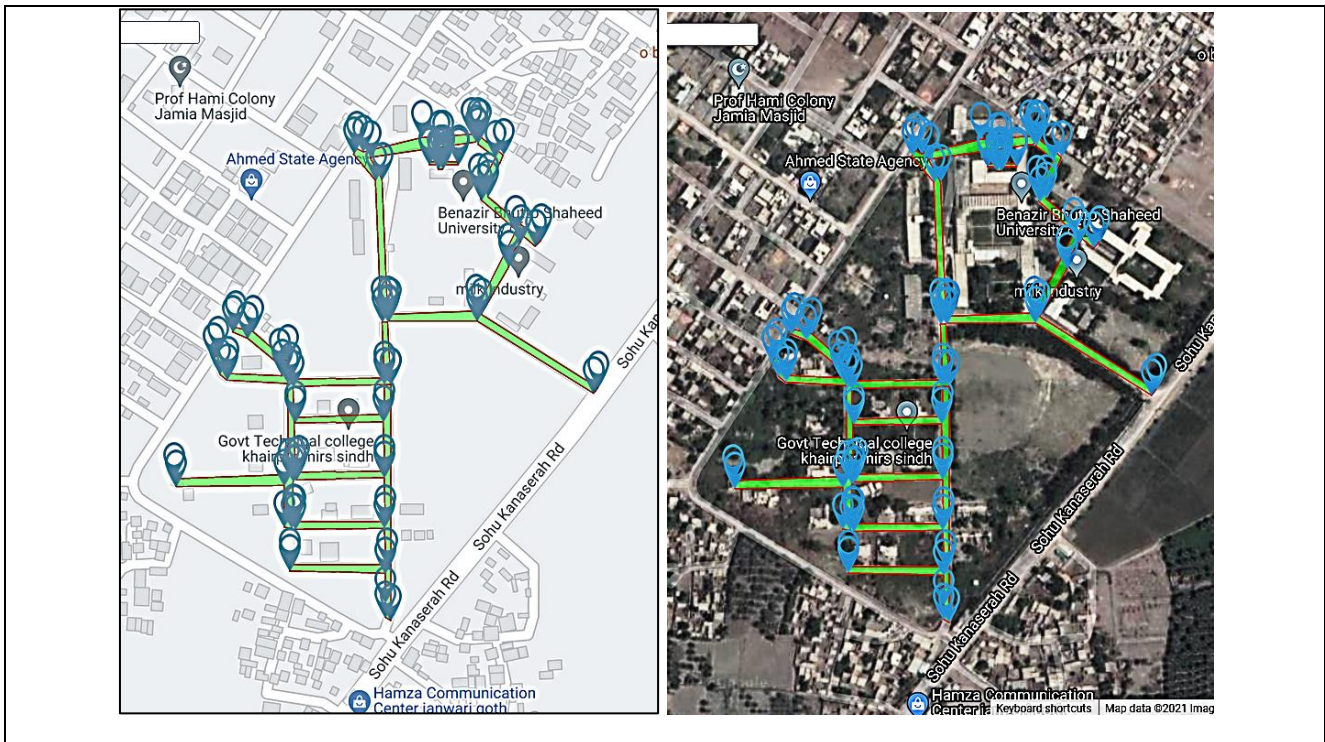
Area on campus covered in planted

Total planted vegetation area: 67,330.728 m²

Total Area: 129,499 m²

Percentage area: 51%

Total area on campus for water absorption besides the forest and planted vegetation (meter²)



Area Output

3667.246 m²
0.004 km²
0.906 Acres
0.367 Hectares
39473.909 Feet²

Total Area Output

13173.951000000001 m²
0.013000000000000001 km²
3.2550000000000003 Acres
1.319 Hectares
141803.231 Feet²

Perimeter Output

1160.735 m
1.161 km

Total **water absorption** area: 13173.91m²

Total Area: 129,499 m²

Percentage area: 10.172 %



Example of **Total area on campus for water absorption besides the forest and planted vegetation** (Benazir Bhutto Shaheed University of Technology & Skill Development, Khairpur Mirs, Pakistan)

University budget for sustainability effort (in US Dollars)

	2019	2020	2021	2022	Average
Budget Total	\$2,180,693	\$2,180,693	\$2,002,543.80	\$1,166,888	\$1,882,704
Sustainability Budget	\$166,492	\$166,492	\$170,493	\$71,429	\$143,726
				Percentage	7.63%



- The average percentage university budget for our Sustainability till 2021 was **7.91 %**
- The average percentage university budget for our Sustainability till 2022 is **7.63 %**

Percentage of operation and maintenance activities of building in one year period



Most of the construction activities at the BBSUTSD were halted owing to governmental restrictions due to COVID 19. But the activities resumed and construction work on new buildings based on Sustainable designs have been started

Campus facilities for disable, special needs and or maternity care

	THE BENAZIR BHUTTO SHAHEED UNIVERSITY OF TECHNOLOGY AND SKILL DEVELOPMENT KHAIRPUR MIRS Phone No.0243-687057 Fax: 0243-9280171 Email: info@bbsutsd.edu.pk
NO. BBSUTSD/ADMIN/975	Dated: 17/6/2021
<u>NOTIFICATION</u>	
SUBJECT: <u>THE ACCESSIBILITY COMMITTEE AND DISABILITY COORDINATORS IN THE UNIVERSITY.</u>	
As required by the Higher Education Commission Islamabad Revised Policy for Students with Disabilities at Higher Education Institutions in Pakistan, 2021, the Accessibility Committee of the University is constituted with following composition:	
i) Mr. Abdul Shakoor Shaikh Assistant Professor	Convener
ii) Ms. Kanwal Syeda Naqvi Jr. Instructor	Member
iii) Ms. Aqsa Abro Junior Clerk/ Computer Operator	Member
iv) Mr. Mujtaba Mehdi Student of BSc Civil Batch-20	Member
v) Mr. Bahram Chandio Assistant Registrar	Member/ Secretary
<u>DISABILITY COORDINATORS</u>	
Following two members of the Accessibility Committee are designated as Disability Coordinators.	
i) Mr. Bahram Chandio Assistant Registrar	
ii) Ms. Kanwal Syeda Naqvi Jr. Instructor	
The Accessibility Committee shall advise the University Management on Accessibility issues of Students with Disabilities, by following the referred HEC Policy.	
This is issued with the approval of Vice Chancellor.	
	 Ghulam Abbas Junejo Deputy Registrar
Cc to:	
1. All Concerned Members	
2. Controller of Examination	
3. Chairperson, Civil Engineering Technology	
4. Chairperson, Basic Science and Related Studies	
5. Assistant Registrar (Academics)	
6. P.A to Vice Chancellor	
Accessibility Committee in the BBSUTSD Khairpur Mirs, Pakistan	

The Higher Education Commission of Pakistan has directed all universities in the country to establish an Accessibility Committee for the Persons with Disabilities (PWD). Following which, the BBSUTSD has constituted the said to coordinate with any PWDs and provide them with best possible facilities available at the campus. Until now, there is no any employee or student of the university with any such disability. However, 12 different strategies / policies / recommendations have been proposed to different sections and offices of the university to facilitate the provision of best possible assistance to PWDs for the upcoming batches of students.



THE BENAZIR BHUTTO SHAHEED
UNIVERSITY OF TECHNOLOGY AND SKILL DEVELOPMENT
KHAIRPUR MIRS

Phone No.0243-687057 Fax: 0243-9280171 Email: bbsutsd.edu.pk@gmail.com

No. BBSUTSD/ADMIN/ 1077

Dated:05/07/2021

MINUTES OF MEETING

The 1st Meeting of Accessibility Committee of the Benazir Bhutto Shaheed University of Technology and Skill Development Khairpur Mirs was held at the office of Engr. Abdul Shakoor Shaikh, Assistant Professor under his convenorship, on Friday 02nd July, 2021 at 11:00 A.M.

The following were attended the meeting.

- | | |
|------------------------------|--------------------|
| 1. Engr Abdul Shakoor Shaikh | Convener |
| 2. Ms. Kanwal Syeda Naqvi | Member |
| 3. Ms. Aqsa Abro | Member |
| 4. Mr. Mujtaha Mehdi | Member |
| 5. Mr. Bahram Chandio | Member / Secretary |

The meeting started with the recitation of Holy Quran by Engr Abdul Shakoor Shaikh, followed by the introduction of all participants. The Secretary of the Committee briefed the members of the committee about the following agenda items:

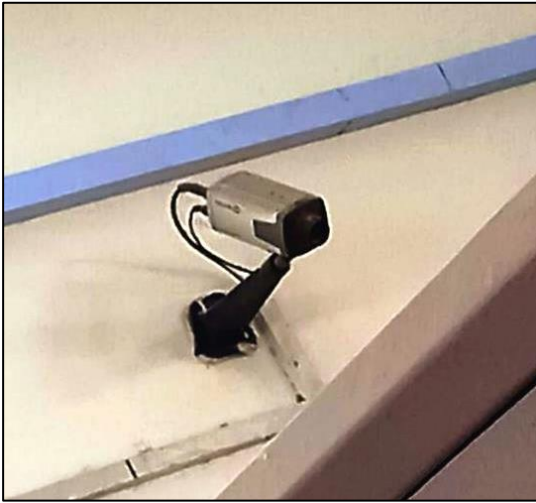
- Policy for students with disabilities at Higher Education Institutions in Pakistan.
- Any other agenda item with the permission of Convener related to the Policy.

Discussion:

After detailed discussion on the policy for students with disabilities at Higher Education Institutions in Pakistan and the Benazir Bhutto Shaheed University of Technology and Skill Development, Khairpur Mirs. The members recommended following recommendation:

S#	Recommendation	Respondent
1.	The details of candidates with disabilities may be required in the application forms of both the Academics programs i.e BSc & DAE at BBSUTSD.	Admissions Cell
2.	Current status and future plan for proper accommodation of Hostel for candidates with disable in the Hostel (Boys / Girls) may be required.	Hostel Warden (Boys / Girls)
3.	Information of Coordinators must be printed in the Prospectus and displayed on the Website	Admissions Cell / System Network Administrator
4.	During Entry Test proper seating arrangements for candidates with disabilities as per requirements, and candidates must be informed well in advance about the arrangements being provided during entrance exam	Director Admissions / Seating Arrangement Committee
5.	The fees waiver for candidates with disabilities (if any) be informed before getting admissions	Admissions Cell / Director Finance / Student Financial Aid Office

Security and safety facilities



1. CCTV in entrance installed at various locations of (BBSUTSD Khairpur, Pakistan)

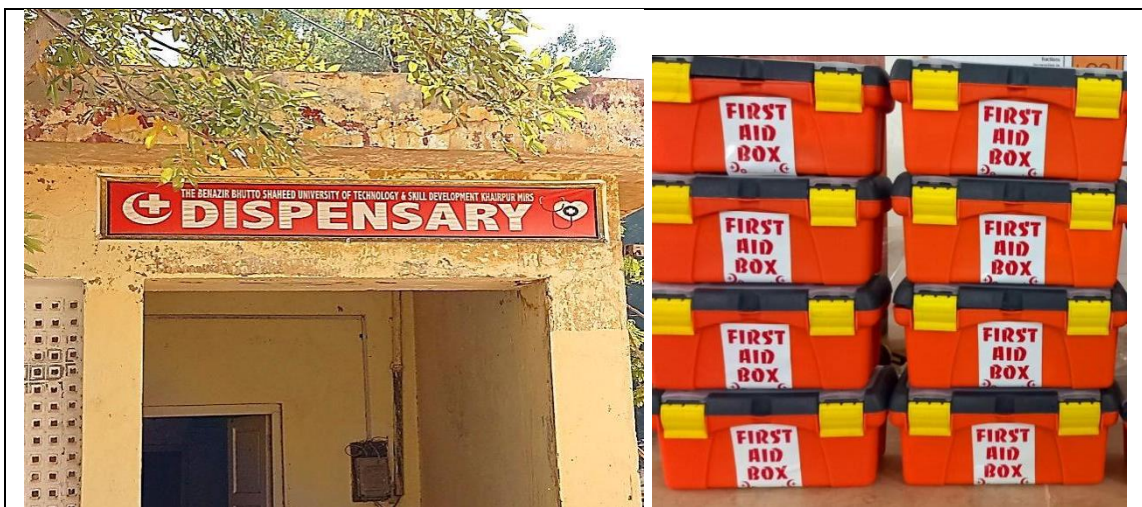


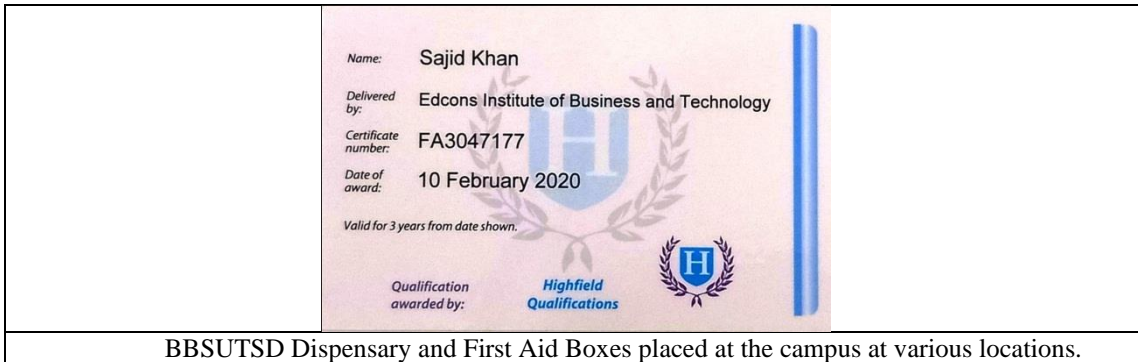
2. Qualified Fire Safety Professionals are working at BBSUTSD providing quality Fire Safety Trainings to both the employees as well the students.



1. Fire Extinguishers at BBSUTSD Khairpur Pakistan
2. CCTV cameras at BBSUTSD Khairpur Pakistan

Health infrastructure facilities for students, academics, and administrative staffs' wellbeing

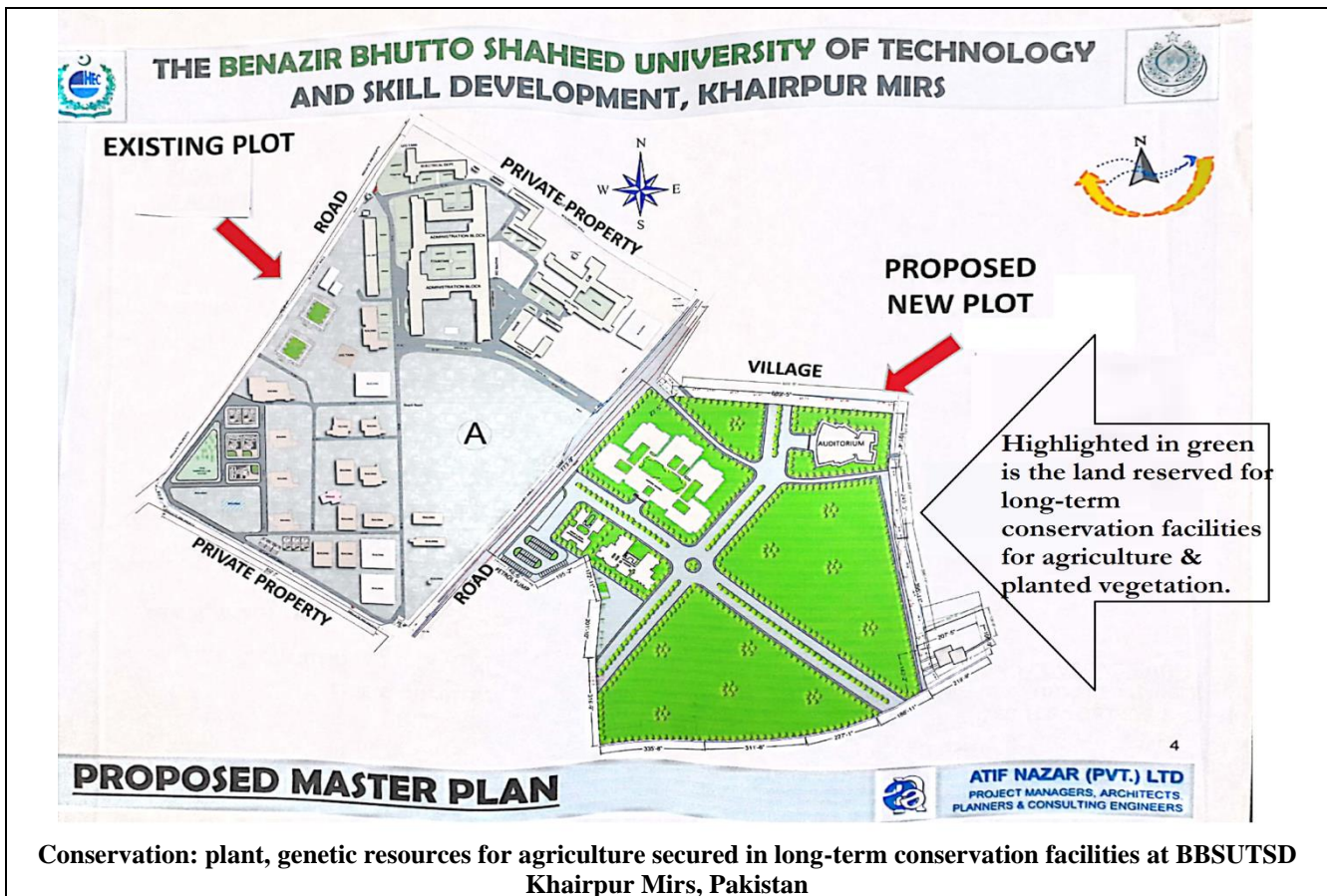




BBSUTSD Dispensary and First Aid Boxes placed at the campus at various locations.

BBSUTSD employees are certified professionals from UK Based Edcons Institute of Business and Technology, providing quality First Aid support to students and employees

Conservation: plant, animal, and wildlife, genetic resources for food and agriculture secured in either medium or long-term conservation facilities



Conservation: plant, genetic resources for agriculture secured in long-term conservation facilities at BBSUTSD Khairpur Mirs, Pakistan

Conservation: plant, genetic resources for agriculture secured in long-term conservation facilities at BBSUTSD Khairpur Mirs, Pakistan

Energy and Climate Change (EC)

Energy efficient appliances usage are replacing conventional appliances



Lighting Appliance	T3	T5	T8	T12	Incandescent	CFL	Total
Total Number of Lights	65	61	64	119	1	120	430
Percentage	15.12	14.19	14.88	27.67	0.23	27.91	100.00

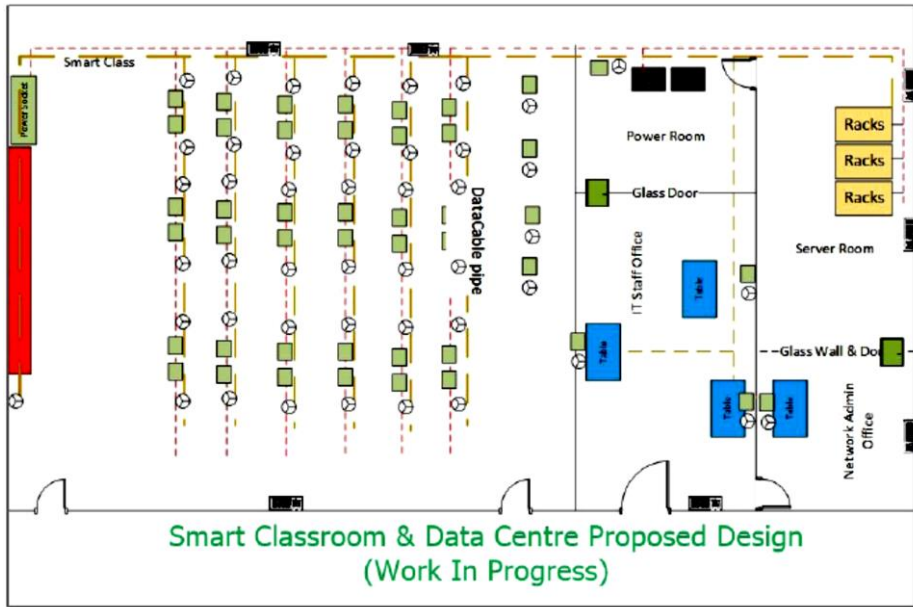
The T12 Lights are proposed to be replaced very soon with T3 lights, LED Bulbs with the intent to reduce the overall consumption of Electricity for Lighting purposes.

At Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur, we are trying our level best to switch the entire electricity consumption system from Conventional to energy efficient sources of electricity generation and utilization. One step towards this effort is to convert all lighting sources from normal Incandescent bulbs to energy efficient Compact Fluorescent Lamp (CFL) Bulbs. Moreover, LED Lighting is also proposed to be installed in places where lighting is extremely essential.

Smart Building implementation

The **Smart Classroom** started functioning at BBSUTSD with 1st ever computerized Entry Test being conducted in it. It was a project worth 03 million (17,426.66 United States Dollar) rupees approved by the government of Sindh Province for the establishment of Smart Classroom at the Benazir Bhutto Shaheed University of Technology & Skill Development, Khairpur Mirs.






Smart Classroom & Data Centre Proposed Design
(Work In Progress)



Guidelines/Specifications for Planning and Information Purposes only

HEC Sindh				
Main Site Equipment				
S.NO.	Indicator (Items)	Item Description	UOM	Qty
VC Solution				
1	Video Solution 85" smart screen all in one 4k		Nos.	1
2	Back Camera for teacher		Nos.	1
3	Digital Podium		Nos.	1
4	Displays 65" Optional		Nos.	2
5	Sound systems (40 Mics-04 speakers-amplifier Mixer-DSP)		Nos.	1
6	CCTV Camera		Nos.	2
7	Access Point / WiFi Device		Nos.	1
Furniture Fixtures				
1	IT Equipment Rack		Nos.	1
2	Class Room Chairs		Nos.	40
3	Class Room Tables		Nos.	20
4	Executive chair for teacher		Nos.	1
Room Acoustics				
				Room Size max 25x40
1	Fall ceiling		Nos.	25x40
2	Wall paneling		Nos.	25x40
3	Carpeting		Nos.	25 x 40
4	Curtains		Nos.	
5	Room Paint		Nos.	
Room Cooling, Light & Power				
1	AIR Conditioners	1.5 TON	Nos.	
2	Lighting		Nos.	4
3	UPS (Optional)	10KVA	Nos.	
Room Miscellaneous Works				
1	Data Cabling			1
2	Electrical Cabling			
3	Audio & Video Cabling			

Note: University may modify specifications as per their requirements/needs.


KHALID HUSSAIN MAHAR
 Deputy Director (Planning)
 Sindh Higher Education Commission
 Government of Sindh



No.AD (ADMIN)/SHEC/6-1/2020
GOVERNMENT OF SINDH
SINDH HIGHER EDUCATION COMMISSION
Karachi Dated April, 2021

To,

The Vice Chancellor,
The Benazir Bhutto Shaheed University of Technology & Skill Development,
Khairpur Mirs.

SUBJECT: GRANT IN AID FOR ESTABLISHMENT OF SMART CLASS ROOM.

I am directed to refer to the subject noted above and to state that on the recommendations of F& P Committee and with the approval of Sindh HEC in its 14th meeting held on 25.02.2021 an amount of Rs. 3.00 million has been approved for establishing smart class room in you university. A cheque amounting to Rs. 3.00 million bearing No. 313223 dated 24.03.2021 is enclosed herewith.

2. It is requested that these funds may be utilized for the establishment of smart class room at your University as per attached guidelines devised by the IT Working Group of Sindh HEC and after fulfillment of all the codal formalities during Current Financial Year 2020-21.

(KHALID HUSSAIN MAHAR)
DEPUTY DIRECTOR (ADMIN)

Vice Chancellor, Secularist
C/O: BBSUTSD, Khairpur Mirs
Date: 18-04-2021
BBSUTSD Khairpur Mirs

Vice Chancellor, Secularist
Inward No: 528
Date: 18-04-2021
BBSUTSD Khairpur Mirs

A copy is forwarded for information to:

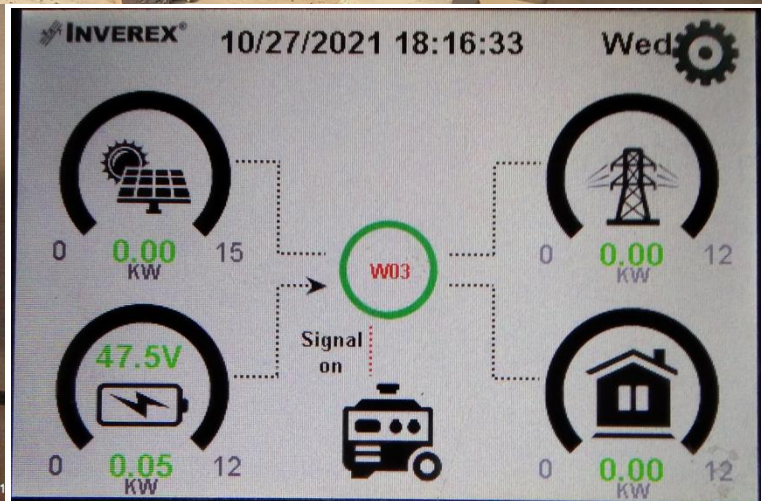
1. The P.S to the Chairperson, Sindh Higher Education Commission, Government of Sindh, Karachi.
2. The PS to Secretary, Sindh Higher Education Commission, Government of Sindh, Karachi.
3. Office order file.

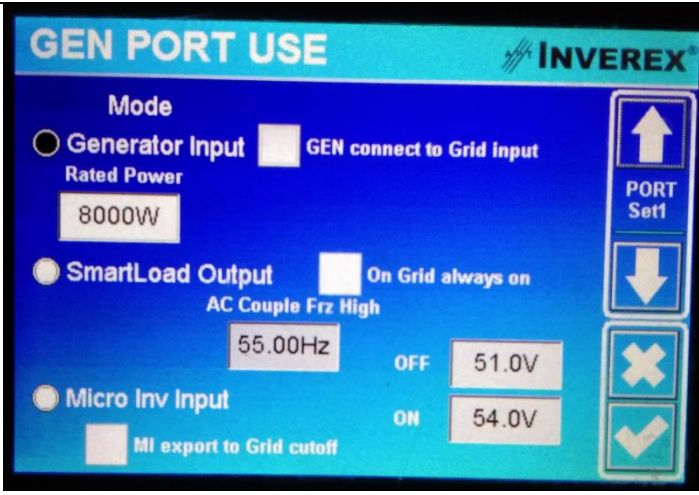
10/4/2021
1. JF
2. ACC
3. DR
4. Sys Admin
5. PPO

A project of worth 03 million (17,426.66 United States Dollar) rupees approved by the government of Sindh Province for the establishment of Smart Classroom at the Benazir Bhutto Shaheed University of Technology & Skill Development, Khairpur Mirs.

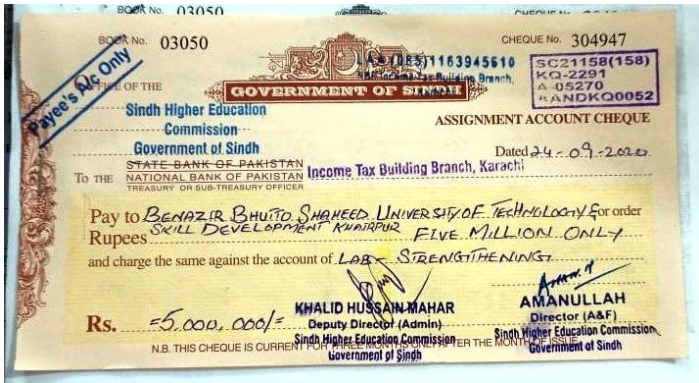
Renewable energy produced inside campus

One Step forward towards making the BBSUTSD a Green Campus by increasing the number of Solar Power Generation Sources at campus. The 10 kV Solar System that was proposed last year is now installed successfully and supplying solar power to Simulation Lab at BBSUTSD Khairpur Mirs, Pakistan.

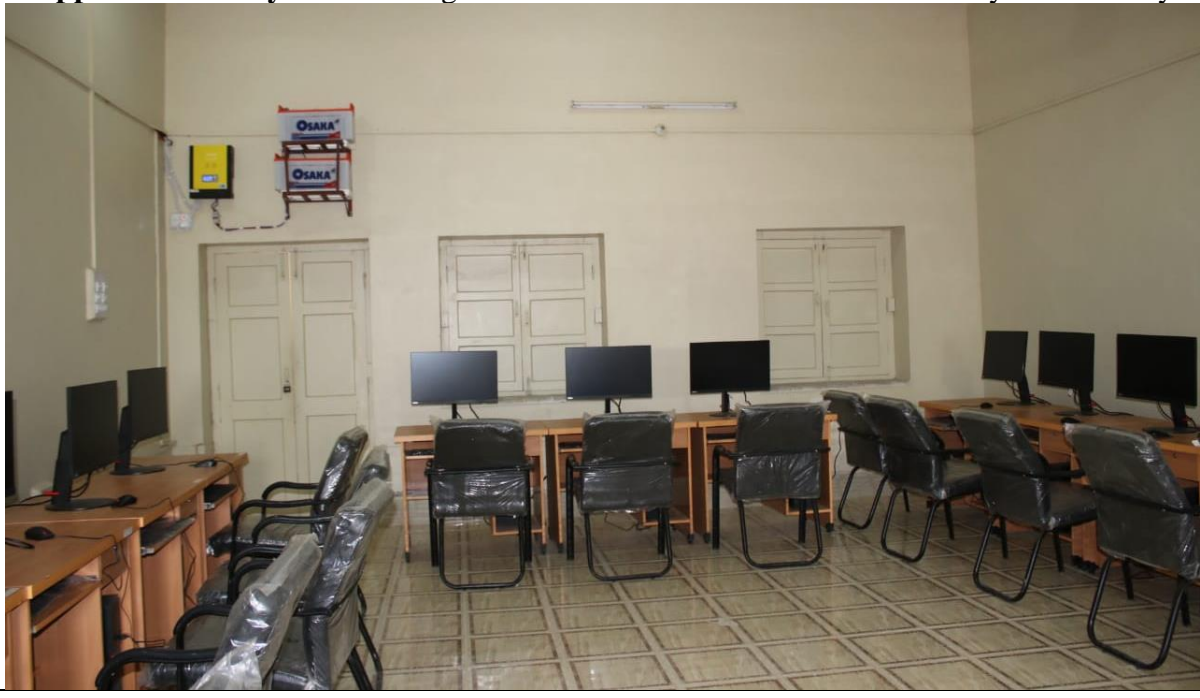




Last Year 2020



A new Project of worth **5 million rupees (67,584.78 United States Dollar)** has been approved by the provincial government of Sindh) titled **Strengthening Laboratory Program** wherein, the power supply systems in laboratories will now employ **Solar PV cells, instead of conventional Grid supplied electricity**. This is a big milestone achieved towards Sustainability in university.



Guideline Specifications/Standards to be followed during the Tendering Process

No.	Category	Specs	Qty
1	Desktop	Dell/HP MINI TOWER – Computer Intel Core I5 9th Gen 8GB DDR4 2666 1 TB SATA INTEL CHIPSET INTEL INTEGRATED GRAPHICS 22" LED Monitor Wifi builtin Lockable Casing 3 Year Support Warranty	30
2	Laptop	Dell/HP Intel Core I5 9th Gen 8GB DDR4 2666 512 SD INTEL CHIPSET INTEL INTEGRATED GRAPHICS 15" Display Wifi builtin 3 Year Support Warranty	2
3	Projector	Screen 3500 lumens	3
4	Printer	Laser Jet Printer 38PPM NW with USB 1 Year Warranty	2
5	Scanner	Flatbed type with ADF	2
6	Wifi Access Point	802.11ac Gigabit Long Range Access Point	2
7	Network Switch	48 port, Gigabit each port	1
8	UPS/Solar	10kv Solar System with batteries	1
9	CCTV	DVR(10 days storage) with 02 Analog Cameras(Night Vision)	1
10	Accessories	Switch Racks, Cables and Connectors etc	1

1 Akber Khowaja (Group CIO Dr. Ziauddin Group)

2 Syed Sohaib Shams (CIO DUHS)

3 Mujawar Malik (Director IT)

4 Azar Akbar (Director IT)

5 Asif Qazi (Director IT)

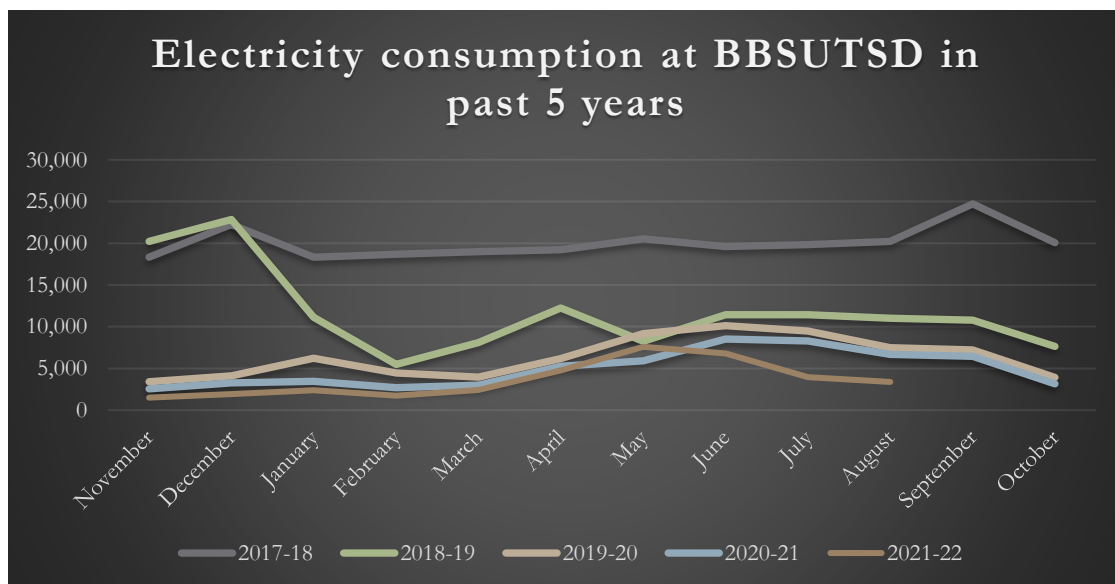
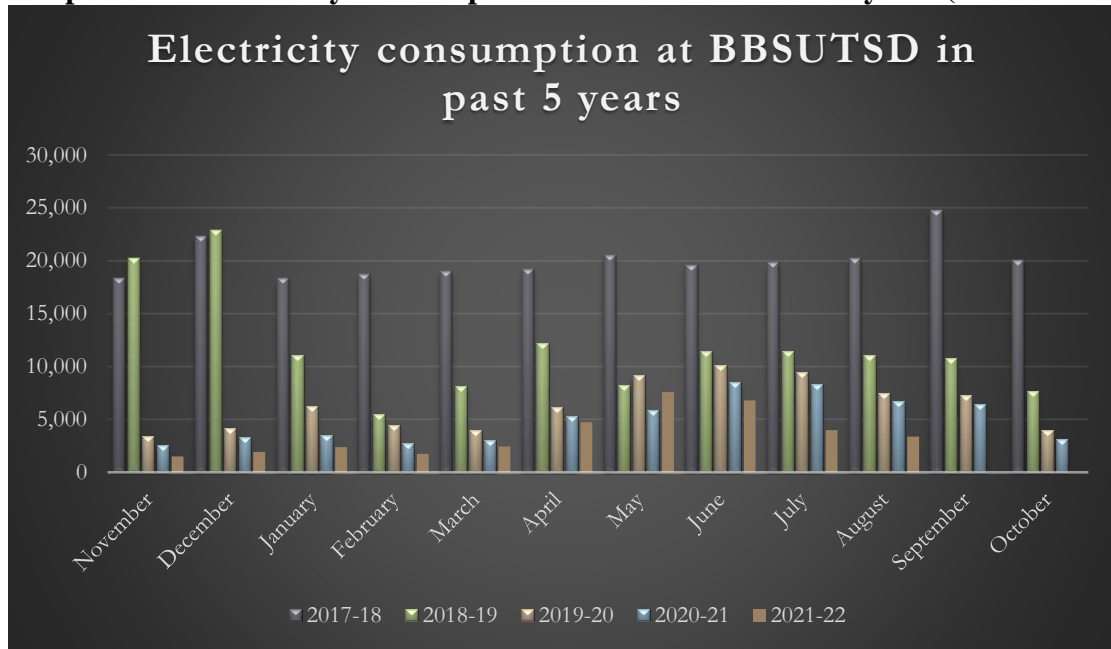
6 Javed Ahmed (Director SHEC)

AutoCAD Lab Solarized at the BBSUTSD Khairpur

The faculty members at the department of Mechanical Engineering Technology in the Benazir Bhutto Shaheed University of Technology & Skill Development (BBSUTSD) Khairpur Mirs conducted the Energy Audit of the University and gave a report suggesting the Solarization of the Campus keeping in view the problem of Load Shedding and dependence of the Electricity from National Grid. As per the recommendations of the report, the process of Solarization of Campus has been initiated with one building segment being solarized. It is proposed that gradually, the entire campus will be solarized and dependence on national grid will be overcome in future.

Electricity usage per year (in kilo watt hour)

Comparison of electricity Consumption at BBSUTSD for last 5 years (2018 – 2022)



Difference between Electricity consumption (kWh) in past four years at the Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur. Keeping in view the efforts taken globally for achieving the sustainability in all sectors of life, BBSUTSD is trying its best to reducing the energy consumption despite increasing number of staff and students at the campus. This has resulted positively in reduced amount of electricity consumption at the campus and can be seen from electricity bills attached.

Snapshots of original Electricity Bills (From October 2018 to September 2022)

SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL - (MDI)											
www.sepcoc.com.pk											
SEPCO GST # 29-00-3891-489-10											
CON DATE	INFO CD	NO OF AC	EDG	BILL MONTH	READING DATE	ISSUE DATE	DUE DATE				
05 AUG 10	31			SEP 22	30 SEP 22	05 OCT 22	19 OCT 22				
CONSUMER ID / LINE/KEY	TARIFF	SANC LOAD	OLD AC NUMBER	11 KV KHAKI SHAH PUL KHARPUR							
238002586 / 3801941637	A-3(A) (66)	75	2438131000102								
REFERENCE NO	DIVISION	KHARPUR									
28 38131 0000102 U	SUB DIVISION	KHARPUR									
NAME & ADDRESS				M-S PRINCIPAL GOVT COLLEGE OF TECHNOLOGY KHP MRS KHARPUR				CNCT LOAD = 75 MCD Date = 15-Jan-2019			
PRV CUMM METER				PRV CUMM MTR				RESST NO			
KWH				KWH METER READING				KWH METER READING			
MDI METER READING				METER STATUS							
SEPCO CHARGES											
UNITS CONSUMED 5016											
ENERGY CHARGES 11097.40											
FIX CHARGES 0											
LFP PENALTY 0											
SEASONAL CHARGES 0											
METER RENT 0											
SERVICE RENT 0											
VAR FPA 17248.04											
QTR TARIFF ADJ 28570.30											
TOTAL 21696.2											
BILL CALCULATION											
GDP 28570.30											
TAXES ON FPA 2002											
TOTAL 28572.30											
DEFERRED AMOUNT 0											
OUTSTANDING INSTALL 0											
CUT HERE											
SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL (MDI)											
www.sepcoc.com.pk											
CONSUMER ID 238002586											
BILL NO 2409103											
SEP 22 - 28 38131 0000102 - 00200400-19 OCT 22 - 0											
BILL MONTH 19 OCT 22											
DUE DATE 28 38131 0000102 U											
PAYABLE WITHIN DUE DATE 2004700											
PAYABLE AFTER DUE DATE 2004999											

2022

SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL (MDI)											
www.sepcoc.com.pk											
SEPCO GST # 29-00-3891-489-10											
CON DATE	INFO CD	NO OF AC	EDG	BILL MONTH	READING DATE	ISSUE DATE	DUE DATE				
05-AUG-10	31		0%	Aug 21	31 AUG 21	04 SEP 21	17 S				
CONSUMER ID	TARIFF	SANC LOAD	OLD AC NUMBER	11 KV KHAKI SHAH PUL KHARPUR							
238002586	A-3 (A) (66)	75	2438131000102								
REFERENCE NO	DIVISION	KHARPUR									
28 38131 0000102 U	SUB DIVISION	KHARPUR									
NAME & ADDRESS				M-S PRINCIPAL GOVT COLLEGE OF TECHNOLOGY KHP MRS KHARPUR				CNCT LOAD = 75 MCD Date = 15-Jan-2019			
PRV CUMM METER				PRV CUMM MTR				RESSET NO			
KWH				KWH METER READING				KWH METER READING			
MDI METER READING				METER STATUS							
SEPCO CHARGES											
UNITS CONSUMED 6697											
ENERGY CHARGES 13068.47											
FIX CHARGES 0											
LFP PENALTY 0											
SEASONAL CHARGES 0											
METER RENT 0											
SERVICE RENT 0											
VAR FPA -1644.94											
QTR TARIFF ADJ 19354.33											
TOTAL 148367.86											
BILL CALCULATION											
GDP 148367.86											
TAXES ON FPA 280											
TOTAL 148647.86											
DEFERRED AMOUNT 0											
OUTSTANDING INSTALL 0											
CUT HERE											
SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL (MDI)											
www.sepcoc.com.pk											
CONSUMER ID 238002586											
BILL NO 6548											


2021

SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL (MDI)											
www.sepcoc.com.pk											
SEPCO GST # 29-00-3891-489-10											
CON DATE	INFO CD	NO OF AC	EDG	BILL MONTH	READING DATE	ISSUE DATE	DUE DATE				
05-AUG-10	31		0%	SEP 20	30 SEP 20	19 OCT 20					
CONSUMER ID	TARIFF	SANC LOAD	OLD AC NUMBER	11 KV KHAKI SHAH PUL KHARPUR							
238002586 / 3801941637	A-3(A) (66)	75.00	2438131000102								
REFERENCE NO	DIVISION	KHARPUR									
28 38131 0000102 U	SUB DIVISION	KHARPUR									
NAME & ADDRESS				M-S PRINCIPAL GOVT COLLEGE OF TECHNOLOGY KHP MRS KHARPUR				CNCT LOAD = 75 MCD Date = 15-Jan-2019			
PRV CUMM METER				PRV CUMM MTR				RESSET NO			
KWH				KWH METER READING				KWH METER READING			
MDI METER READING				METER STATUS							
SEPCO CHARGES											
UNITS CONSUMED 7224											
ENERGY CHARGES 12665.44											
FIX CHARGES 0											
LFP PENALTY 0											
SEASONAL CHARGES 0											
METER RENT 0											
SERVICE RENT 0											
VAR FPA 0.00											
QTR TARIFF ADJ 20877.36											
TOTAL 147,730.80											
BILL CALCULATION											
GDP 147,730.80											
TAXES ON FPA 0.00											
TOTAL 147,730.80											
DEFERRED AMOUNT 0											
OUTSTANDING INSTALL 0											
CUT HERE											
SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL (MDI)											
www.sepcoc.com.pk											
CONSUMER ID 238002586											
BILL NO 4093 029											
SEP 20 - 28 38131 0000102 - 00409319-19 OCT 20 - 0											
BILL MONTH 19 OCT 20											
DUE DATE 28 38131 0000102 U											
PAYABLE WITHIN DUE DATE 4,093.029											
PAYABLE AFTER DUE DATE 4,108.185											

2020

SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL (MDI)											
www.sepcoc.com.pk											
SEPCO GST # 29-00-3891-489-10											
CON DATE	INFO CD	NO OF AC	EDG	BILL MONTH	READING DATE	ISSUE DATE	DUE DATE				
05-AUG-10	31		NA	SEP 19	30 SEP 19	04 OCT 19	14 OCT 19				
CONSUMER ID	TARIFF	SANC LOAD	OLD AC NUMBER	11 KV KHAKI SHAH PUL KHARPUR							
3801941637	A-3 (A) (66)	75	2438131000102								
REFERENCE NO	DIVISION	KHARPUR									
28 38131 0000102 U	SUB DIVISION	KHARPUR									
NAME & ADDRESS				M-S PRINCIPAL GOVT COLLEGE OF TECHNOLOGY KHP MRS KHARPUR				CNCT LOAD = 75 MCD Date = 15-Jan-2019			
PRV CUMM METER				PRV CUMM MTR				RESSET NO			
KWH				KWH METER READING				KWH METER READING			
MDI METER READING				METER STATUS							
SEPCO CHARGES											
UNITS CONSUMED 10803											
ENERGY CHARGES 18970.68											
FIX CHARGES 0											
LFP PENALTY 0											
SEASONAL CHARGES 0											
METER RENT 0											
SERVICE RENT 0											
VAR FPA 0.00											
QTR TARIFF ADJ 19445.4											
TOTAL 38915.16											
BILL CALCULATION											
GDP 38915.16											
TAXES ON FPA 0											
TOTAL 38915.16											
DEFERRED AMOUNT 0											
OUTSTANDING INSTALL 0											
CUT HERE											
SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL (MDI)											
www.sepcoc.com.pk											
CONSUMER ID 3801941637											
BILL NO 1281											
System Runtime: Service.Exceptions (Db0000400): A generic error occurred in GDI+ at System.Drawing.Image.Save(Saving:Blissman, ImageCodecInfo: encoder, EncoderParameters: encoderParams) at System.Drawing.Image.Save(Saving:Blissman, ImageFormat: Format) at [D:\Automation.Linux\ServerControl.Linux\Barcode.s] (
BILL MONTH 14 OCT 19											
DUE DATE 28 38131 0000102 U											
PAYABLE WITHIN DUE DATE 3051547											
PAYABLE AFTER DUE DATE 3072034											

2019

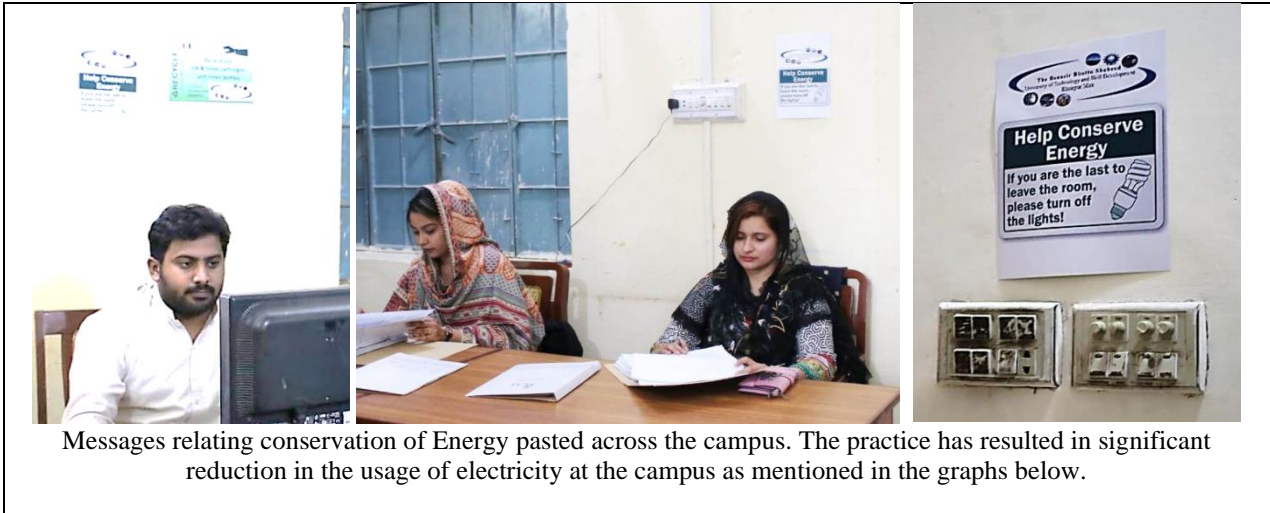
SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL (MDI)									
www.sepcocom.pk					SEPCO GST # 29.00.3891.689.10				
CONN DATE	INFG. CD	NO OF AC	ED	BILL MONTH	READING DATE	ISSUE DATE	DUE DATE		
05-AUG-10	31	00	NA	Oct 18	03 OCT 18	11 OCT 18	26 OCT 18		
CONSUMER ID	TARRIF	SANCLD	OLD AC NUMBER		FEEDER NAME		110V SHAM BAKAR KHAR PUR		
30010481637	A-3 (A) (84)	75			MONTH	MDI	KWH UNITS	BILL	PAYMENT
REFERENCE NO	DIVISION		KHAR PUR		OCT17	0	17938	183670	0
24.38131.0000102.U	SUB DIVISION		KHARPUR		NOV	0	18327	1901620	579511
NAME & ADDRESS					DEC	0	22265	1680806	458277
M-6 PRINCIPAL GOVT COLLEGE OF TECHNOLOGY KHIP MRB KHARPUR					JAN18	0	18327	1919833	208818
SAY NO TO CORRUPTION					FEB	0	18679	1563317	0
WEB GENERATED BILL					MAR	0	18978	1831348	183840
PRV CLUMI MDI	FRS CLUMI MDI	RESET NO	MONTHLY ADV BILL	POWER FACT	APR	0	19230	1957633	410822
			0	0	MAY	0	20522	1900772	0
					JUN	0	19620	2288770	227594
					JUL	0	19829	2402636	231874
					AUG	0	20215	2938485	0
					SEP	0	24720	3043176	513843
					Fuel Price Adj for sep-18 @ 1.1635 NOWH				
					FT FPA 0 ET FPA 0				
					ST FPA 0 TF FPA 0				
					CST FPA 3998 ED FPA 0				
					VAR FPA 23520.15				
					TAM FPA 27518.15				
KWH METER READING		KWH METER READING		KWH METER READING		METER STATUS			
METER NO	PREVIOUS	PRESENT	MF	PREVIOUS	PRESENT	MF	PRESENT	DEF-EST	DEF-EST
202748	18440	18440	40						
202748	4454	4454	40						
UNIT CONSUMED (OFF PEAK) (PKA)		3796 (OFF PEAK) (PKA)		UNIT CONSUMED (OFF PEAK) (PKA)		3796 (OFF PEAK) (PKA)			
SEPCO CHARGES		GOVT CHARGES		ARRANGEMENT		262948309			
UNITS CONSUMED	20064	E.D.		CURRENT BILL			358,354		
ENERGY CHARGES	295844	PTV FEE		BL L ADJUSTMENT			0		
FIX CHARGES	0	GST	51777	INSTALLMENT			0		
L/F PENALTY		INCOME TAX		FUEL PRICE ADJUSTMENT			27518		
SEASONAL CHARGES		EXTRA TAX	0	SUBSIDIES			0		
METER RENT		FURTHER TAX	0	PAYABLE WITHIN DUE DATE			3014269		
SERVICE RENT		IT'S (23% IS)	0	L/F SURCHARGE			20658		
		STAX - 2014		PAYABLE AFTER DUE DATE			3045024		
		R/J SURCHARGE	2006.40						
		SALES TAX	0						
		FC SURCHARGE	8627.52						
		TR SURCHARGE							
		TAXES ON FPA	3998						
		GST ADJ	3998						
		TOTAL	86408.92						
		DEFERRED AMOUNT							
		OUTSTANDING INSTAL							
IN CASE ANY DISCREPANCY IS NOTICED IN THIS BILL CONCERNED REVENUE OFFICER CUSTOMER SERVICES SHOULD BE CONTACTED BEFORE DUE DATE FOR RECTIFICATION THEREOF. OTHERWISE BILL WILL BE TREATED AS CORRECT AND RECONCILED.									
CUT HERE									
SUKKUR ELECTRIC POWER COMPANY - ELECTRICITY CONSUMER BILL (MDI)									
www.sepcocom.pk									
CONSUMER ID					30010481637				
BILL NO					850				
									
Oct 18 - 24.38131.0000102 - 00304.496 - 26 OCT 18 - 6									
BILL MONTH	DUE DATE	REFERENCE NO	PAYABLE WITHIN DUE DATE		3014366				
Oct 18	26 OCT 18	24.38131.0000102.U	PAYABLE AFTER DUE DATE		3045024				

2018

Electricity Usage for the past 4 years.

	2017-18	2018-19	2019-20	2020-21	2021-22
November	18,327	20,223	3,407	2,554	1,502
December	22,265	22,850	4,104	3,266	1,925
January	18,327	11,120	6,239	3,475	2,372
February	18,679	5,480	4,460	2,706	1,743
March	18,978	8,120	3,958	2,995	2,442
April	19,230	12,240	6,179	5,283	4,748
May	20,522	8,240	9,181	5,909	7,592
June	19,620	11,440	10,124	8,523	6,786
July	19,829	11,441	9,470	8,287	3,971
August	20,215	11,035	7,480	6,697	3,376
September	24,720	10,803	7,224	6,441	5,000
October	20,064	7,653	3,930	3,147	2,500
Total	240,776	140,645	75,756	59,283	43,957

The Yellow color indicates estimate consumption of electricity based on past practices.



Messages relating conservation of Energy pasted across the campus. The practice has resulted in significant reduction in the usage of electricity at the campus as mentioned in the graphs below.

Soon after the announcement of the BBSUTSD overall score and position in GreenMetric World University Ranking, strict policies relating to conservation of Electricity were adopted. With the messages to turn off the lights and electrical appliances in the entire university, the excess use of electricity was avoided and a significant reduction of power consumption as depicted in the graphs and picture above was observed.

Ratio of renewable energy production divided by total energy usage per year



Roof Mounted Solar Panels (The Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur)

The solar system installed at BBSUTSD is expected to produce around 5 kWh a day. The climate of Khairpur usually experiences a rainy day to a maximum of 35 days, and the system is calculated to produce power at 80% of its own efficiency. Therefore, the total power that is estimated to be obtained from the system in a year is

$$\text{Power} = \text{Solar Days} \times \text{Solar System Output per day} \times \text{System Efficiency}$$

$$\text{Power} = 330 \times 5 \text{ kWh} \times 80\%$$

$$\text{Power} = 1320 \text{ kWh}$$

No	Renewable Energy	Production (in kWh)
3	Solar panel	1,320
	Total	1,320

13,20 / 59,283 (Electricity usage) = 2.226 %

Elements of green building implementation as reflected in all construction and renovation policy

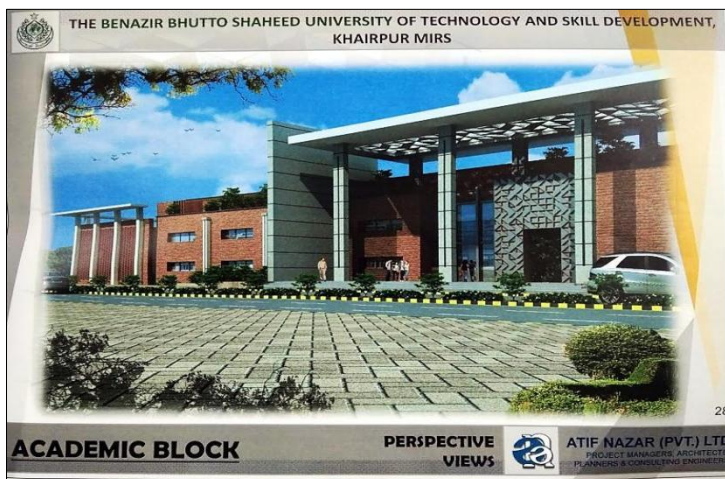
Existing Structure of Main Campus Buildings at BBSUTSD





Proposed Structure of new buildings planned to be constructed in future.

To ensure the element of Sustainability in Campus, all the new buildings are proposed and planned to be constructed keeping in consideration the essential components of Net-Zero buildings with the characteristics of natural ventilation already involved in the building architecture. For that purpose, the layout plans are underway and shall soon be made a part of the building infrastructure of the BBUSTSD Khairpur. Following is the proposed Structure of Main Campus Building at BBSUTSD



Greenhouse gas emission reduction program

	
<p>1. Bike Charges parking (BBSUTSD KHP, Pakistan)</p>	<p>2. renewable energy (BBSUTSD KHP, Pakistan)</p>
	
<p>3. Ride Share (BBSUTSD KHP, Pakistan)</p>	

1. Charging parking for private vehicle to reduce vehicle in campus
2. Using renewable energy for electricity that reducing purchased electricity
3. Ride share designed to encourage commuters to adopt healthy and sustainable transportation options. (Carpool)

Please Provide Total Carbon Footprint (CO₂ emission in the last 12 months (2021-22), in metric tons

Option 2: Recommended by UI GreenMetric

CO₂ (electricity)

$$\begin{aligned}
 &= \frac{\text{electricity usage per year (kWh)}}{1000} \times 0,84 \\
 &= \frac{43,957 \text{ kWh}}{1000} \times 0,84 \\
 &= 36.9238 \text{ metric tons}
 \end{aligned}$$

CO₂ (bus)

$$= \frac{\text{number of shuttle bus in your university} \times \text{total trips for shuttle bus service each day} \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,01$$

$$= \frac{1 \times 2 \times 2 \times 240}{100} \times 0,01$$

$$= 0.096 \text{ metric tons}$$

CO₂ (cars)

$$= \frac{\text{number of cars entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,02$$

$$= \frac{25 \times 2 \times 2 \times 240}{100} \times 0,02$$

$$= 4.8 \text{ metric tons}$$

CO₂ (motorcycle)

$$= \frac{\text{number of motorcycle entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,01$$

$$= \frac{105 \times 2 \times 2 \times 240}{100} \times 0,01$$

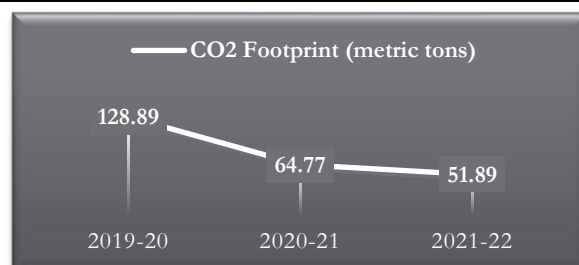
$$= 10.08 \text{ metric tons}$$

CO₂ (total)

$$= 36.9238 + 0.096 + 4.8 + 10.08$$

$$= 51.8998 \text{ metric tons}$$

Carbon footprint in **2019-20 = 128.89** metric tons
 Carbon footprint in **2020-21 = 64.77** metric tons
 Carbon footprint in **2021-22 = 51.89** metric tons



Approximate Total Carbon Footprint of BBUSTSD Khairpur

At BBSUTSD Khairpur, we have tried our best to utilize lesser number private vehicles so that maximum effort can be put on producing the smallest possible value of CO₂ emissions. In future, we are also trying to minimize the emissions by solarizing the entire campus and create an environment-friendly campus in the country. This year, BBSUTSD has been able to reduce its CO₂ footprint from **128.89 metric tons in 2019** to **64.77 metric tons in 2021** and then subsequently to **51.89 metric tons in 2022**, which is a very good sign of the university's commitment towards sustainability.

Number of innovative program(s) in energy and climate change

02 Programs are implemented.

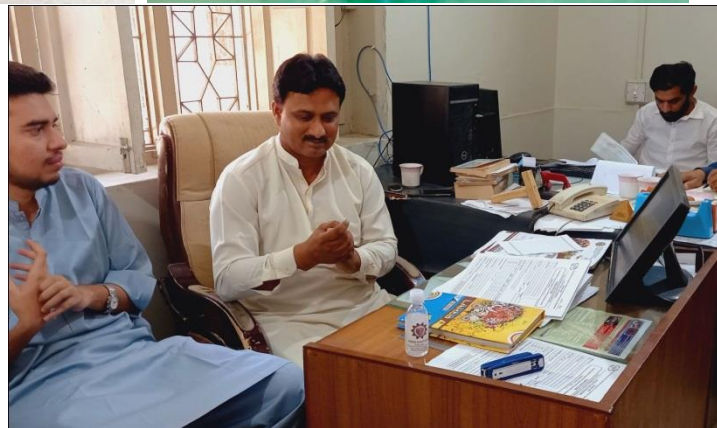
1. Hand Sanitizers prepared by the BBSUTSD
2. Walk-Through Disinfectant Gates installed at 5 different locations of the BBSUTSD Khairpur Mirs, Pakistan



1. Preparation of BBSUTSD Own Hand Sanitizer for employees and public.



2. Walk Through Disinfectant gates, obtained from FAB Lab, Sukkur IBA University installed at BBSUTSD Khairpur Mirs, Pakistan





1. Hand Sanitizers being used by employees of the university along with all students wearing face mask for their own safety.
 2. Walk-Through Disinfectant Gates installed at 5 different locations at BBSUTSD Khairpur, Pakistan
- Impactful university program(s) on climate change**





BBSUTSD supported and participated in a dialogue on Climate Change mainly organized by Rotary Club International and Swedish Institute Alumni. The Faculty member from BBSUTSD helped spread awareness among the public about the disaster climate change can bring, and the role public can play to mitigate it.

Recycling Program For University Waste

Green U
RECYCLE FOR A CAUSE
Recycle old ink & toner cartridges and toner bottles
A Campus Greening Drive message by:
The Benazir Bhutto Shaheed University of Technology and Skill Development
Khairpur Mirs





With different recycle bins made available at the campus, messages relating to Recycling the waste are also displayed beside to make sure, every type of waste is segregated in a proper manner.

1. New Color coded Recycle Bins introduced at various locations in BBSUTSD to spread awareness and ensure proper segregation of types of Waste Material produced at campus
2. Different promotional messages related to recycling the waste have been affixed on various spots where collection of waste is observed to promote the culture of recycling in the entire campus.

Program to Reduce The Use of Paper and Plastic in Campus



1. Reducing of paper waste in university with paper shredder machine (BBSUTSD KHP, Pakistan)



2. Use of emails instead of using papers in large quantity in office work (BBSUTSD KHP, Pakistan)

 THE BENAZIR BHUTTO SHAHEED
UNIVERSITY OF TECHNOLOGY AND SKILL DEVELOPMENT
KHAIRPUR MIRS
Phone No.0243-687057 Fax: 0243-9280171
Email: bbsutsd.edu.pk@gmail.com

NO.BBSUTSD/ADMIN/KHP/1023

Date: 10/8/2019

CIRCULAR

BAN ON PLASTIC BAGS IN CAMPUS

Keeping in consideration the severe damages caused by non-degradable Plastic Bags to the environment, the Benazir Bhutto Shaheed University of Technology & Skill Development (BBSUTSD) Khairpur Mirs has pledged not to use plastic bags throughout the university premises. It is therefore informed to all that the University has declared a **BAN ON PLASTIC BAGS IN CAMPUS** premises with immediate effect. All the employees, teachers and students are therefore advised to stop using Plastic Bags immediately and use cloth/paper bags alternatively, failing which necessary action may be taken against the concerned.

This is issued as per the directives of the competent authority.


Deputy Registrar
Benazir Bhutto Shaheed
University of Technology & Skill Development
Khairpur Mirs

Copy to:-

1. Focal Person, Green Metric University Rankings, BBSUTSD Khairpur Mirs.
2. Estate Officer, BBSUTSD Khairpur Mirs, with the directives to ensure compliance.
3. Security Incharge, BBSUTSD Khairpur Mirs, with the directives to ensure compliance.
4. Circular File.



3. BBSUTSD becomes the 1st university in the province to put an Official Ban on Plastic Bags at Campus and Introduction of Clothing Bags in Campus as some steps towards ensuring Campus Sustainability Initiative.



In addition to Banning the Plastic Bans, Introduction of Clothing Bags is promoted by faculty & Staff members as well as students. The practice is expected to curb the use of plastic bags across the campus and encourage the use of paper or clothing bags in the entire university.

Organic Waste Treatment



Small scale Organic Waste Treatment at BBSUTSD Khairpur Mirs

At BBSUTSD Khairpur, the teachers in Chemical Engineering Department ask students to utilize the Organic Waste collected by the gardeners from across the campus and use it for the producing Methane Gas through small scale Bio-Gas plant. The program is carried out on experimental basis for creating awareness among the students regarding the benefits of harvesting energy from biogas. It is further proposed that such plants shall be installed at macro level to generate electricity from biogas for partially meeting the power requirements of the campus.

Inorganic Waste Treatment



THE BENAZIR BHUTTO SHAHEED
UNIVERSITY OF TECHNOLOGY & SKILL DEVELOPMENT
KHAIRPUR MIRS
email: bbsutsd.edu.pk@gmail.com, Website: www.bbsutsd.edu.pk
Phone: +92-243-923025, Fax: +92-243-9280171

General Lab Safety Instructions

Label Dangerous Laboratory Waste - It's The Law!

LABEL ALL CONTAINERS

Containers must be labeled, regardless of size, with the name of the substance, the words "hazardous waste" or "dangerous waste", the major risk, and the accumulation start date.



NATIONAL FIRE PROTECTION

ASSOCIATION (NFPA) LABEL SYSTEM

The NFPA diamond or list is a common labeling system in laboratories, used to quickly and easily identify the risks posed by hazardous materials.

<p>HEALTH HAZARD</p> <p>4 EXTREME - Highly toxic, may be fatal with short term exposure.</p> <p>3 SERIOUS - Toxic. Full protective suit and breathing apparatus should be worn.</p> <p>2 MODERATE - Breathing apparatus and face mask must be worn.</p> <p>1 SLIGHT - Breathing apparatus may be worn.</p> <p>0 MINIMAL - No precautions necessary.</p>	<p>FLAMMABILITY HAZARD</p> <p>4 EXTREME - Extremely flammable gas or liquid. Flash point below 73 F.</p> <p>3 SERIOUS - Flammable. Flash point 73 F to 100 F.</p> <p>2 MODERATE - Combustible. Requires moderate heating to ignite. Flash point below 100 F.</p> <p>1 SLIGHT - Slightly combustible. Requires strong heating to ignite.</p> <p>0 MINIMAL - Will not burn under normal conditions.</p>
<p>SPECIFIC HAZARD</p> <p>OXIDIZER OX</p> <p>ACID AC</p> <p>ALKALI ALK</p> <p>CORROSIVE COR</p> <p>USE NO WATER W</p> <p>RADIATION ☼</p>	<p>INSTABILITY HAZARD</p> <p>4 EXTREME - Explosive at room temperature.</p> <p>3 SERIOUS - May detonate if shocked or heated under confinement or mixed with water.</p> <p>2 MODERATE - Unstable, may react with water.</p> <p>1 SLIGHT - May react if heated or mixed with water.</p> <p>0 MINIMAL - Normally stable, does not react with water.</p>

Hazardous Waste

Acetone

Flammable

Accumulation Start Date: 11/6/15



Treatment of Inorganic Waste at The Benazir Bhutto Shaheed University of Technology & Skill Development (BBSUTSD) Khairpur

The inorganic waste generated was collected and dumped in the open air. However, if the waste is hazardous, it is dumped in the underground after taking sufficient safety measures.

Toxic Waste Handled



Chemical Waste Pail

- Designate and label for lab specific use
- Ethidium Bromide gels
- Contaminated solids including plastics and glass
- No sharps
- Provided by EPS (6-3473)



Recycling Bin

- Uncontaminated paper
- Empty boxes
- Catalogues
- Provided by F&S (6-5711)



Regular Garbage

- Uncontaminated refuse (paper towels, pipet wrappers, etc.)
- Decontaminated Risk Group 1 biological solids
- Provided by Caretaking (8-6252)



Teal Laboratory Glass Tote

- Uncontaminated Clear glass (triple rinsed)
- No hazardous materials, garbage or gloves
- No coloured glass
- Provided by F&S (6-5711)

At BBSUTSD, we try our best to manage the Toxic Waste and treat it well so that risk could be minimized to the lowest and injuries could be avoided. For that purpose, different programs are also underway to spread awareness regarding careful disposal of toxic waste at the campus, particularly in different labs, involving hazardous chemicals.

Sewerage Disposal

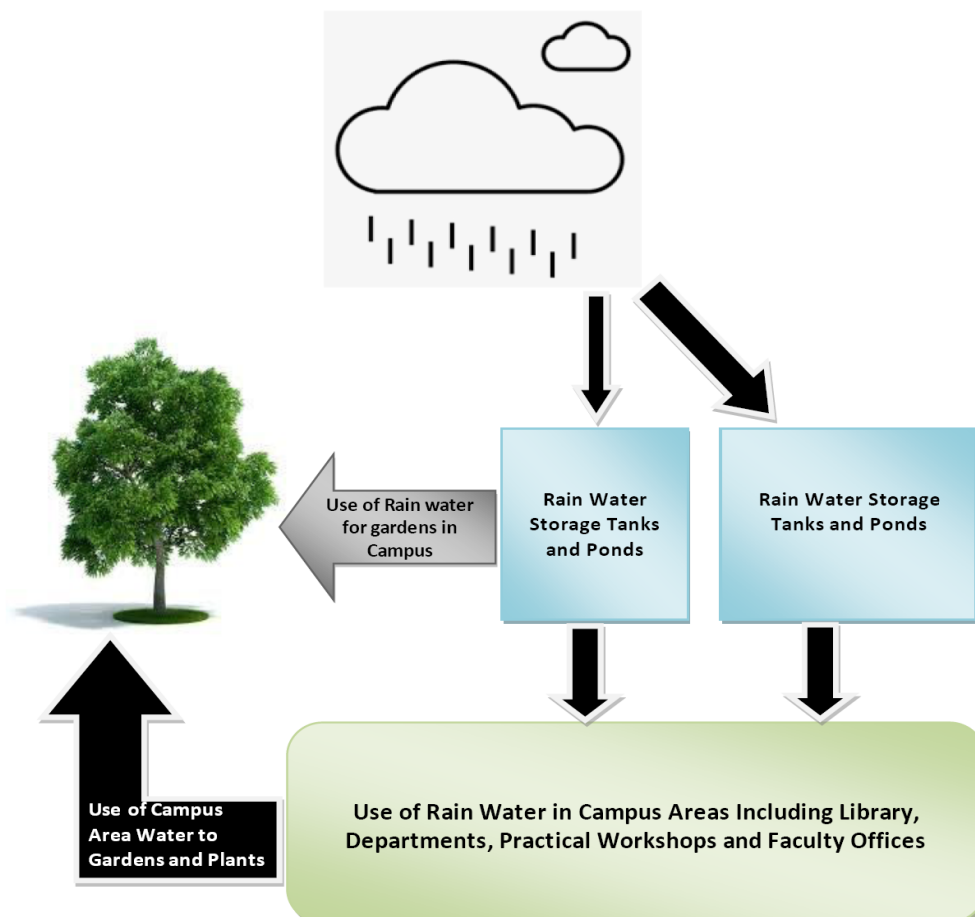


Snapshots of Sewerage Disposal at The Benazir Bhutto Shaheed University of Technology & Skill Development
Khairpur

Water Conservation Program Implementation



Water conservation program and implementation (BBSUTSD KHP, Pakistan)

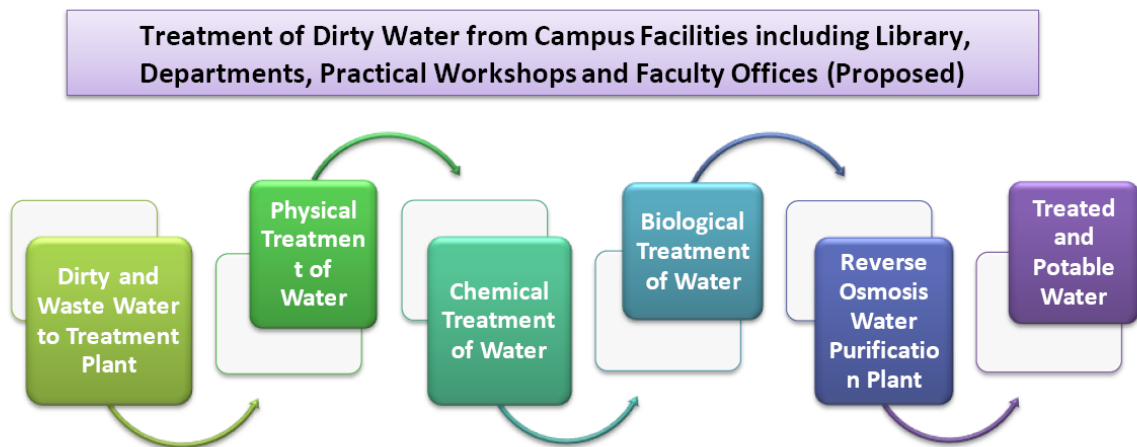


Rainwater Collection System under Water Conservation program at The Benazir Bhutto Shaheed University of Technology and Skill Development, Khairpur Mirs, Sindh, Pakistan



At the moment, the water conservation facilities are not functioning properly. But however, depending upon appropriate funding opportunities, the storage & conservation facilities will once again be utilized for the campus as well as for the residential colony. On the other hand, A New Tube Well has been drilled, and the water from which is supplied to the local trees being cultivated in the campus.

Water Recycling Program Implementation



Efforts are underway to develop the facility for Treatment of Dirty Water from Campus Facilities including Library, Departments, Practical Workshops and Faculty Offices. Very soon, the BBSUTSD will have its own Water Treatment facility as proposed in the diagram above.

The Use of Water Efficient Appliances (Water tap, toilet flush, etc.)



Water efficient appliance used for different purposes (BBSUTSD KHP, Pakistan)



Treated Water used in garden for best growth of grass and plants (BBSUTSD KHP, Pakistan)



Effort is being put on strengthening the available appliances for efficient use of Water at the Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur

Consumption of treated water



Treated Water produced at the campus is used in garden for best growth of grass and plants (BBSUTSD KHP, Pakistan)

Water pollution control in campus area

Currently, there are not any significant **Water pollution control in campus area**. However, control measures are being under discussion, with which Water pollution could be minimized to a minimum.



Preparation of BBSUTSD Own Hand Sanitizer for employees and public.



Handwashing and sanitation facilities during Covid-19 pandemic
 (Benazir Bhutto Shaheed University of Technology & Skill Development, Khairpur Pakistan)

Facilities	Number of Facilities
Disinfectant Walk-Through Gates	5
Handwashing Facilities	30

Question [4.5] = $\frac{30}{05}$

The total number of vehicles (cars and motorcycles) divided by total campus' population

No.	Vehicle	Total Number
1	Cars managed by the university	5
2	Cars entering the university	25
3	Motorcycles entering the university	105
	Total	135

Total Percentage of Campus Population using vehicles (2022)
 $5.4 = 135 / 1600$ (population) = **8.43 %**

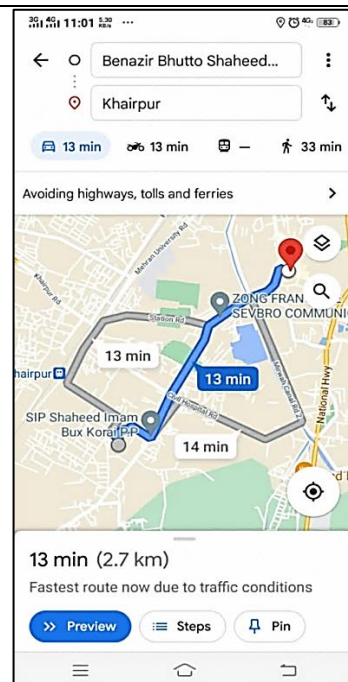
Total Percentage of Campus Population using vehicles (2021)
 $5.4 = 135 / 1480$ (population) = **9.12 %**

Note: compared to last year, the campus population has increased, which has ultimately had a positive impact in the form of reduced percentage of people using personal vehicles.

Shuttle services



Shuttle service



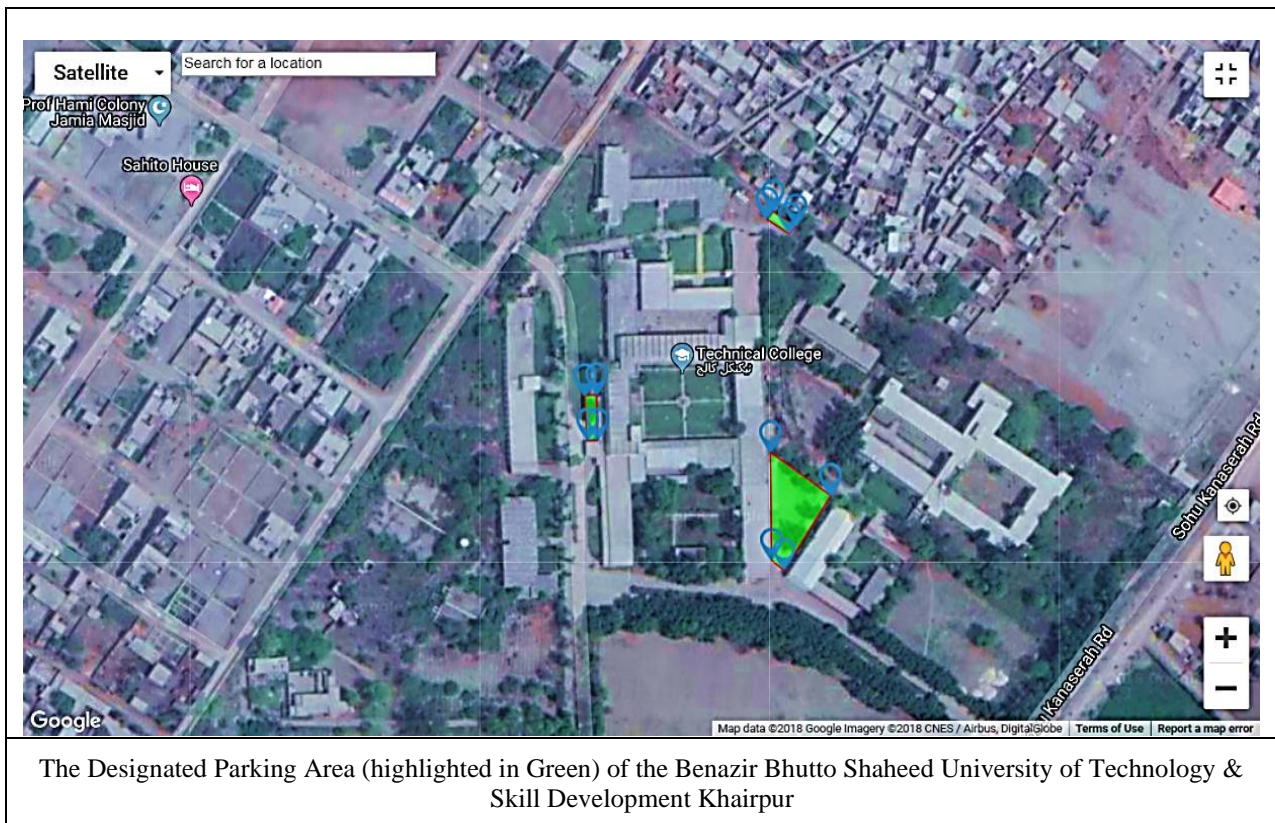
Currently, the BBSUTSD provides Shuttle/bus campus inside as well as outside the campus for students, faculty and for staff members at the university, covering approximately 2.7 km in one direction.

Zero Emission Vehicles (ZEV) policy on campus



Keeping in view the Carbon emissions caused by Gasoline vehicles, BBSUTSD had purchased Zero Emission Vehicles for lower staff and increased their number to facilitate their travel within the campus. This increase in ZEVs has contributed significantly to the reduction of emissions and has created a sense of responsibility towards the environment among students and the staff alike. The University intends to purchase more and more ZEVs in the future.

Ratio of parking area to total campus area



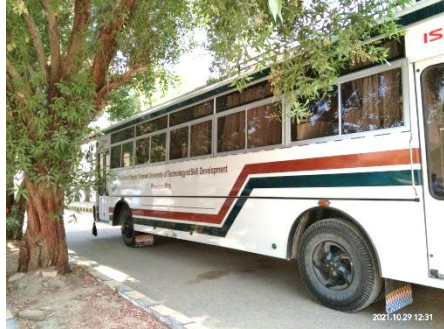
Total Parking area = 1004.32m²
Ratio parking area : 0.039 %

Program to limit or decrease the parking area on campus for the last 5 years (from 2018 to 2022)

Now, the program to limit or decrease the parking area of campus is underway and is under preparation. The university authorities are, till then, encouraging the use of Zero Emission Vehicles (ZEVs) to contribute towards reduction of CO₂ emissions.

Number of Transportation Initiatives to Decrease Private Vehicles on Campus

Unlike Last year, the BBSUTSD has purchased new buses to discourage the use of personal vehicles to become a sustainable campus and contribute towards reduced amount of CO₂ emission in the atmosphere.
Total of 5 new buses, 1 coaster, 1 ambulance, and 1 Datsun were purchased.



Buses on Campus

Bus Routes from University from Khairpur City to 07 different locations around the city

10:59

Benazir Bhutto Shaheed...
Thari Mirwah

1 hr 20 1 hr 21 11 hr

Avoiding highways, tolls and ferries

1 hr 20 min (65 km)
Fastest route now due to traffic conditions

Preview Steps Pinned

10:59

Benazir Bhutto Shaheed...
Kandiario Bus Stop

1 hr 52 1 hr 43 16 hr

Avoiding highways, tolls and ferries

1 hr 52 min (89 km)
Best route now due to traffic conditions

Preview Steps Pin

11:01

Benazir Bhutto Shaheed...
Khairpur

13 min 13 min 33 min

Avoiding highways, tolls and ferries

13 min (2.7 km)
Fastest route now due to traffic conditions

Preview Steps Pin

11:00

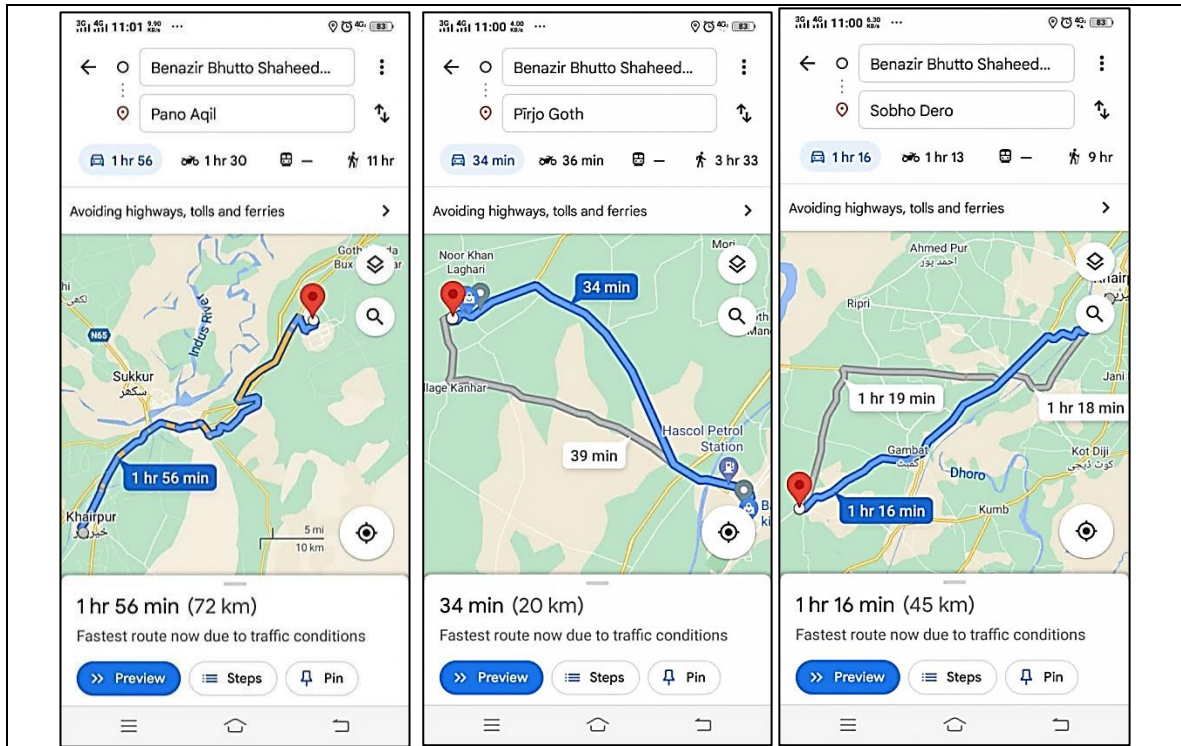
Benazir Bhutto Shaheed...
Sukkur Airport

48 min 46 min 6 hr

Avoiding highways, tolls and ferries

48 min (32 km) ⚠️
Fastest route now due to traffic conditions

Preview Steps Pin



Keeping in consideration the Carbon emissions of the private vehicles, it is preferred that majority of the students and employees of the university should use University buses. Given above are the Routes of university buses used for transportation within the Khairpur city and to various locations around Khairpur Mirs, Pakistan.

Pedestrian path policy on campus



Pedestrian paths at Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur

Total water absorption area: 128.915m²
Total Area: 454.678 m²
Percentage area: 28%

Number of Courses/Subjects Related to Sustainability Offered

Undergraduate Studies


The Benazir Bhutto Shaheed University of Technology & Skill Development (BBSUTSD) is a relatively new university and currently it offers Bachelor of Engineering Technology (HEC - Islamabad Approved Four Years Degree Program) in Four Disciplines and are titled as Bachelor of Engineering Technology "BSET" eg: BSET in civil Technology.

Featured Courses:

- B.Tech (Civil Engineering Technology)
- B.Tech (Electrical Engineering Technology)
- B.Tech (Mechanical Engineering Technology)
- B.Tech (Electronic Engineering Technology)

In all the courses above, special care has been taken to incorporate the concept of Sustainability in each subject to ensure an understanding among the students about their duty towards environment and the future of generations to come. From time to time, courses are updated in the "Board of Studies" meeting, duly recommended by the "Board of Faculty", and approved by the "Academic Council".

Total number of courses/modules offered



Courses offered in BSc Engineering Technology (4 Years)

- ❖ Civil Technology
- ❖ Electrical Technology
- ❖ Mechanical Technology
- ❖ Electronics Technology

Departments of DAE Section (3 Years)

- ❖ Civil Technology
- ❖ Electrical Technology
- ❖ Mechanical Technology
- ❖ Electronics Technology
- ❖ Auto & Diesel Technology
- ❖ Refrigeration and Air-conditioning Technology
- ❖ Petroleum Technology
- ❖ Chemical Technology

The Benazir Bhutto Shaheed University of Technology and Skill Development Khairpur Mirs

Total number of departments in Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur in two sections of University i-e DAE and BSc

Total number of departments in Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur in two sections of University i-e DAE and BSc

Total research funds dedicated to sustainability research (in US Dollars)

Total research funds dedicated to sustainability research (in US Dollars) at Benazir Bhutto Shaheed University of Technology & Skill Development (BBSUTSD) Khairpur Mirs

Head	2018-19	2019-20	2020-21	2021-22
Research	1	5.5 million	0.5 million	0.970 million
Plantation	0.5 million	0.30 million	0.5 million	1.490 million
Building	11 million	30 million	16.75 million	15 million
				17.46 million
				78,693.97 Dollars

	in PKR	in Dollars
Total research fund dedicated to sustainability research in 2018-19	1 million	6,419.52
Total research fund dedicated to sustainability research in 2019-20	5 million	32,268.69
Total research fund dedicated to sustainability research in 2020-21	0.5 million	2,886.09
Total research fund dedicated to sustainability research in 2021-22	0.970	4,371.89
	4 years Average	11,486.55

Total research funds (in US Dollars)

Compared to the last year, this year special attention has been paid to Sustainable Campus Initiative and a significantly higher number of funds have been dedicated to Research Fund particularly reserved Sustainability. Following are the statistics;

	in PKR	in Dollars
Total research fund in 2018-19	1 million	6,419.52
Total research fund in 2019-20	5.0 million	32,268.69
Total research fund in 2020-21	0.5 million	2,886.09
Total research fund in 2021-22	0.97 million	4,371.89

Average of Last Four Years

11,486.55

Number of scholarly publications on sustainability

The screenshot shows a Google Scholar search for 'Benazir Bhutto shaheed university of technology & skill development, Khairpur'. The search results are filtered to show articles from 2018 to 2022. The top result is a PDF titled '... OF PHOTOVOLTAIC POWER SYSTEM AT BENAZIR BHUTTO SHAHEED UNIVERSITY OF TECHNOLOGY AND SKILL DEVELOPMENT KHAIRPUR' by AM Shah, MI Soomro, SH Qazi, I Khurshid, and M Sheeraz, published on irjmets.com. The second result is a PDF titled 'A NEW HITCH BY SURGICAL MASKS ON ENVIRONMENT DUE TO COVID-19 PANDEMIC' by S ur Rehman, S Ahmed, and S Oad, published on researchgate.net. The search interface includes filters for time range, sorting options, and citation preferences.

Example of events **scholarly publications on sustainability** in the academic year 2018-2022.
A total average per annum over the last 5 years of **164 publications**

Number of events related to environment and sustainability





Vice Chancellor The Benazir Bhutto Shaheed University of Technology and Skill Development Khairpur Mirs Engineer Prof. Dr Madad Ali Shah & Divisional Forest Officer Social Forestry Division Khairpur Mirs Hosh Muhammad Shar Signed MoU to plant 10 Thousand Plants at BBSUTSD Khairpur Mirs, Under Ten Billion Tree Tsunami Project (TBTP).



The Benazir Bhutto Shaheed University of Technology and Skill Development, Khairpur Mirs Celebrated Tree Plantation Day. On This Occass Engr. Prof. Dr Madad Ali Shah Vice Chancellor BBSUTSD Khairpur Mirs, Prof. Dr Mir Muhammad Shah Vice Chancellor Sukkur IBA Univers Prof. Dr. Khalil Ahmed Ibutoto Vice Chancellor Shah Abdul Latif University Khairpur Mirs , Prof. Dr Shah Muhammad Luhrani, Dr Muhammad Ibrah Keerio Principal Khairpur Agriculture College of Engineering & Technology, Zubair Ahmed Anwar Principal IBA Community College Khairpur, Dr. Maz Hussain Baloch, Prof. Dr Minhoon Khan Laghari, Touheed Ghani Manager WWF Sukkur Region, Ziyadullah Laghari Divisional Forest Officer Gov Sindh, Mir Sajjad Hussain Talpur, Prof. Dr. Hussain Bux Mari, Saima Gul, Shafique Rehman Laghari, Syed Waheed Ali Shah, Nosheen Memon Sehrih Bhatti are addressing the event. On This occasion Worthy Vice Chancellors & Honourable Guests Planted Trees at BBSUTSD Khairpur Mirs.

Friday March 19th, 20

1.



Public Private Dialogue on The Role of Oil and Gas sector in Clean Energy Transition - SDPI Pakistan

2. **Link: https://www.youtube.com/watch?v=t5UUsgOO_eE&t=6131s**



3.

Awareness workshop on UN Sustainability Goals (SDGs)



4.

Awareness workshop on UI GreenMetric World University Rankings 2021

2019



The Benazir Bhutto Shaheed University of Technology and Skill Development, Khairpur Mir's

Awareness Workshop
on
UI GREEN METRIC WORLD UNIVERSITY RANKINGS

Date: 29 October 2019
Venue: Auditorium Hall, BBSUTSD, Khairpur Mir's



Awareness Workshop on UI GreenMetric World University Rankings



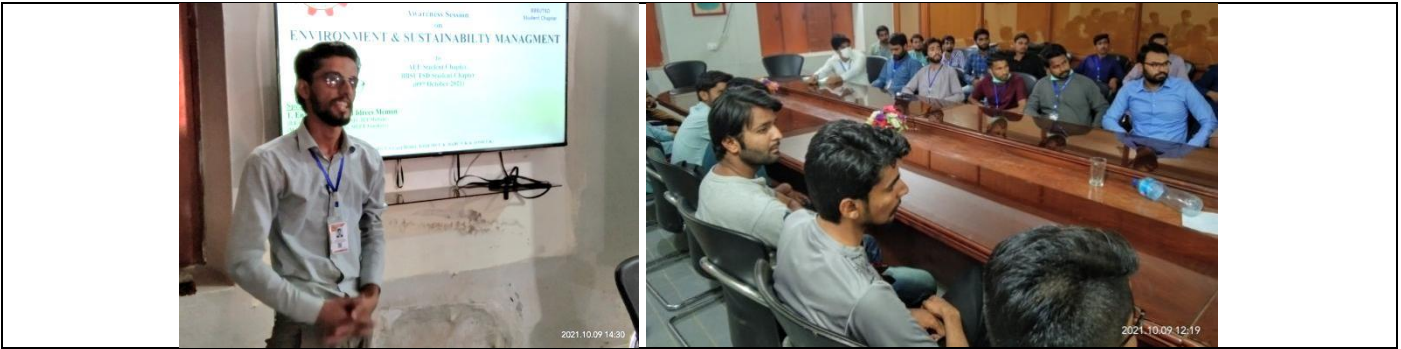
Tree Plantation Campaign at BBSUTSD Khairpur

Events Related to Environment and Sustainability The Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur

Number of student organizations related to sustainability = 02

1. Association of Energy Engineers (AEE) BBSUTSD Student Chapter
2. American Society of Mechanical Engineers (ASME) BBSUTSD Student Chapter





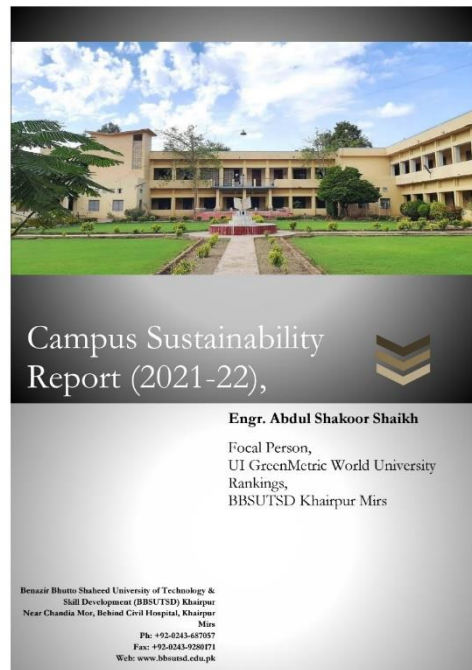
Association of Energy Engineer (AEE) International, BBSUTSD Chapter was established with a mission to promote sustainability efforts in academia The first event Association of Energy Engineer (AEE), BBSUTSD Chapter organised was an awareness Workshop on Environment and Sustainability Management



BBSUTSD KHAIRPUR MIRS NEWS: Vice Chancellor The Benazir Bhutto Shaheed University of Technology and Skill Development, Khairpur Mirs Engineer Prof. Dr Madad Ali Shah Inaugurated the “American Society of Mechanical Engineers” (ASME) of Department of Mechanical Engineering Technology BBSUTSD Chapter. On this occasion Worthy Vice Chancellor Engineer Prof. Dr Madad Ali Shah, Dean (Acting) Faculty of Engineering Technology Prof. Dr Hussain Bux Marri, Engineer Saddam Hussain Shar, Engineer Syed Ali Mustafa Shah also addressed the workshop. All the faculty members & Students of Mechanical Engineering Technology attended this inauguration ceremony.

Saturday, April 24th, 2021

Sustainability Report



Campus Sustainability Report 2021-22 (Benazir Bhutto Shaheed University of Technology & Skill Development Khairpur).

Additional evidence link:


<http://bbsutsd.edu.pk/sustainable-campus/>

Number of cultural activities on campus (e.g., Cultural Festival) including virtual activities (if any)





World Teachers Day




**The Benazir Bhutto Shaheed University of Technology
& Skill Development Khairpur Mir's**

Relief Drive

Rashan Distribution

Rain / Flood Emergency Support



Contact:
Safdar Ali Abro
 0333-7036094
 Email: safdar@bbsutsd.edu.pk



Distribution of Medical and Health material for rain affected people of Khairpur Mirs

NATIONAL EXPANSION PLAN OF NICS | Ministry of Information Technology & Telecom | INFORMATION SCIENCE & TECHNOLOGY DEPARTMENT GOVERNMENT OF SINDH

National Incubation Centers & Entrepreneurship Opportunities

SUKKUR CENTER | **MISSION INNOVATION PAKISTAN**

LAUNCHPAD 3RD COHORT

THE KEY TO UNLOCKING YOUR STARTUP POTENTIAL

OUR OFFERINGS ARE FREE OF COST FOR 6 MONTHS CYCLE.

- MONTHLY STIPEND
- FREE OFFICE SPACE
- LEGAL ASSISTANCE
- MENTORSHIP
- BUSINESS DEVELOPMENT ASSISTANCE
- DEVELOPMENT

BENEFITS

- Monthly Stipend
- Free Office Space
- Business Development Assistance
- Legal Assistance
- Mentorship

WHERE?
BBSUTSD, KHAIRPUR MIRS

WHEN?
18TH AUGUST 2022, 11:30AM

SPEAKER
Ghulam Nabi Kalkara
INCUBATION MANAGER

ORGANIZED BY
OFFICE OF THE RESEARCH INNOVATION AND COMMERCIALIZATION IN COLLABORATION WITH DEPARTMENT OF ELECTRONICS ENGINEERING TECHNOLOGY THE BENAZIR BHUTTO SHAHEED UNIVERSITY OF TECHNOLOGY & SKILL DEVELOPMENT, KHAIRPUR MIRS

National Incubation Centers 3rd Cohort Launchpad organized for awareness of BBSUTSD Khairpur



MoU signing ceremony with Chinese University



Independence Day Celebration





**THE BENAZIR BHUTTO SHAHEED UNIVERSITY
OF TECHNOLOGY AND SKILL DEVELOPMENT
KHAIRPUR MIRS**

INAUGURATION CEREMONY Technology Project Exhibition

ProTech'22



13TH MAY 2022

BBSUTSD, KHAIRPUR MIRS



**DEPARTMENT OF ELECTRONICS ENGINEERING TECHNOLOGY
in-collaboration with ORIC BBSUTSD, Khairpur Mirs**



1. For the first time ever, the students of BBSUTSD participated in the Pakistan Universities Debating Championship – PUDC to represent BBSUTSD on a Regional Level.



2. Jashn-e-Eid Milad-un-Nabi (Celebrations of birth of Holy Prophet Muhammad P.B.U.H at BBSUTSD was observed with religious zeal and spirit.



Media Section Bbsutsd Khairpur Mir's

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3 m • 🌐

Demonstration of Mini Projects of Subject "Electronic Devices and Circuit" F20 Batch, 1st year 2nd semester department of Electronics Engineering Technology, BBSUTSD under the supervision of Engr Kundan kumar Sukhani.



3. Mini Project Exhibition of Student Projects was organized to boost up the confidence of students in their abilities and skills

Number of university program(s) to improve teaching and learning



THE BENAZIR BHUTTO SHAHEED UNIVERSITY OF TECHNOLOGY AND SKILL DEVELOPMENT,
KHAIRPUR MIRS

ONE DAY SEMINAR ON

FUNCTIONAL NANO SENSORS DEVELOPMENT & CHARACTERIZATION



Thursday, 11th November 2021

Time: **11:30 AM Sharp**
Venue: Auditorium, BBSUTSD,
Khairpur Mirs

Organized by: Office of the Research Innovation & Commercialization (ORIC)
in collaboration with: Department of Electronics Engineering Technology
BBSUTSD, Khairpur Mirs

Resource Person

Dr. Ahmed Ali Shah



Dr. Ahmed Ali Shah
is working as an
Assistant Professor
in the Department of
Electrical Engineering,
Sukkur IBA University.

Dr. Ahmed Ali Shah got Ph.D From
Hanyang University, South Korea.





BBSUTSD KHAIRPUR MIRS NEWS: Student Affairs Office BBSUTSD Khairpur Mirs organized a Lecture on 'E-Commerce & Techno-preneurship' at Auditorium Hall BBSUTSD Khairpur. The session was conducted by Mr. Muhammad Ashraf Nasir Saad, Founder & CEO - 'Upsell Now'. The session focussed on Freelancing through Innovation in the field of Technology.



BBSUTSD KHAIRPUR MIRS NEWS: Career Counseling session conducted for BBSHRRDB Batch-I Trainees, held at Auditorium, The Benazir Bhutto Shaheed University of Technology and Skill Development, Khairpur Mirs. On this occasion Prof. Dr. Noor Ahmed Shaikh Vice Chancellor BBSUTSD, Khairpur Mirs, Muhammad Nawaz Phulpoto District Monitoring Officer BBSHRRDB Khairpur, Mir Sajjad Hussain Talpur Dean Faculty of Skill Development, Engr. Ayaz Ali Mandan & Sajid Khan also addressed the session. Mr. Muhammad Nawaz Phulpoto, District Monitoring Officer, BBSHRRDB, Khairpur, delivered the lecture on career counseling . He emphasized that skill is the only tool that eradicate poverty from the society and makes a person respectable citizen. A Large number of Faculty members & BBSHRRDB trainees attended this session.



BBSUTSD KHAIRPUR MIRS NEWS: Hands-on workshop on Design and Development of intelligent systems Organized by Department of Electronics Engineering Technology, The Benazir Bhutto Shaheed University of Technology & Skill Development, (BBSUTSD) Khairpur Mirs. The resource person of the prestigious event was Engr. Arif Hussain. Welcome note delivered by Engr. Ghalib Raza and opening remarks made by Engr. Izhar Hussain & Secretary of the event was Engr. Sadia Kalsoom. In this high level workshop a large number of students participated in the event.



BBSUTSD
KHAIRPUR MIRS



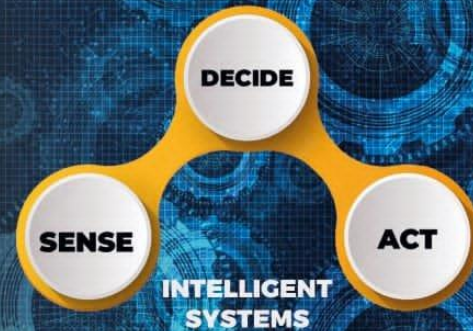
DESIGN & DEVELOPMENT OF INTELLIGENT SYSTEMS HANDS-ON WORKSHOP

**EMPOWERING
YOUTH FOR
21ST CENTURY**

A ROAD MAP TO TRANSFORM
SCIENCE, TECHNOLOGY,
ENGINEERING AND MATHEMATICS
EDUCATION



**LEARN
EXPLORE
DESIGN
IMPLEMENT
AUTOMATE**



WHEN?

MAY 19, 2022

WHERE?

AUDITORIUM

ORGANIZER & TRAINER

ENGR. ARIF HUSSAIN

LECTURER ELECTRONICS ENGG. TECHNOLOGY

DEPARTMENT OF ELECTRONIC ENGINEERING TECHNOLOGY

THE BENAZIR BHUTTO SHAHEED UNIVERSITY OF TECHNOLOGY & SKILL DEVELOPMENT, KHAIRPUR MIRS

Number of sustainability community services project organized and/or involving students



Distribution of COVID 19 Masks among the underprivileged to keep themselves safe from the Novel Coronavirus and Cloth Bags with old BBSUTSD logo printed on them to prevent / reduce the use of plastic bags at campus.

Distribution of COVID 19 Masks among the underprivileged to keep themselves safe from the Novel Coronavirus and Cloth Bags with old BBSUTSD logo printed on them to prevent / reduce the use of plastic bags at campus. Both the events were meant to do some community service to help the masses fight the virus as well learnt to respect and keep the environment clean

Number of sustainability-related startups

No. This year 06 students startup projects, supported by BBSUTSD were shortlisted for National Grassroots ICT Research Initiative (NGIRI) 2021-22.

National Grassroots ICT Research Initiative (NGIRI) 2021-22				
Provisional List of FYPs--Shortlisted for Funding				
(Note: All disbursements will be made only after verified expenditure reports submitted by focal persons)				
FYP Code	FYP Title	University	Campus	Department
NGIRI-2022-16171	'Study of synthesis of Zinc oxide Nano particles doped epoxy based PDLC'	Balochistan University of Information Technology, Engineering & Management Sciences	Quetta	Science & Technology
NGIRI-2022-16242	'INVESTIGATION OF EMF-RF (Wi-Fi) IMPACTS ON EMPLOYEE'S HEALTH IN HIGHER EDUCATION OF INSTITUTE.'	Balochistan University of Information Technology, Engineering & Management Sciences	Quetta	Science & Technology
NGIRI-2022-12475	'Design and Fabrication of 3-Axis CNC Router'	Benazir Bhutto Shaheed University of Technology & Skill Development	Main	Mechanical Engineering
NGIRI-2022-12584	'Use of Fresnel lens in solar desalination to achieve enhanced distillate output'	Benazir Bhutto Shaheed University of Technology & Skill Development	Main	Mechanical Engineering
NGIRI-2022-12990	'IoT Based smart Health Monitoring system and Automation Using Augmented Reality'	Benazir Bhutto Shaheed University of Technology & Skill Development	Main	Electronics Engineering
NGIRI-2022-13176	'Dual Syringe Smart Infusion Pump With Real Time Health Monitoring'	Benazir Bhutto Shaheed University of Technology & Skill Development	Main	Electronics Engineering
NGIRI-2022-13201	'Arduino Based Hybrid Energized automatic Firefighting Rescue Robot(QRob)'	Benazir Bhutto Shaheed University of Technology & Skill Development	Main	Electrical Engineering
NGIRI-2022-16127	'Electric Car Based On Solar Panel'	Benazir Bhutto Shaheed University of Technology & Skill Development	Main	Electrical Engineering
NGIRI-2022-10908	'Design and development of Solar Thermal Air Heater'	Capital University of Science and Technology	Main	Mechanical Engineering
NGIRI-2022-11114	'Solar Water Desalination System'	Capital University of Science and Technology	Main	Mechanical Engineering

Highlights of individuals projects, which have won several awards on provincial as well national level are presented below



3RD COHORT LAUNCHPAD





3RD COHORT LAUNCHPAD



- ⦿ Pump NFT
- ⦿ Dual Syringe
- ⦿ Synergy
- ⦿ Advance Idea Mechanics
- ⦿ Pkz-E Sawari

- ⦿ BitBurners
- ⦿ Ecom Falcons
- ⦿ Tourism Tech
- ⦿ Lakhtaq
- ⦿ MedPro

- ⦿ Mistri
- ⦿ Palletform
- ⦿ NAS Biztech
- ⦿ Haft e Zaban
- ⦿ Ruhazat Boutique



FINAL YEAR PROJECT OF ELECTRONICS ENGINEERING TECHNOLOGY
DUAL SYRINGE SMART INFUSION PUMP
WITH REAL TIME HEALTH MONITORING

HAS BEEN SELECTED AS STARTUP AND INCUBATED AT NATIONAL INCUBATION CENTER, SUKKUR

TEAM

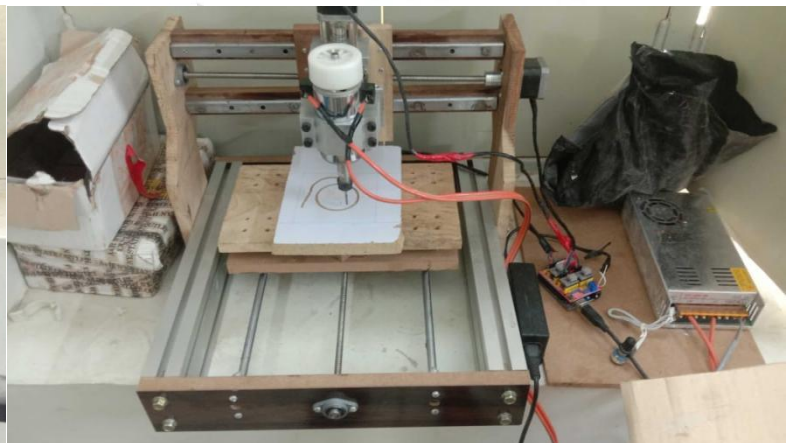
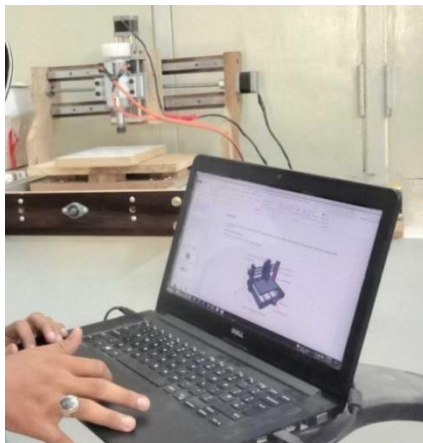
PROJECT SUPERVISOR: ENGR. ARIF HUSSAIN (LECTURER, ELECTRONICS ENCG. TECHNOLOGY, BBSUTSD)

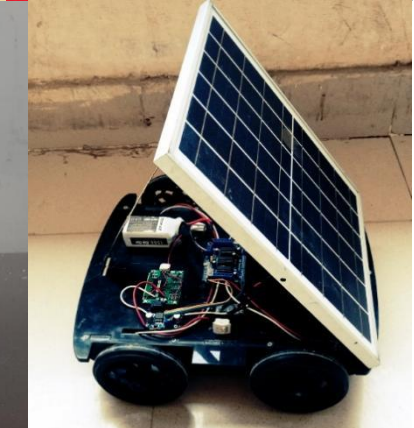
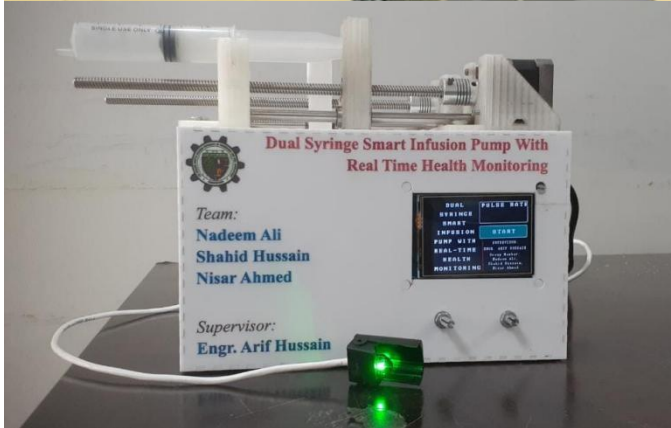
MEMBERS: NABEH ALI RIZAMANI, SHAHID HUSSAIN MURTUZA, NISAR AHMED KATOORAI (All BSc. Electronics Engrg. Tech. BBSUTSD, Khanpur)













THE BENAZIR BHUTTO SHAHEED UNIVERSITY OF TECHNOLOGY AND SKILL DEVELOPMENT
KHAIRPUR MIRS

The department of Electronics Engineering Technology got **1st Position** in Hi Robo Tec Fiesta 4 project exhibition organized by Hitec University Taxila. The project title was RC Plane designed by student Nabi Bukhsh & Supervised by Engr Kundan Kumar.

In the exhibition, 524 teams of 45 different universities of Pakistan participated in different categories of exhibition.



BBSUTSD KHAIRPUR MIRS NEWS: In design build fly competition held at GIKI, project title BOOM TWIN PLANE designed by Nabi Bukhsh and Junaid Murad Sial supervised by Engr Kundan Kumar have awarded as Motivational project by team of DBFC. The name of team is Altruism. This event was online bcz of Covid.



BBSUTSD KHAIRPUR MIRS NEWS: Students of DAE Petroleum, BBSUTSD Khairpur Mirs have secured 2nd Position in SPE Petro-Fiesta'22 organized at Mehran UET SZAB Campus Khairpur Mirs. Total fourteen models were presented. Number of Five Universities participated. Students who won 2nd position are from DAE however all other students participating in Petrofiesta'22 were from B.E program.



BBSUTSD KHAIRPUR MIRS NEWS: Students of the Department of Electronics Engineering Technology BBSUTSD Khairpur Mirs have secured 1st position and 2nd position in DAIRA 22 event, in National University of Computer and Emerging Sciences FAST Chinnot Faisalabad campus Punjab. Projects supervised by Engr. Kundan Kumar. In this event 1600 students of 40 different universities have participated in different 60 activities.



