



B.S. Abdur Rahman

Crescent

Institute of Science & Technology

Deemed to be University u/s 3 of the UGC Act, 1956

GST Road, Vandalur, Chennai 600 048

CAMPUS INFRASTRUCTURE

JANUARY 2018

**B.S.ABDUR RAHMAN CRESCENT INSTITUTE OF SCIENCE
& TECHNOLOGY
ESTATE OFFICE**

VISION

BSAC Institute of Science and Technology is committed to ensure that the built infrastructure of the institute has sustainability as a core principle, both in construction and maintenance management of the campus.

Estate office aspires to follow a range of sustainable design features and practices implemented to build and maintain the institute as a complete green and sustainable campus continuously

MISSION

- **Establish on campus renewable energy sources like Roof-Top Solar Power Plants, Bio –Gas plants**
- **Energy and Water Conservation Measures**
- **Green Belt Development**
- **Solid Waste Management program to separate recyclable waste and dispose all waste in non-polluting, responsible manner.**
- **Getting all buildings certified as Green buildings (Gold rating) under USGBC-LEED / GBCI-EDGE / IGBC rating systems.**
- **Follow Sustainable Construction practices.**

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1. CAMPUS FACT FILE

Infrastructure	As on 2009	As on DEC'17
Campus Area	50.19 acres	50.19 acres
Built up area	71,354 Sq.mts	1,50,000 Sq.mts
Power backup	60%	100%
Wi-fi	None	100%
Hostels	878(Boys +350(Girls)	1700(Boys)+500(Girls)
Guest house	None	18 Rooms
Staff Quarters	28	72

2. BUILDINGS:

S.No	Name of the Building	Plinth area in sft	Covered area
1	Men's Hostel Annexure	23,398.20	G+2 (RCC)
2	Mosque (college)	10,554.20	G+1 (RCC)
3	P.G. Hostel	49,445.20	G+3 (RCC)
4	Men's Hostel Dining Hall (Old)	21,596.40	G+1 (RCC)
5	Men's Hostel Dining Hall (New)	4,536.00	G (GI Sheet)
6	Men's Hostel Main Building	107,395.60	G+3 (RCC)
7	Men's Hostel New Block (A)	38,141.00	G+6 (RCC)
8	Men's Hostel New Block -B	38,141.00	G+6 (RCC)
9	Men's Hostel New Block - C	38,181.49	G+6 (RCC)
10	Men's Hostel New Block - D	38,141.53	G+6 (RCC)
11	Mechanical Lab - I	3,744.30	GI sheet roof
12	Mechanical Lab - II	3,743.20	GI sheet roof
13	Workshop - I	3,739.00	GI sheet roof
14	Workshop - II	3,745.80	GI sheet roof
15	I st Year Block	45,454.00	G+3 (RCC)
16	Community Hall	2,350.70	GI sheet roof
17	Estate Office	5,138.70	G+2 (RCC)
18 a	Canteen	5,505.70	G (AC sheet)
18 b	Canteen	8,500.00	G GI Sheet
19	PED Directors Office	6,564.60	G+2 (RCC)
20	R &D Lab	686.60	G (RCC)
21	Power Room	1,468.40	G (RCC)
22	Power Room extension	5,850.00	G+2 (RCC)
23	MBA Block	69,074.40	G+2 (RCC)
24	Survey Lab	582.80	G RCC
25	Main building + Annex	135,172.40	G+3 (RCC)
26	Principal Quarters	3,177.80	G+1 (RCC)
27	Professors Quarters - 1	9,548.40	G+2 (RCC)
28	Staff Quarters (AP)- 2	6,183.90	G+2 (RCC)
29	Staff Quarters - 3	2,343.40	G+1 (RCC)
30	Staff Quarters - 4	2,365.40	G+1 (RCC)
31	Staff Quarters - 5	5,676.60	G+1 (RCC)
32	Staff Quarters - 6	2,906.40	G+2 (RCC)
33	Ladies Hostel Main Block	39,234.80	G+3 (RCC)
34	TBAK - Hostel (Annex)	32,371.60	G+3 (RCC)
35	Ladies Hostel Prayer Hall	682.80	G GI Sheet
36	Ladies Hostel Dining Hall	1,000.00	G GI Sheet
37	College Auditorium	27,542.80	G +2 (RCC)

38	Library & Com.Science Block	85,298.00	G+3 (RCC)
39	School of Architect	20,267.00	G+3 (RCC)
40	Data Centre Adjct.to Science Block	4,800.00	G+3 (RCC)
41	New staircase adjacent to Science block	380.00	RCC
42	New Work shop Automobile Engine lab1	3,300.00	G I sheet
43	New Automobile shed 2	3,300.00	G I sheet
44	Arabic College	22,408.00	G+1 (RCC)
45	Arabic College Hostel	28,637.40	G+1 (RCC)
46	School of Life sciences Block	58,000.00	G+7 (RCC)
47	School of Mechanical science block	135,000.00	G+7 (RCC)
48	VC Villa	4,300.00	G+1 (RCC)
49	Hostel STP(250KLD)	1,600.00	GI sheet
50	Staff Quarters wing 1	75,000.00	G+9 (RCC)
51	Ladies Hostel block Extension phase 1	80,000.00	G+8 (RCC)
52	Ladies Hostel block Extension phase 2dining (under construction)	70,000.00	G+1 (RCC)
54	Service Block (Chiller Plant)	4,000.00	G (RCC)
55	New Store room	2,700.00	GI sheet
56	School of Architecture block extension (Under construction)	98,000.00	G+7 (RCC)
57	ATM & Book Shop	1,000.00	GI Sheet & RCC
	Total	1,501,875.52	

Total Built-up area: 15,01,875sqft



Life Science Block



Mechanical Sciences Block

3. UNHINDERED ACCESS TO DISABLED PERSONS:

All buildings are constructed with a facility of ramps and lifts for Persons with Disabilities.



Electrical Science Block



Main block



Convention Centre



School of Mechanical Science Block



School of Life Science



Main Canteen



Basic Science Block



Computer Science Block



Main Block

4. MEDICAL FACILITY:

In our Institute we have 2 Medical Centre – 10-bed for Men's and 6-bed for Women's - with 24x7 residential doctors and staff nurses. Medical Centre have all Medical facility like General ward, Ambulance with 24x7 driver, first aid kit and necessary equipments for any emergency purpose. Our Institute vehicles and laboratories also have First Aid kit box. A tie-up with AG Hospital in Tambaram is in place for further treatments.



Men's Medical Centre – Entry



Women's Medical Centre Entry



Men's Medical Centre – General Ward



Examination Table



Focus Lamp



Nebulization Kit



Pulse oxymeter



X ray Lobby



Oxygen cylinder



Steam Inhaler



Suction apparatus



Stretcher



Wheel Chair



Sterile bin



Instrument sterilizer



IV stand



First Aid box

5. PRAYER HALLS:

In our campus we have 2 prayer halls, one in Men's Hostel and another in Institute campus. For Women we have separate prayer hall in Hostel, Convention Centre & Community hall.



Men's Hostel Prayer hall



Prayer hall for Institute



Women's Prayer Hall



Community Hall

6. a) POWER SUPPLY:

Demand contracted from TANGEDCO: 1200KVA

Transformer Capacity	Make	Voltage Ratio	Year of Commissioning
800KVA	Universal	11KV /433V	2008
800 KVA	Universal	11KV /433V	2008

b) BACK-UP POWER CAPACITY: 2350KVA (100%)

DG Set Capacity	Make	Year of Commissioning
320KVA	Cummins	2002
500KVA	Cummins	2004
780KVA	Sulzer	2008
750KVA	Perkins	2013



750KVA DG



500KVA DG

7. RENEWABLE ENERGY :

a) Solar Power Plant - Capacity: 250kWp

We have installed two Roof top solar power plants in our campus. The details are tabled below;

Solar Power Plant	Installed by	Year of Commissioning
150kWp	Vikram Solar	June 2014
100kWp	Fourth Partner Energy	November 2014



- Roof-top Solar Power Plant I of 150kWp capacity commissioned in June 2014 at a cost of 1.32C. Have saved 62.04 Lacs till 31st December 2017.
- Roof-top Solar Power Plant II of 100kWp capacity commissioned in October 2014 at a cost of 62Lacs. Have saved 39.62 Lacs till 31st December 2017.
- Total power generated through the Solar PV plants is 11,74,057 units, which is equal to 10% of our annual consumption. Avoided emission of greenhouse gases to the equivalent of 699,755kg CO₂.

b) **Solar Water Heaters:**

Solar Water heaters in Hostels and staff quarters – installed capacity 42500 litres. This is equal to not using 240 electric geysers of various capacities. The list of solar water plants block wise details is tabled below;

<u>MEN'S HOSTEL</u>		
Block	No. of tanks	Capacity in litres
A Block	16	4000
B Block	20	5000
C Block	18	4500
D Block	18	4500
Main block	20	5000
PG block	12	3000
<u>LADIES HOSTEL</u>		
Main block	22	5500
Annexe Block		
New Block Phase 1	21	5250
<u>STAFF QUARTERS</u>		
New Staff Quarters	23	5750
Total Capacity	170	42,500 Litres



c) **Bio-Gas Methanization Plant**

A Biogas plant of 50m³ capacity for Ladies Hostel is commissioned in June 2017. The food waste collected from hostel mess and canteen is recycled in the bio gas plant. The gas generated from the plant is utilized for cooking in Ladies Hostel mess Kitchen.



Food waste feed in to Bio gas plant

8. AIRCONDITIONING:

S.No	Location	Type of Units	No.of Units
1	Auditorium	75TR Chiller units	2
2	School of Life science Block 6,7 th floor	18HP capacity Daikin make VRF system	1
3	Academic Blocks	Window AC	124
4	Academic Blocks	Split Ac units	197
5	Academic Blocks	Cassette type	29
6	School of Mechanical science Block 1 st floor Dean room	5HP capacity Daikin make VRF system	1
7	Architecture	5HP VRF Unit	1
8	Green Room	2.5TR/2TR Cassette	2
9	Ladies Hostel	24HP VRF unit	1
10	Ladies Hostel	Window AC	4
11	Ladies Hostel	Split AC	14
12	Men's Hostel	24HP VRF unit	2
13	Men's Hostel	Window AC	2
14	Men's Hostel	Split AC	21

9. a) CCTV System In Campus:

Sl.No	Location	Nos
1	First year block	2
2	Aeronautical Block	4
3	Convention Centre	13
4	Convention centre seminar hall	10
5	Estate Office Road	8
6	GST Road	2
7	Library	3
8	Ladies Hostel	4
9	Life Science /MBA block	4
10	Men's Hostel A Block	25
11	Men's Hostel B Block	30
12	Men's Hostel C Block	25
13	Men's Hostel D Block	25
14	Men's Hostel PG block	18
15	Men's Hostel Main block and passage	31
16	Main block	4
17	VC Office	1
18	Spare	2
19	Arabic college	4
20	Exam cell	6
21	New Architecture Block	4
22	Staff quarters	6
23	Check post	1
24	Men's Hostel Dining Hall	2
25	Old Architecture Block	1
26	Science block Lab	4
	Total	239

b) WIFI Connectivity:

In Our Institute whole campus covered with 100% WIFI Facility.

10. PROTECTED WATER SUPPLY:

Water Treatment plants are provided -5 Nos at various places in the campus to treat the water before use in toilets, quarters, Men's Hostel & Ladies hostel.

The capacity and quantity of water treated by each plant is tabled below.

a) Water Treatment Plants

S.NO	LOCATION	CAPACITY	WORKING HOURS	REMARKS
1	New staff Quarters	5m ³ /hr	10	Commissioned in Apr -2016
2	New ladies hostel	5m ³ /hr	12	Commissioned in Aug -2016
3	Men's hostel service block	10m ³ /hr	18	Commissioned in Aug -2016
4	VC Villa	1m ³ /hr	4	Commissioned in Jan -2017
5	Life Science block	5m ³ /hr	8	Commissioned in Aug -2017
Total treated water		335,000Ltrs per day		



b) RO Drinking Water Plants

After initial treatment, the water is further treated by Reverse Osmosis (RO) plants before supplied for drinking purpose. The number of RO plants in campus is tabled below;

S.No	Location	Capacity Litres/Hr	Working Hours Per Day	Qty Of Treated Water In Litres
1	Institute Main Plant- Near to Main block	1500	6	9000
2	science block Terrace	1000	5	5000
3	Ladies hostel New block terrace	500	5	2500
4	Men's hostel Dining hall	2000	4	8000
5	Men's hostel service block	2000	5	10000
6	Aeronautical block terrace	500	2	1000
7	Life sciences block terrace	500	2	1000
Total treated water		8000		36500

RO DRINKING WATER DOMESTIC UNITS				
S.No	Location	Capacity Litres/Hr	Working Hours Per day	Qty Of Treated Water in litres
1	Ladies hostel Main block First Floor	50	3	150
2	Ladies hostel Main block Second Floor	50	3	150
3	Ladies hostel Main block Third Floor	50	3	150
4	Ladies hostel Main block Old Mess	50	3	150
5	Ladies hostel Annex block First Floor	50	3	150
6	Ladies hostel Annex block Second Floor	50	3	150
7	New Architecture block First floor	50	2	100
8	New Architecture block Second Floor	50	2	100

9	First Year block Third Floor	50	2	100
10	First year block Chemistry Lab	50	5	250
11	Fitness centre	12	4	48
12	Medical Hall	12	4	48
13	Registrar Office	12	4	48
Total Treated Water		536		1640



11.SANITATION FACILITY:

Toilets are provided in Institute academic campus, Men's Hostel, Ladies hostel. The numbers and toilet per student ratio is tabled below;

Location	Gents		Ladies Toilet
	Urinal	Toilet	
Institute	1:23	1:28	1:7
Men's Hostel	1:10	1:6	
Women's Hostel			1:3

Highest standard of maintenance of the toilets is daily carried out by outsourced staff numbering 118.

Rest room for physically challenged person are provided in Convention Centre and School of Mechanical Science Block.

12. ELEVATOR FACILITY:

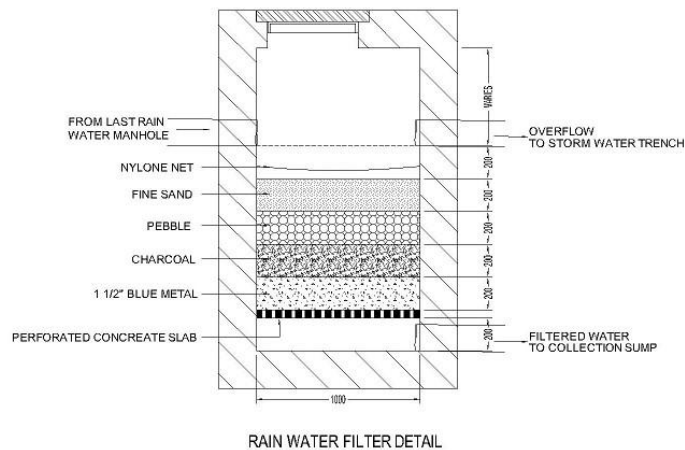
S.No	Building	No of Lifts
1	Auditorium	1
2	Science block	1
3	Life science block	2
4	Mechanical Science block	2
5	New Staff Quarters	2
6	First year block, Main, MBA block	3
7	New Ladies Hostel	2
	Total	13

S.No	Hostel Building	No of Lifts
1	A block	2
2	B Block	2
3	C Block	2
4	D Block	2
5	Kitchen Dumb waiter	1
	Total	9

13. ENVIRONMENTAL SUSTAINABILITY:

a) Rain Water Harvesting:

Rainwater harvesting facility done in blocks to collect of rain water from the terrace. The harvested water is diverted to open wells in Institute campus Men’s Hostel and ladies hostel. The rain water is also stored in UG sumps of Life Science block and Mechanical Science Block. The rain water is stored after passing through the pre-filter as per filter as per shown diagram.



b) Sewage Treatment Plants:

Location	Capacity	Remarks
Institute	250KLD	Commissioned in 2003 as a 150KLD plant. Revamped and capacity increased to 250KLD in 2015
Men’s Hostel	250KLD	Commissioned in 2014



c) Napkin Burner (Attached With Wetscrubber for Pollution Control)

Incinerator machine has been installed to dispose sanitary napkins. Wet scrubber is attached at the outlet of burner fumes where the fumes gets scrubbed in water and gets filtered to remove the harmful emissions.



14. TRANSPORT VEHICLES:

The Transport Department provides a safe, comfort and pleasant travel to the Institute transport users.

We have 51 vehicle which were been used for students & staff trips, water consumption for Institute and schools. Regular follow- ups are made to provide on time Insurances, Fit condition certificate and permit to all our Institute vehicles

Sl.No	Vehicle type	Nos
1	Swaraj Mazda	7
2	Tempo Traveller	5
3	Load vehicles	2
4	Eicher Mini Bus	4
5	Ambulance	1
6	Water Tankers	5
7	Ashok Leyland Bus Non -AC	8
8	AC bus	4
9	Tractor	1
10	Cars	14
	Total	51

All vehicles are provided with speed controller as per RTO norms

All vehicles except cars are provided with Neotrack software for vehicle tracking.

15. HOSTELS:

Separate Men's Hostel complex with six multi-storeyed blocks containing 481 rooms shall accommodate 1712 boys including 47 AC rooms. Another complex with three multi-storeyed blocks containing 200 rooms shall accommodate 500 girls including 27 AC Rooms.

K.B.A MEN'S HOSTEL ROOMS WITH AC & CAPACITY DETAIL		
DESCRIPTION	ROOMS	CAPACITY
A - BLOCK	57	212
A-Block A/C	30	64
B - BLOCK	63	224
B - BLOCK A/C	17	68
C - BLOCK	83	300
D - BLOCK	83	300
MAIN BLOCK	108	352
PG - BLOCK	40	192
TOTAL CAPACITY	481	1712

T.B.A.K WOMENS' HOSTEL ROOM WITH AC & CAPACITY DETAIL		
DESCRIPTION	ROOMS	CAPACITY
MAIN BLOCK	30	136
ANNEX BLOCK	44	168
ANNEX BLOCK WITH AC	7	21
NEW BLOCK	99	155
NEW BLOCK WITH AC	20	20
TOTAL	200	500

a) HOSTEL FACILITIES:

- a. 24 Hours power back-up through central power distribution system
- b. Separate dining hall for Veg & Non-Veg
- c. Mess Food with HALAL Certificate & FSSAI License.
- d. Reading Room
- e. Recreation Hall with DTH facilities
- f. Mosque/Prayer Hall
- g. GYM
- h. Computing Facility,
- i. Swimming Pool
- j. Elevator facility
- k. WIFI connectivity
- l. CCTV Cameras
- m. Water Treatment Plants
- n. RO Drinking water
- o. Outdoor /Indoor sports facility
- p. Solar water Heaters
- q. Laundrette Service.



Automatic Laundry Machines



Swimming Pool

16. STAFF QUARTERS & GUEST HOUSE:

The residential accommodations of teaching and non teaching staff are adequately furnished with following facilities.

1. 24 hrs Power backup.
2. WiFi Connectivity
3. Cable, DTH Connection
4. Prayer Hall,
5. Vehicle Parking space for 4 wheeler and 2 wheeler
6. Elevator facility
7. Water Treatment Plant
8. Solar Water Heaters
9. RO Drinking Water

Staff Quarters Detail

S.No	Name	Qty
1	Professor Quarters	6
2	AP Quarters	6
3	Tenement Quarters	4
4	New Staff Quarters	44
5	Selaiyur Quarters	12
	Total	72

Guest House Detail

S.No	Name	Qty
1	Estate Office 1st floor	3
2	1C New quarters	3
3	Guest House	4
4	Auditorium	2
5	Ladies Hostel	2
6	Men's Hostel	4
	Total	18

17. OTHER FACILITIES IN CAMPUS:

- a. Convention Centre
- b. Canteen
- c. Departmental Store
- d. Indian Overseas Bank
- e. IOB ATM Facility
- f. Food Outlets
- g. Book Shop and Stationery store
- h. Community Hall
- i. Indoor and Outdoor sports facilities

Convention centre: Institute provides a multi facility convention centre to the capacity of 1200 members with three seminar halls.

Location	Occupancy
Auditorium	1200
Seminar Hall-1	300
Seminar Hall-2	180
Seminar Hall-3	40



Main Canteen



Departmental Store



ATM



Fitness Centre



Book Shop



Indoor Games



Outdoor Sports



Athletic Tracks

18. CAMPUS ESTATE MANAGEMENT

ESTATE OFFICE - ACTIVITIES

EVENT MANAGEMENT

FURNISHING & FURNITURE

HORTICULTURE

FLEET MANAGEMENT

SECURITY

HOUSE KEEPING

CIVIL MAINTENANCE

NEW PROJECTS

MECHANICAL / PLUMBING/STP/WTP/RO

ELECTRICAL/ LIFTS/SOLAR PLANTS

AIRCONDITIONING

TELEPHONE SYSTEM

INTERIOR WORKS

HOSTEL MANAGEMENT

CANTEEN MANAGEMENT

ESTATE OFFICE – STAFF STRENGTH

S.No	Staff	Strength
1	Office staff	11
2	Maintenance & Others	11
3	Engineering –Civil	5
4	Plumbing/STP	17
5	Engineering –Electrical	18
6	Stores	5
7	Transport	55
	Total	122

Outsourced staff strength

S.No	Staff	Strength
1	Security staff	43
2	Housekeeping	118
3	Landscaping	14
4	Solid Waste Management	22
	Total	197