



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

JULY 2019

INDEX

S.No	Description	Page No
1	Campus Fact File	4
2	Buildings Infrastructure	5
3	Unhindered Access To Disabled Persons	10
4	Medical Facility	12
5	Prayer Halls	15
6	Power Supply & Power Back Up	16
7	Renewable Energy- Solar Power Plants, Solar Water Heaters, Biogas Plant	17
8	Air Conditioning	22
9	CCTV Systems & WIFI Connectivity	23
10	Protected Water Supply	24
11	Sanitation Facility	26
12	Elevator Facility	26
13	Environmental Sustainability Facilities – Rain Water Harvesting, Sewage Recycling Plants, Napkin Incinerator Machine	27
14	Transport Vehicle	29
15	Hostels	30
16	Staff Quarters & Guest House	32
17	Other Facilities	33
18	Campus Estate Management	36

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

VISION

B.S. Abdur Rahman Crescent 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.**

1. CAMPUS FACT FILE

Infrastructure	As on 2009	As on July 2019
Campus Area	50.19 acres	50.19 acres
Built up area	71,354 Sq.mts	1,40,000 Sq.mts
Power backup	60%	100%
Wi-fi	None	100%
Hostels	878(Boys +350(Girls)	1700(Boys)+500(Girls)
Guest house	8 Rooms	18 Rooms
Staff Quarters	28	72

2. BUILDINGS INFRASTRUCTURE:

S.No	Name of the Building	Built ups 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	Mainbuilding + Annnex	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 2 under construction	70,000.00	G+9 (RCC)
54	Civil Lab & class room	8,000.00	G (RCC)+1 P.F
55	New Store room	2,700.00	GI sheet
56	School of Architecture block extension	98,000.00	G+7 (RCC)
57	ATM & Book Shop	1,000.00	GI Sheet & RCC
58	MBA Block 3rd floor class room	3,137.00	3F- Prefab
59	Parents waiting hall in men's Hostel	1,500.00	G- Prefab
60	Drivers Lounge	611.00	G -Prefab
	Total	1,511,123.52	

Total Built-up Area: 15,11,124 sqft



Life Sciences Block



Mechanical Sciences Block



New Ladies Hostel



New Staff Quarters



New Architecture Block

Establishment of Crescent School of Business



Crescent School of Business



Class Room



Library

**Establishment of Centre for Innovation
in Teaching and Learning**



Passage

Establishment of Centre for Leadership



**Establishment of Crescent Innovation
and incubation centre**



Civil Yard Class Room



Establishment of Robo lab in School of Mechanical Science Block 1st floor. This has been designed to accommodate 36 working station with fully A/C LAB



Establishment of Parents waiting Lounge @ 1500Sft at Men's Hostel.



Establishment of new Class rooms



3. UNHINDERED ACCESS TO DISABLED PERSONS:

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



Electrical Sciences Block



Main block



Convention Centre



School of Mechanical Science Block



School of Life Science Block



Main Canteen



Basic Sciences Block



Computer Sciences 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



Emergency Monitor



ECG machine



Automated External Defibrillator (AED)

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



Ladies 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: 550kWp

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

Solar Power Plant	Installed by	Year of Commissioning
150 kWp	Vikram Solar	June 2014
100 kWp	Fourth Partner Energy	November 2014
300 kWp	Fourth Partner Energy	October 2018



Main Block, MBA Block & Basic Sciences Block



Aeronautical Block



Auditorium Block



Computer Sciences Block

- Roof-top Solar Power Plant I of 150kWp capacity commissioned in June 2014 at a cost of 1.32C. Have saved 88.47 Lacs till 30th June 2019.
- Roof-top Solar Power Plant II of 100kWp capacity commissioned in October 2014 at a cost of 62Lacs. Have saved 59.43 Lacs till 30th June 2019.
- New Roof-top Solar Power Plant III of 300kWp capacity commissioned in October 2018 at a cost of 1.20C. Have saved 24.19 Lacs till 30th June 2019. Total power generated through the Solar PV plants is 1987499 units. Our average monthly consumption is 37%. Avoided emission of greenhouse gases to the equivalent of 11,84,566kg 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



New Staff Quarters



Ladies Hostel



Men's Hostel

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

d) ECOBIN (250 KGS / DAY)



We have installed 250Kg Ecobin in BSACIST for Food Waste.

Operating Procedures

Food waste after segregate loaded and mixed with 10-15% of saw dust +0.1% Bioculum. Now the mixture lifted into feeding port of ecobin. In the tank, mixing operation will be done with regular time intervals in a day by day using main agitator derive.

Air will pass through into the tank by using blower with regular time intervals. Repeating mixture operation for feeding 250kgs per day. After repeating the activities for 15 days compost developed at the bottom.

Around 25kgs of collected compost can be used for fertilising the soil by toping up in the soil.



8. AIR CONDITIONING:

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	217
5	Academic Blocks	Cassette type	32
6	School of Mechanical science Block 1 st floor Dean room	5HP capacity Daikin make VRF system	2
7	New Architecture block 2 nd floor	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	41

9. a) CCTV System in Campus:

Sl.No	Location	Nos
1	First year Block	2
2	Aeronautical Block	9
3	Convention Centre	15
4	Convention centre seminar hall	10
5	Estate Office Road + New Architecture Block	14
6	GST Road	2
7	Computer Science Block + Library + Pharmacy Dept	8
8	Ladies Hostel + Staff quarters + Check post	11
9	Life Science /MBA block	5
10	Men's Hostel A Block	25
11	Men's Hostel B Block	32
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	5
17	VC Office	4
18	Men's Hostel Mess	2
19	Arabic college	4
20	Exam cell	10
21	VC Villa	3
22	Innovation & Incubation centre	16
23	BSAU General Store	9
24	Medical hall	11
	Total	296

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		335,000 Ltrs 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	1000	5	5000
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		8500		40500

RO DRINKING WATER DOMESTIC UNITS				
S.No	Location	Capacity Litres/Hr	Working Hours Per day	Qty Of Treated Water in litres
1	First year block chemistry lab	50	2	100
2	Fitness centre	12	4	48
3	Medical Hall	12	4	48
4	Registrar Office	12	4	48
5	Innovation Centre	12	5	60
Total treated water		98		304



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 Housekeeping staffs numbering 129

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
8	New Architecture block	2
	Total	15

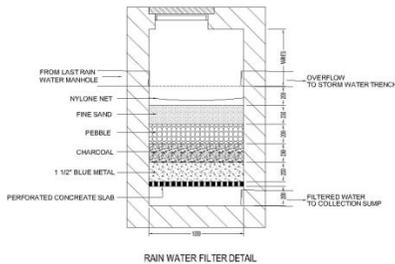
S.No	Hostel Building	No of Lifts
1	A block	2
2	B Block	2
3	C Block	2
4	D Block	2
5	Kitchen Dumb waiter	1
	Total	9

13. ENVIRONMENTAL SUSTAINABILITY:

a) Rain Water Harvesting:

Rain water 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, Mechanical Science Block and Architecture Block.

The rain water is stored after passing through the pre-filter as per filter as per shown diagram.



New Architecture Block RWH

b) Sewage Treatment Plants:

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

Separate Napkin destroyer machine has installed in Ladies hostel 5 Nos and Medical Hall 1 No.



In campus



Ladies Hostel Main Block



Ladies Hostel New Block



Medical Hall

14. TRANSPORT VEHICLES:

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

We have 52 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 -Non AC	4
2	Tempo Traveller – Non AC	2
4	Eicher – Non AC	1
5	Ambulance	1
6	Water Tankers	5
7	Tempo Traveller AC	1
8	Bharat Benz - AC Bus	15
9	Eicher – AC Bus	1
10	Ashok Leyland AC Bus	4
11	Cars	18
	Total	52

All vehicles are provided with speed governor 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 DETAILS		
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 DETAILS		
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. Reading Room
- d. Recreation Hall with DTH facilities
- e. Mosque/Prayer Hall
- f. GYM
- g. Computing Facility,
- h. Swimming Pool
- i. Elevator facility
- j. WIFI connectivity
- k. CCTV Cameras
- l. Water Treatment Plants
- m. RO Drinking water
- n. Outdoor /Indoor sports facility
- o. Solar water Heaters
- p. Laundrette Service.
- q. Dish Wash Machine
- r. Palmyra Cafe
- s. Parents Waiting Lounge



Automatic Laundry Machines



Swimming Pool

Dish Wash Machine



Men's Hostel



Women's Hostel

Palmyra Cafe



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
10. Children's Park

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 Guest House	3
2	1C Guest House	3
3	New Guest House	4
4	Auditorium Guest House	2
5	Ladies Hostel Guest House	2
6	Men's Hostel Guest House	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
- j. Vending Machines
- k. Driver's Lounge
- l. ICICI ATM Facility

Convention centre: Institute provides a multi facility convention centre to the capacity of 1720 members with an Auditorium and 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



Basket Ball court



Palmyra Cafe

18. CAMPUS ESTATE MANAGEMENT

ESTATE OFFICE - ACTIVITIES

EVENT MANAGEMENT

FURNISHING & FURNITURE

HORTICULTURE

FLEET MANAGEMENT

HOUSE KEEPING

CIVIL MAINTENANCE

NEW PROJECTS

MECHANICAL / PLUMBING/STP/WTP/RO

ELECTRICAL/ LIFTS/SOLAR PLANTS

AIRCONDITIONING

TELEPHONE SYSTEM

INTERIOR WORKS

HOSTEL MANAGEMENT

ESTATE OFFICE – STAFF STRENGTH

S.No	Staff	Strength
1	Office staff	12
2	Maintenance & Others	14
3	Engineering – Civil	5
4	Plumbing/STP	16
5	Engineering –Electrical	14
6	Transport	53
7	Gardener	13
	Total	127

Outsourced staff strength

S.No	Staff	Strength
1	Security staff	50
2	Housekeeping	129
3	Solid Waste Management	9
	Total	188