




# KSHATRIYA COLLEGE OF ENGINEERING

(Affiliated to JNTU Hyderabad & Approved by AICTE)

7.1.3: Quality audits on environment and energy regularly undertaken by the Institution Report on energy audit submitted by the auditing agency.

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Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224,  
Dist: Nizamabad. (T.S).



Kshatriya College of Engineering, Nizamabad, Telangana.

Green Audit (Self-Assessment)

2018-19

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

## 1. Total number of Plants in Campus?

Plant type with approx. count 1800

Full grown Trees 800

Small Trees 400

Hedge Plants 600

Grass Cover SQM 6856.96 m<sup>2</sup>

## 1.1 WATER AND WASTEWATER MANAGEMENT

### 1. List uses of water in your institute

Basic use of water in campus:

**Drinking** –1900 liters

**Gardening** –7500 liters

**Kitchen and Toilets** – 1400 liters

**Others** – 1100 liters

**Hostel** –

**Total = 11.9 KL/Month**

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nellore

## 2 How does your institute store water? Are there any water saving techniques followed in your institute?

There are total 17000 liters water storage of water and boosting within the College campus.

Sl. No	Storage Type	Capacity	Quantity	Total (in Litres)
1	OVER HEAD TANK	8000	1	8000
2	OVER HEAD TANK	2000	2	4000
3	OVER HEAD TANK			
4	OVER HEAD TANK			
5	UNDER GROUND TANK (Fire tank)	5000	1	5000
6	UNDER GROUND TANK			
7	UNDER GROUND HEAD TANK			
	<b>TOTAL STORAGE CAPACITY</b>	<b>15000</b>		<b>17000</b>

### Saving Techniques

- Avoid overflow of water controlled valves are provided in water supply system.
- Close supervision for water supply system.
- Water Conservation awareness for new students
- Sprinklers usage for gardening and grass cover

  
Principal  
Kshatriya College of Engg.  
CHERUR-ARMOOR - 53224  
Dist: Palnathur

## 1.2 CARBON FOOTPRINT - EMISSION & ABSORPTION

### 1. Electricity used per year - CO<sub>2</sub> emission from Electricity

$$\begin{aligned} & (\text{Electricity used per year in kWh}/1000) \times 0.84 \\ & = 49658 \text{ kWh} / 1000 \times 0.84 \\ & = 41.712 \text{ ton} \end{aligned}$$

### 2. Diesel used per year CO<sub>2</sub> emission from HDS (Diesel)

$$\begin{aligned} & (\text{Diesel used per year in litres}) \times 2.68 \\ & \times 2.68 \\ & = 2400 \times 2.68 \\ & = 6.432 \text{ ton} \end{aligned}$$

### 3. Transportation per year (car) CO<sub>2</sub> emission from transportation (Bus and Car)

Car - About 4.6 metric tons CO<sub>2</sub> per year  
Bus - About 17 tons CO<sub>2</sub> per year

Total CO<sub>2</sub> emission per year = 69.472

## CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 800 full grown trees and 400 semi grown trees of different species, on the campus spread over 28.36 acres.

Carbon absorption capacity of one full grown tree 22 kg CO<sub>2</sub> Therefore Carbon absorption capacity of 800 full-grown trees  $800 \times 22 \text{ kg CO}_2 = 17.6 \text{ tons of CO}_2$ .

The carbon absorption capacity of 1284 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption  $400 \times 6.8 \text{ kg of CO}_2 = 2.72 \text{ tons of CO}_2$


There are approximately Hedge Plants 600 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO<sub>2</sub> where as some others absorb very low level of CO<sub>2</sub>. In the absence of a detailed scientific study, 200g of CO<sub>2</sub> absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is  $600 \times 200 \text{ g} = 0.12 \text{ tons of CO}_2$  The lawns on the campus have grass and cover a total area of 73808 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area  $73808 \times 365 \times 0.1 \text{ g CO}_2 = 2.69 \text{ tons CO}_2 \text{ per year}$ .

Grand total of carbon absorption capacity of the campus is 23.01 tons.

Principal  
College of Engg.  
RST  
CHEER-ARMOOR - 63224

## RECOMMENDATIONS

1. Green Belt Development.
2. Deployment of renewable energy sources.
3. Energy savings.

  
Principal  
Kshatriya College of Engg.  
CHENNAI



Kshatriya College of Engineering, Nizamabad, Telangana.

Green Audit Report  
2019-20

  
Principal  
Kshatriya College of Engg  
CHE-IR-ADP-IR-2019-20

## Overview

Kshatriya College of Engineering (KCEA) was established in the year 2001 under the aegis of Pandit Deendayal Upadhyay Educational Society. KCEA is located on a sprawling 40 acres campus. It is located on the serene NH-16 highway, 30 km away from Nizamabad district. KCEA is affiliated to the Jawaharlal Nehru Technology University Hyderabad. (JNTUH) offering graduate programs in engineering and postgraduate programs in the streams of Engineering, Business Administration, and Polytechnic.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ART DOR - 503 224  
Dist: Nizamabad



# GREEN AUDIT - ANALYSIS

## 1.1 GENERAL INFORMATION

### 1. Does any Green Audit conducted earlier?

Not Conducted

### 2. What is the total strength (people count) of the Institute?

#### Students

Male: 515 Female: 273 Total: 788

#### Teachers (including guest faculty)

Male: 60 Female: 24 Total: 84

#### Non-Teaching Staff

Male: 21 Female: 16 Total: 37

#### Total Strength

Male: 596 Female: 313 Total: 909

  
Kshaniya College of Education  
CHP - UR - AP - 505 001  
Dist: Khammam

**3. What is the total number of working days of your campus in a year?**

257

**4. Where is the campus located?**

Adjacent to NH-64, chepur village, Armoor mandal, Nizamabad District, Telangana

**5. Which of the following are available in your institute?**

Garden area available  
Playground available  
Kitchen available  
Toilets available  
Garbage Or Waste Store Yard available  
Laboratory available  
Canteen available  
Hostel Facility  
Guest House available

**6. Which of the following are found near your institute?**

Municipal dump yard  
Garbage heap  
Public convenience  
Sewer line  
Stagnant water  
Open drainage  
Industry – (Mention the type)  
Bus / Railway station at a distance 2-3 kms from campus  
Market / Shopping complex at a distance 2-6 kms from campus

**1.2 WASTE MINIMIZATION AND RECYCLING**

**1. Does your institute generate any waste? If so, what are they?**

Yes  
Electronic waste

**2. What is the approximate amount of waste generated per day? (in KG approx.)**

Biodegradable waste -  
Non-biodegradable waste -

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

Hazardous Waste <  
Others -

**3. How is the waste managed in the institute? By Composting, Recycling, Reusing, Others (specify)**

Others -  
Waste Electronic material is sold out to the 3<sup>rd</sup> party for Recycling / Reusing

**4. Do you use recycled paper in institute?**

No

**5. How would you spread the message of recycling to others in the community?**

Our college NCS unit is organizing ofetnly the awareness programs I n near the village Chepur ,Perkit,Govindpet,Mamadipally,Lakkora etc to spread the message or recycling and its importance

**6. Can you achieve zero garbage in your institute? if yes, how?**

Continuous efforts are put to achieve zero garbage

**1.3 GREENING THE CAMPUS**

**1. Is there a garden in your institute?**

Yes

**2. Do students spend time in the garden?**

Yes

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Anaparthi

### 3. Total number of Plants in Campus?

Plant type with approx. count 1750

Full grown Trees 750

Small Trees 390

Hedge Plants 540

Grass Cover SQM 6870.96 m<sup>2</sup>

### 4. Is the College campus having any Horticulture Department? (If yes, give details)

No

### 5. How many Tree Plantation Drives organized by campus per annum?

A minimum 3 in a year

### 6. Is there any Plant Distribution Program for Students and Community?

YES

### 8. Is there any Plant Ownership Program?

NO

## 1.4 WATER AND WASTEWATER MANAGEMENT

### 1. List uses of water in your institute

Basic use of water in campus:

Drinking – 1900 liters

Gardening – 7800 liters

Kitchen and Toilets – 1400 liters

Others – 1100 liters

Hostel –

Total = 12.2 KL/Month KLtr (approximately)

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

## 2. How does your institute store water? Are there any water saving techniques followed in your institute?

There are total 17000 liters water storage of water and boosting within the College campus.

Sl. No	Storage Type	Capacity	Quantity	Total (in Litres)
1	OVER HEAD TANK	8000	1	8000
2	OVER HEAD TANK	2000	2	4000
3	OVER HEAD TANK			
4	OVER HEAD TANK			
5	UNDER GROUND TANK (Fire tank)	5000	1	5000
6	UNDER GROUND TANK			
7	UNDER GROUND HEAD TANK			
	<b>TOTAL STORAGE CAPACITY</b>	<b>15000</b>		<b>17000</b>

### Saving Techniques

- Avoid overflow of water controlled valves are provided in water supply system.
- Close supervision for water supply system.
- Water Conservation awareness for new students
- Sprinklers usage for gardening and grass cover

## 3. Locate the point of entry of water and point of exit of waste water in your institute.

Entry – South-West or Open Area

Exit- North-East or Main Bulding

## 4. Write down ways that could reduce the amount of water used in your institute

### Basic ways:

- Close the taps after usage
- Water Conservation awareness for new students
- Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage
- In new block, push tap are installed to save water

  
Principal  
Kshatriya College of Engg.  
CHERUR-ARMOOR - 503 224  
Dist: Nellore

## 1.5 ANIMAL WELFARE

1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

Dogs , Squirrels, Birds, Insects , Peacocks

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

No

## 1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO<sub>2</sub> emission from Electricity

(electricity used per year in kWh/1000) x 0.84  
= 48600kWH /1000x0.84  
= 40.82 ton

2. LPG/PNG used per year - CO<sub>2</sub> emission from LPG/PNG

(LPG/PNG used per year in KG) x 2.99  
x 2.99  
= x 2.99  
= ton

3. Diesel used per year CO<sub>2</sub> emission from HDS (Diesel)

(Diesel used per year in litres) x 2.68  
x 2.68  
=2400 x 2.68  
= 6.432 ton

4. Transportation per year (car) CO<sub>2</sub> emission from transportation (Bus and Car)

Car - About 4.6 tons r co<sub>2</sub> per year  
Bus - About 17 tons r co<sub>2</sub> per year

  
Principal  
Kshatriya College of Engg.  
CHEERUR-ARMOOR - 503 224  
Dist: Nizamabad

Total CO2 emission per year cumulative by electricity usage + bus and car transportation = 68.852 Tons

## CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 750 full grown trees and 390 semi grown trees of different species, on the campus spread over 28.36 acres.


Carbon absorption capacity of one full grown tree 22 kg CO<sub>2</sub> Therefore Carbon absorption capacity of 800 full-grown trees  $750 \times 22 \text{ kg CO}_2 = 16.5 \text{ tons of CO}_2$ .

The carbon absorption capacity of 390 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption  $390 \times 6.8 \text{ kg of CO}_2 = 2.652 \text{ tons of CO}_2$

There are approximately Hedge Plants 540 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO<sub>2</sub> where as some others absorb very low level of CO<sub>2</sub>. In the absence of a detailed scientific study, 200g of CO<sub>2</sub> absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is  $540 \times 200 \text{ g} = 0.108 \text{ tons of CO}_2$


The lawns on the campus have grass and cover a total area of 73760 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area  $73760 \times 365 \times 0.1 \text{ g CO}_2 = 2.69 \text{ tons CO}_2 \text{ per year}$ .

Grand total of carbon absorption capacity of the campus is 21.95 tons.

  
Principal  
Kshatriya College of Engg.  
CHEER-AR-00A-119224  
Dist: Jhansi

## GREEN INITIATIVES BY CAMPUS

- **Solid Waste Management**
  - Waste management is done by composting
- **Tree Plantation Drives**
  - Five plantation drives were carried out in the current year on the Campus.
- **Air Pollution Reduction**
  - The College is in the process of pursuing air quality monitoring by an approved lab.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nellore



## RECOMMENDATIONS

- College should start drip irrigation to save water on campus
- Increase plantation drives in nearby villages, local bodies, NGOs, and Municipal Corporations.
- Establish an E-waste collection center on campus.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nellore



# KSHATRIYA COLLEGE OF ENGINEERING

NIZAMABAD, TELANGANA.

Has been assessed by BGS for the environmental impacts to fulfil the requirements of

## GREEN AUDIT

The initiatives carried out by the institution have been found to be satisfactory.

Auditor Signature

A handwritten signature in black ink, appearing to be 'Dmitri', written over a horizontal line.

Date of Audit: 24.06.2020

BGS Certification Services.  
Email: [bgscertification@gmail.com](mailto:bgscertification@gmail.com).  
Thane.

A handwritten signature in green ink, appearing to be 'A', written above a blue rectangular stamp.

Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad



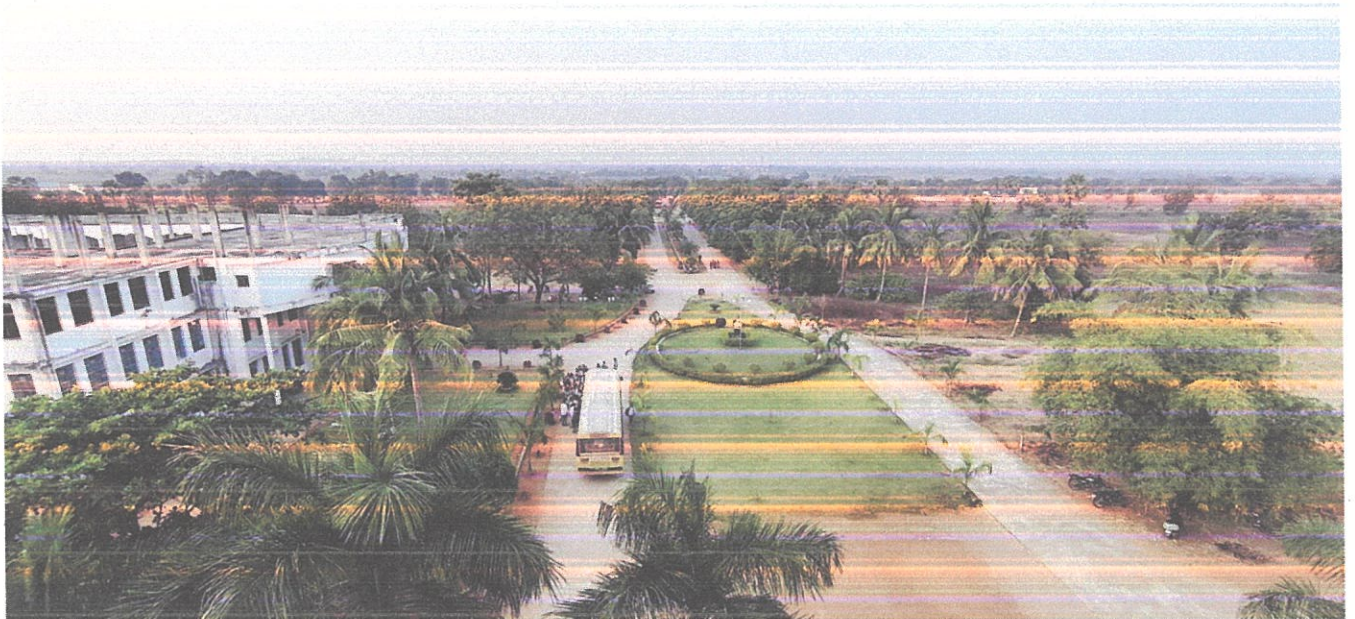
Kshatriya College of Engineering, Nizamabad, Telangana.

Green Audit Report  
2020-21

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

## Overview

Kshatriya College of Engineering (KCEA) was established in the year 2001 under the aegis of Pandit Deendayal Upadhyay Educational Society. KCEA is located on a sprawling 40 acres campus. It is located on the serene NH-16 highway, 30 km away from Nizamabad district. KCEA is affiliated to the Jawaharlal Nehru Technology University Hyderabad. (JNTUH) offering graduate programs in engineering and postgraduate programs in the streams of Engineering, Business Administration, and Polytechnic.



  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

## GREEN AUDIT - ANALYSIS

### 1.1 GENERAL INFORMATION

#### 1. Does any Green Audit conducted earlier?

*Not Conducted*

#### 2. What is the total strength (people count) of the institute?

##### **Students**

Male: 597 Female: 294 Total: 891

##### **Teachers (including guest faculty)**


Male: 62 Female: 28 Total: 90

##### **Non-Teaching Staff**

Male: 22 Female: 16 Total: 38

##### **Total Strength**

Male: 681 Female: 338 Total: 1019

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - PIN 224  
Dist: Jhansi, M.P.

**3. What is the total number of working days of your campus in a year?**

257

**4. Where is the campus located?**

Adjacent to NH-64, Chepur village, Armoor Mandal, Nizamabad District, Telangana

**5. Which of the following are available in your institute?**

Garden area available  
Playground available  
Kitchen available  
Toilets available  
Garbage Or Waste Store Yard available  
Laboratory available  
Canteen available  
Hostel Facility  
Guest House available

**6. Which of the following are found near your institute?**

Municipal dump yard  
Garbage heap  
Public convenience  
Sewer line  
Stagnant water  
Open drainage  
Industry – (Mention the type)  
Bus / Railway station at a distance 2-3 kms from campus  
Market / Shopping complex at a distance 2-6 kms from campus


**1.2 WASTE MINIMIZATION AND RECYCLING**

**1. Does your institute generate any waste? If so. what are they?**

Yes  
Electronic waste

**2. What is the approximate amount of waste generated per day? (in KG approx.)**

Biodegradable waste -  
Non-biodegradable waste -

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist. Nizamabad

Hazardous Waste <  
Others -

**3. How is the waste managed in the institute? By Composting, Recycling, Reusing, Others (specify)**

Others -

Waste Electronic material is sold out to the 3<sup>rd</sup> party for Recycling / Reusing

**4. Do you use recycled paper in institute?**

No

**5. How would you spread the message of recycling to others in the community?**

Our college NCS unit is organizing ofetnly the awareness programs I n near the village Chepur ,Perkit, Govindpet, Mamadipally, Lakkora etc to spread the message or recycling and its importance

**6. Can you achieve zero garbage in your institute? if yes, how?**

Continuous efforts are put to achieve zero garbage

**1.3 GREENING THE CAMPUS**

**1. Is there a garden in your institute?**

Yes

**2. Do students spend time in the garden?**

Yes

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMODR - 603 224  
Dist: Tirunelveli

### 3. Total number of Plants in Campus?

Plant type with approx. count 1790

Full grown Trees 780

Small Trees 350

Hedge Plants 500

Grass Cover SQM 6556.96 m<sup>2</sup>

### 4. Is the College campus having any Horticulture Department? (If yes, give details)

No

### 5. How many Tree Plantation Drives organized by campus per annum?

A minimum 3 in a year

### 6. Is there any Plant Distribution Program for Students and Community?

YES

### 8. Is there any Plant Ownership Program?

NO

## 1.4 WATER AND WASTEWATER MANAGEMENT

### 1. List uses of water in your institute

Basic use of water in campus:

Drinking – 1900 liters


Gardening – 7900 liters

Kitchen and Toilets – 1400 liters

Others – 1200 liters

Hostel –

Total = 12.4 KL/Month

  
Principal  
Kshatriya College of Engg.  
CHENNAI-600 008 - 503 224  
Dist: Chennai



## 2. How does your institute store water? Are there any water saving techniques followed in your institute?

There are total 17000 liters water storage of water and boosting within the College campus.

Sl. No	Storage Type	Capacity	Quantity	Total (in Litres)
1	OVER HEAD TANK	8000	1	8000
2	OVER HEAD TANK	2000	2	4000
3	OVER HEAD TANK			
4	OVER HEAD TANK			
5	UNDER GROUND TANK (Fire tank)	5000	1	5000
6	UNDER GROUND TANK			
7	UNDER GROUND HEAD TANK			
	<b>TOTAL STORAGE CAPACITY</b>	<b>15000</b>		<b>17000</b>

### Saving Techniques

- Avoid overflow of water controlled valves are provided in water supply system.
- Close supervision for water supply system.
- Water Conservation awareness for new students
- Sprinklers usage for gardening and grass cover

## 3. Locate the point of entry of water and point of exit of waste water in your institute.

Entry – South-West or Open Area

Exit- North-East or Main Bulding

## 4. Write down ways that could reduce the amount of water used in your institute

### Basic ways:

- Close the taps after usage
- Water Conservation awareness for new students
- Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage
- In new block, push tap are installed to save water

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

## 1.5 ANIMAL WELFARE

1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

*Dogs, Squirrels, Birds, Insects, Peacocks*

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

*No*

## 1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO<sub>2</sub> emission from Electricity

*(Electricity used per year in kWh/1000) x 0.84*  
*= 49050 kWh /1000x0.84*  
*= 41.202 ton*

2. LPG/PNG used per year - CO<sub>2</sub> emission from LPG/PNG

*(LPG/PNG used per year in KG) x 2.99*  
*x 2.99*  
*= x 2.99*  
*= ton*

3. Diesel used per year CO<sub>2</sub> emission from HDS (Diesel)

*(Diesel used per year in litres) x 2.68*  
*x 2.68*  
*=2400 x 2.68*  
*= 6.432 ton*

4. Transportation per year (car) CO<sub>2</sub> emission from transportation (Bus and Car)

*Car - About 4.6 metric tons r co2 per year*  
*Bus – About 17 tons r co2 per year*

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 751 224  
Dist: Bhubaneswar

Total CO<sub>2</sub> emission per year cumulative by electricity usage + bus and car transportation= 69.234 ton

## **CARBON ABSORPTION BY FLORA IN THE INSTITUTION**

There are 780 full grown trees and 350 semi grown trees of different species, on the campus spread over 28.36 acres.

Carbon absorption capacity of one full grown tree 22 kg CO<sub>2</sub> Therefore Carbon absorption capacity of 800 full-grown trees  $780 \times 22 \text{ kg CO}_2 = 17.16 \text{ tons of CO}_2$ .

The carbon absorption capacity of 350 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption  $350 \times 6.8 \text{ kg of CO}_2 = 2.38 \text{ tons of CO}_2$

There are approximately Hedge Plants 500 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO<sub>2</sub> where as some others absorb very low level of CO<sub>2</sub>. In the absence of a detailed scientific study, 200g of CO<sub>2</sub> absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is  $500 \times 200 \text{ g} = 0.10 \text{ tons of CO}_2$

The lawns on the campus have grass and cover a total area of 70578 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area  $70578 \times 365 \times 0.1 \text{ g CO}_2 = 2.58 \text{ tons CO}_2 \text{ per year}$ .

Grand total of carbon absorption capacity of the campus is 22.22 tons.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

## GREEN INITIATIVES BY CAMPUS

- **Solid Waste Management**
  - There is ban on single use plastic and plastic crockery in the campus.
- **Renewable Energy**
  - Solar power plant of capacity 60 KW is to be installed on building roof.
  - College has signed an agreement with third party solar power provider for 0.06 MW.
  -
- **Tree Plantation Drives**
  - Five plantation drives were carried out in the current year on the Campus.
  - Plants survival rate is around 90%
- **Air Pollution Reduction**
  - Personal Vehicles (Students) are not allowed in the campus


**Environment Committee Initiatives** – KCEA has an environment committee.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 603 224  
Dist: Tirumala

## RECOMMENDATIONS

- Environmental parameters should be included in purchase policy to achieve a cradle to grave approach for sustainability.
- College should go for water balancing / audit for monitoring the use and wastage of water.
- A Water Meter should be installed at every building of the institute to monitor water consumption per capita.
- College should start drip irrigation to save water on campus
- College should increase the use of Sprinklers for gardening purposes
- Flow rate of taps should be checked, it should not be more than 2.5 liters/minute.
- Increase plantation drives in nearby villages, local bodies, NGOs, and Municipal Corporations.
- Arrange training programs on environmental management systems and nature conservation for schools and local people.
- Establish an E-waste collection center on campus.

Green building guidelines for future expansion projects of the campus.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad



## AUDIT CERTIFICATE

PRESENTED TO

### **KSHATRIYA COLLEGE OF ENGINEERING** NIZAMABAD, TELANGANA.

Has been assess by MQCIUL for the comprehensive study of environmental impacts on institutional working framework to fulfil the requirements of

## **GREEN AUDIT**

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

Auditor Signature

Date of Audit: 23.06.2021



*Amil*

MARK CERTIFICATION CONSULTANTS, 8-1-402/A/5/2, TOLICHOWKI, HYDERABAD -500008, TELANGANA, INDIA.

Website: [WWW.MARKCERTIFICATION.COM](http://WWW.MARKCERTIFICATION.COM),

Email: [INFO@MARKCERTIFICATION.COM](mailto:INFO@MARKCERTIFICATION.COM)

*Principal*  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad




Kshatriya College of Engineering, Nizamabad, Telangana.

Green Audit Report  
2021-22

  
Principal  
Kshatriya College of Engg.  
CHEP/HR-ARMO/CR - 173/224  
Nizamabad

## Overview

Kshatriya College of Engineering (KCEA) was established in the year 2001 under the aegis of Pandit Deendayal Upadhyay Educational Society. KCEA is located on a sprawling 40 acres campus. It is located on the serene NH-16 highway, 30 km away from Nizamabad district. KCEA is affiliated to the Jawaharlal Nehru Technology University Hyderabad. (JNTUH) offering graduate programs in engineering and postgraduate programs in the streams of Engineering, Business Administration, and Polytechnic.

  
Principal  
Kshatriya College of Engg.  
CHEFUR-ARMOOR - 503 224  
Dist: Nizamabad



## GREEN AUDIT REPORT – DETAILS

### 1. Does any Green Audit conducted earlier?

Conducted.

### 2. What is the total strength (people count) of the institute?

#### Students

Male: 509 Female: 305 Total: 814

#### Teachers

Male: 55 Female: 27 Total: 82

#### Non-Teaching Staff

Male: 21 Female: 18 Total: 36

#### Total Strength

Male: 585 Female: 350 Total: 935

  
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Dist: Tirunelveli

**3. What is the total number of working days of your campus in a year?**

258

**4. Where is the campus located?**

Adjacent to NH-64, Chepur village, Armors Mandal, Nizamabad District, Telangana

**5. Which of the following are available in your institute?**

Garden area available  
Playground available  
Kitchen available  
Toilets available  
Garbage Or Waste Store Yard available  
Laboratory available  
Canteen available  
Hostel Facility  
Guest House available

**6. Which of the following are found near your institute?**

Municipal dump yard  
Garbage heap  
Public convenience  
Sewer line  
Stagnant water  
Open drainage  
Industry – (Mention the type)  
Bus / Railway station at a distance 2-3 kms from campus  
Market / Shopping complex at a distance 2-6 kms from campus

**1.2 WASTE MINIMIZATION AND RECYCLING**

**1. Does your institute generate any waste? If so, what are they?**

E- Waste

**2. What is the approximate amount of waste generated per day? (in KG approx.)**

Biodegradable waste -  
Non-biodegradable waste -

  
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Dist: Nizamabad

Hazardous Waste <  
Others -

**3. How is the waste managed in the institute? By Composting, Recycling, Reusing, Others (specify)**

Waste Electronic material is sold out to the 3<sup>rd</sup> party for Recycling / Reusing

**4. Do you use recycled paper in institute?**

No

**5. How would you spread the message of recycling to others in the community?**

Our college NCS unit is organizing ofetnly the awareness programs I n near the village Chepur ,Perkit,Govindpet,Mamadipally,Lakkora etc to spread the message or recycling and its importance

**6. Can you achieve zero garbage in your institute? if yes, how?**

Continuous efforts are put to achieve zero garbage

**1.3 GREENING THE CAMPUS**

**1. Is there a garden in your institute?**

Yes

**2. Do students spend time in the garden?**

Yes

  
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Kshatriya College of Engg.  
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Dist: Tirunelveli

### 3. Total number of Plants in Campus?

Plant type with approx. count 1800

Full grown Trees 800

Small Trees 400

Hedge Plants 600

Grass Cover SQM 6856.96 m<sup>2</sup>

### 4. Is the College campus having any Horticulture Department? (If yes, give details)

No

### 5. How many Tree Plantation Drives organized by campus per annum?

A minimum 3 in a year

### 6. Is there any Plant Distribution Program for Students and Community?

YES

### 8. Is there any Plant Ownership Program?

NO

## 1.4 WATER AND WASTEWATER MANAGEMENT

### 1. List uses of water in your institute

Basic use of water in campus:

Drinking – 2500 liters

Gardening – 8500 liters

Kitchen and Toilets – 1500 liters

Others – 1200 liters

Hostel –

Total = 13.7KL/Month

  
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Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: H. T. Mahabubnagar

**2 How does your institute store water? Are there any water saving techniques followed in your institute?**

There are total 17000 liters water storage of water and boosting within the College

Sl. No	Storage Type	Capacity	Quantity	Total (in Litre)
1	OVER HEAD TANK	8000	1	8000
2	OVER HEAD TANK	2000	2	4000
3	OVER HEAD TANK			
4	OVER HEAD TANK			
5	UNDER GROUND TANK (Fire tank)	5000	1	5000
6	UNDER GROUND TANK			
7	UNDER GROUND HEAD TANK			
	<b>TOTAL STORAGE CAPACITY</b>	<b>15000</b>		<b>17000</b>

**Saving Techniques**

- Avoid overflow of water controlled valves are provided in water supply system.
- Close supervision for water supply system.
- Water Conservation awareness for new students
- Sprinklers usage for gardening and grass cover

**3. Locate the point of entry of water and point of exit of waste water in your institute.**

**Entry** – South-West or Open Area

**Exit**- North-East or Main Building

**4. Write down ways that could reduce the amount of water used in your institute**

**Basic ways:**

- Close the taps after usage
- Water Conservation awareness for new students
- Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage
- In new block, push tap are installed to save water

  
**Principal**  
 KJ Somaiya Institute of Technology  
 College of Engg.  
 CHEPUR-ARMOOR - 503 224  
 Dist: Nizamabad

## 1.5 ANIMAL WELFARE

1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

Dogs, Squirrels, Birds, Insects, Peacocks

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

No

## 1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO<sub>2</sub> emission from Electricity

(Electricity used per year in kWh/1000) x 0.84  
= 48900 kWh/1000 x 0.84  
= 41.076 ton

2. LPG/PNG used per year - CO<sub>2</sub> emission from LPG/PNG

(LPG/PNG used per year in KG) x 2.99  
x 2.99  
= x 2.99  
= ton

3. Diesel used per year CO<sub>2</sub> emission from HDS (Diesel)

(Diesel used per year in litres) x 2.68  
x 2.68  
= 2400 x 2.68  
= 6.432 ton

4. Transportation per year (car) CO<sub>2</sub> emission from transportation (Bus and Car)

Car – About 4.6 tons r co2 per year  
Bus – About 17 tons r co2 per year

  
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CHEPUR-ARMOOR - 03 224  
Dist: Jhansi

Total CO<sub>2</sub> emission per year cumulative by electricity usage + bus and car transportation = 41.076 + 6.432 + 21.6 = 69.108 tons

## CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 800 full grown trees and 400 semi grown trees of different species, on the campus spread over 28.36 acres.

Carbon absorption capacity of one full grown tree 22 kg CO<sub>2</sub> Therefore Carbon absorption capacity of 800 full-grown trees  $800 \times 22 \text{ kg CO}_2 = 17.6 \text{ tons of CO}_2$ .

The carbon absorption capacity of 400 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption  $400 \times 6.8 \text{ kg of CO}_2 = 2.72 \text{ tons of CO}_2$

There are approximately Hedge Plants 600 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO<sub>2</sub> where as some others absorb very low level of CO<sub>2</sub>. In the absence of a detailed scientific study, 200g of CO<sub>2</sub> absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is  $600 \times 200 \text{ g} = 0.12 \text{ tons of CO}_2$

The lawns on the campus have grass and cover a total area of 73807 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area  $73807 \times 365 \times 0.1 \text{ g CO}_2 = 2.69 \text{ tons CO}_2 \text{ per year}$ .

Grand total of carbon absorption capacity of the campus is 23.13 tons.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nellore

## GREEN INITIATIVES BY CAMPUS

- **Solid Waste Management**
  - Waste management is done by composting
  - There is ban on single use plastic and plastic crockery in the campus.
- **Renewable Energy**
  - The college is using solar lights for street lights.
- **Tree Plantation Drives**
  - Two plantation drives were carried out in the current year on the Campus.
  - Plants survival rate is around 87%
- **Air Pollution Reduction**
  - Personal Vehicles (Students) are not allowed in the campus

**Environment Committee Initiatives** – KCEA has an environment committee.

  
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Kshatriya College of Engg.  
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Dist: Nizamabad



# RECOMMENDATIONS

- Eco-friendly product purchase.
- College should increase the use of Sprinklers for gardening purposes
- Increase plantation drives in nearby villages, local bodies, NGOs, and Municipal Corporations.
- Establish an E-waste collection center on campus.

Green building guidelines for future expansion projects of the campus  
Note: Other details will be added later on.

  
Principal  
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Dist: Nizamabad



## AUDIT CERTIFICATE

PRESENTED TO

### **KSHATRIYA COLLEGE OF ENGINEERING** NIZAMABAD, TELANGANA.

Has been assess by MQCIUL for the comprehensive study of environmental impacts on institutional working framework to fulfil the requirements of

## **GREEN AUDIT**

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

Auditor Signature

Date of Audit: 22.06.2022



*Amil*

MARK CERTIFICATION CONSULTANTS, 8-1-402/A/5/2, TOLICHOWKI, HYDERABAD -500008, TELANGANA, INDIA.

Website: [WWW.MARKCERTIFICATION.COM](http://WWW.MARKCERTIFICATION.COM),

Email: [INFO@MARKCERTIFICATION.COM](mailto:INFO@MARKCERTIFICATION.COM)

*[Signature]*  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad



Kshatriya College of Engineering  
Nizamabad, Telangana.

Green Audit Report  
2022-23

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

# Green Audit Report Structure

INTRODUCTION

OVERVIEW OF COLLEGE

VISION AND MISSION

AUDIT PARTICIPANTS

EXECUTIVE SUMMARY

GREEN AUDIT ANALYSIS

1.1 GENERAL INFORMATION OF COLLEGE

1.2 WASTE MINIMIZATION AND RECYCLING

1.3 GREENING THE CAMPUS

1.4 WATER & WASTE WATER MANAGEMENT

1.5 ANIMAL WELFARE

1.6 CARBON FOOTPRINTS

INITIATIVES TAKEN BY COLLEGE

RECOMMENDATION

CONCLUSION

  
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Dist: Nizamabad

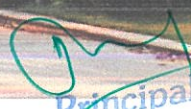
# Acknowledgement

We would like to thank the management of KCEA for assigning this important work of Green Audit. We appreciate the co-operation to the teams for completion of assessment.

We would also like to thank Dr. V. Vedprakash – Coordinator, IQAC, for her continuous support and guidance, without which the completion of the project will not be possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We are also thankful to the IQAC team last but not the least, we would like to thank Prof. Dr. R. K. Pandey (*Principal*), KCEA for giving us an opportunity to evaluate the environmental performance of the campus.



  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

# Disclaimer

MQCIUL Audit Team has prepared this report for **KCEA** based on input data submitted by the representatives of College complemented with the best judgment capacity of the expert team.


While all sensible care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

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CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

## Concept & Context

The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory from the academic year 2019–20 onwards that all Higher Educational Institutions should submit an annual Green, Environment and Energy Audit Report. Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In view of the NAAC circular regarding Green auditing, the College management decided to conduct an external environment assessment study by a competent external professional auditor. The green audit aims to examine environmental practices within and outside the College campus, which impact directly or indirectly on the atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of College/college environment. It was initiated with the intention of reviewing the efforts within the institutions whose exercises can cause risk to the health of inhabitants and the environment.

Through the green audit, a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment can be commenced. This audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Energy Management & Carbon Footprint etc. being implemented by the institution. The concepts, structure, objectives, methodology, tools of analysis, objectives of the audit are discussed below.

  
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Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

# Introduction

Now a days, the educational institutions are becoming more thoughtful towards the environmental aspects and as a result new and innovative concepts are being introduced to makethem sustainable and eco-friendly. To preserve the environment within the institution, a numberof viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the saving the energy, waste recycle, water consumption reduction, water harvesting and many more...

The activities carried out by the institution can also create adverse environmental impacts. Greenaudit is defined as an official inspection of the effects a College has on the environment. Green Audit is conducted to evaluate the actual scenario at the institution campus. Green audit can be a useful tool for a College/college to determine how and where they are using the most of the energy or water or resources; the College can then decide how to implement changes and make savings. It can also be used to determine the nature and volume of waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the application of mitigation measures is a win-win situation for all the institutions, the learners and the mother earth. It can also result in health awareness and can promote the environmental awareness, values and beliefs. It provides a better understanding to staff and students about the Green impact on institution. Green auditing also upholds financial savings through reduction of resource usage. It gives an opportunity to the students and teachers for the development of ownership of the personal and social responsibility. The audit process involves primary data collection, site walk through with the team of College/college including the assessment of policies, activities, documents and records.

  
Principal  
Kshatriya College of Engg.  
CHITRA ABU J.R. - 573224

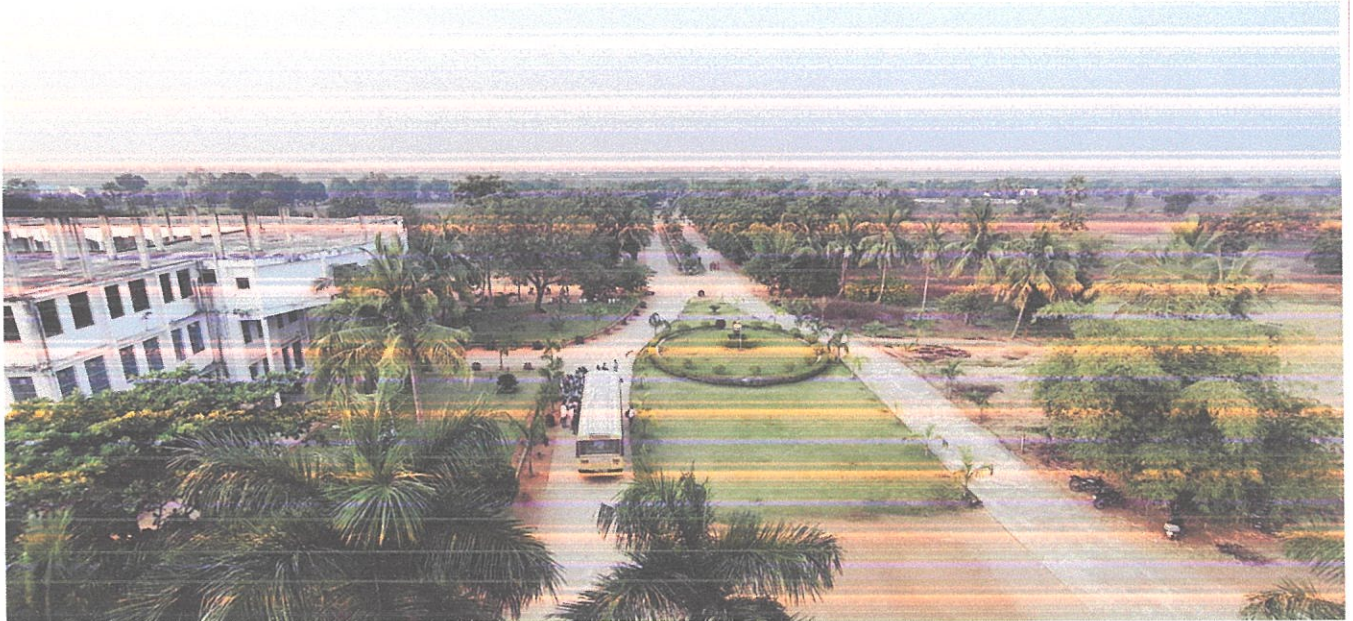


## Overview of the College

The educated is the one who has learned how to learn ...and change. "It is only through Right Education one can bring a desired and positive change in this society. Goyal Group of Industries envisaged the need of right education and so as an extension to the philosophy of, "SERVICE TO CUSTOMERS".

KCEA today is the name to reckon with for its Student Centric interventions to meet the objective of imparting Quality Engineering and Management Education aiming for the sole motto of making the leaders in chosen disciplines, ready to take on the challenges of world of work effectively and efficiently. The courseware addresses the educational and emotional needs of the students which in turn help them to advocate the cause of "Responsible Citizenship" not only at workplace but in all walks of life in the dynamic world order.

Kshatriya College of Engineering (KCEA) was established in the year 2001 under the aegis of Pandit Deendayal Upadhyay Educational Society. KCEA is located on a sprawling 40 acres campus. It is located on the serene NH-16 highway, 30 km away from Nizamabad district. KCEA is affiliated to the Jawaharlal Nehru Technology University Hyderabad. (JNTUH) offering graduate programs in engineering and postgraduate programs in the streams of Engineering, Business Administration, and Polytechnic.



  
Principal  
Kshatriya College of Engg.  
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Dist: Nizamabad

## Vision & Mission




### ***Our Vision:***

To be a center of excellence in technical education with research orientation and to develop human resources to serve the society and nation building.



### ***Our Mission:***

- To provide comprehensive technical education programmes in various disciplines and to contribute effectively to the profession and the society.
- Establishing centre of excellence in inter disciplinary areas which are important and relevant to industry and employment with scope for research.
- To inculcate human values and ethical practices to the graduates through co- curricular and extracurricular activities.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

# Audit Participants

On behalf of college:

1. M. Laxman.
2. A. Kailash.
3. M. Subhash.
4. Dr. C. Dayanand.
5. A. Kiran Kumar.

On behalf of Audit Team:

Mr. Anilkumar G Swami. (Lead Auditor – ISO 14001 & ISO 50001)

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

## Executive Summary

Green auditing is an essential step to identify and determine whether the institutions practices are sustainable and ecological. Traditionally, we were upright and efficient users of natural resources. But over the period of time, excessive usage of resources like water, electricity, petrol, etc. have become habitual for everyone especially, in urban and semi-urban areas. It is actually the right time to check if we (our process) are consuming more than required resources? Whether we are using resources sensibly?

Green audit standardizes all such practices and provides an efficient way to use natural resources. In the time of climate change and resource exhaustion it is necessary to re-check the processes and convert it in to green and sustainable. Green audit provides an approach for it. It also increases overall awareness among the folks working in institution towards the eco-friendly environment.

This is the fifth attempt to conduct green audit of this College campus for fulfilment of NAAC criteria. This Audit was mainly focused on greening indicators like consumption of energy in terms of electricity and

Fossil fuel, quality of soil, water usage, vegetation, waste management practices and carbon foot print of the Campus. Initially a questionnaire was shared to know about the existing resources of the campus and

Resource consumption pattern of the students and staffs in the College.

  
**Principal**  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - PIN 224  
Dist: Kamrup

# GREEN AUDIT - ANALYSIS

## 1.1 GENERAL INFORMATION

### 1. Does any Green Audit conducted earlier?

Conducted.

### 2. What is the total strength (people count) of the Institute?

#### Students

Male:497 Female:279 Total:794

#### Teachers (including guest faculty)


Male:58 Female:23 Total:81

#### Non-Teaching Staff

Male:20 Female:16 Total:36

#### Total Strength

Male:575 Female:336 Total:911

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

**3. What is the total number of working days of your campus in a year?**

252

**4. Where is the campus located?**

Adjacent to NH-64, chepur village, Armoor mandal, Nizamabad District, Telangana

**5. Which of the following are available in your institute?**

Garden area: Available  
Playground: Available  
Kitchen: Available  
Toilets: Available  
Garbage Or Waste Store Yard: Available  
Laboratory: Available  
Canteen: Available  
Hostel Facility  
Guest House: Available

**6. Which of the following are found near your institute?**

Municipal dump yard  
Garbage heap  
Public convenience  
Sewer line  
Stagnant water  
Open drainage  
Industry – (Mention the type)  
Bus / Railway station: At a distance 2-3 kms from campus  
Market / Shopping complex: At a distance 2-6 kms from campus


**1.2 WASTE MINIMIZATION AND RECYCLING**

**1. Does your institute generate any waste? If so, what are they?**

Yes  
Electronic waste

**2. What is the approximate amount of waste generated per day? (in KG approx.)**

Biodegradable waste -  
Non-biodegradable waste -

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

Hazardous Waste <

Others -

**3. How is the waste managed in the institute? By Composting, Recycling, Reusing, Others (specify)**

Others -

Waste Electronic material is sold out to the 3<sup>rd</sup> party for Recycling / Reusing

**4. Do you use recycled paper in institute?**

No

**5. How would you spread the message of recycling to others in the community?**

Our college NCS unit is organizing often the awareness programs in near the village Chepur, Perkit, Govindpet, Mamadipally, Lakkora etc to spread the message of recycling and its importance

**6. Can you achieve zero garbage in your institute? if yes, how?**

Continuous efforts are put to achieve zero garbage

**1.3 GREENING THE CAMPUS**

**1. Is there a garden in your institute?**

Yes

**2. Do students spend time in the garden?**

Yes

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 513 224  
Dist: Nellore

### 3. Total number of Plants in Campus?

Plant type with approx. count 1800

Full grown Trees 800

Small Trees 400

Hedge Plants 600

Grass Cover SQM 6856.96 m<sup>2</sup>

### 4. Is the College campus having any Horticulture Department? (if yes, give details)

No

### 5. How many Tree Plantation Drives organized by campus per annum?

A minimum 3 in a year

### 6. Is there any Plant Distribution Program for Students and Community?

YES

### 8. Is there any Plant Ownership Program?

NO

## 1.4 WATER AND WASTEWATER MANAGEMENT

### 1. List uses of water in your institute

Basic use of water in campus:

*Drinking* – 2000 liters

*Gardening* – 8000 liters

*Kitchen and Toilets* – 1400 liters

*Others* – 1000 liters

*Hostel* –

*Total = 12.4KL/Month (approximately)*

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 533 224  
Dist: West Godavari



**2. How does your institute store water? Are there any water saving techniques followed in your institute?**

There are total 17000 liters water storage of water and boosting within the College campus.

Sl. No	Storage Type	Capacity	Quantity	Total (in Litres)
1	OVER HEAD TANK	8000	1	8000
2	OVER HEAD TANK	2000	2	4000
3	OVER HEAD TANK			
4	OVER HEAD TANK			
5	UNDER GROUND TANK (Fire tank)	5000	1	5000
6	UNDER GROUND TANK			
7	UNDER GROUND HEAD TANK			
	<b>TOTAL STORAGE CAPACITY</b>	<b>15000</b>		<b>17000</b>

**Saving Techniques**

- Avoid overflow of water controlled valves are provided in water supply system.
- Close supervision for water supply system.
- Water Conservation awareness for new students
- Sprinklers usage for gardening and grass cover

**3. Locate the point of entry of water and point of exit of waste water in your institute.**

**Entry** – South-West or Open Area

**Exit**- North-East or Main Bulding

**4. Write down ways that could reduce the amount of water used in your institute**

**Basic ways:**

- Close the taps after usage
- Water Conservation awareness for new students
- Maintenance and monitoring of valves in supply system to avoid overflow/leakage and spillage
- In new block, push tap are installed to save water

*(Signature)*  
**Principal**  
 Kshatriya College of Engg.  
 CHEPUR-ARMOUR - 503 224  
 Dist: Nellore

## 1.5 ANIMAL WELFARE

1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

Dogs, Squirrels, Birds, Insects, Peacocks

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

No

## 1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO<sub>2</sub> emission from Electricity

(electricity used per year in kWh/1000) x 0.84  
= 48,768 kWh /1000x0.84  
= 40.97 ton

2. LPG/PNG used per year - CO<sub>2</sub> emission from LPG/PNG

(LPG/PNG used per year in KG) x 2.99  
x 2.99  
= x 2.99  
= ton

3. Diesel used per year CO<sub>2</sub> emission from HDS (Diesel)

(Diesel used per year in litres) x 2.68  
2400 x 2.68  
=6.432 ton

4. Transportation per year (car) CO<sub>2</sub> emission from transportation (Bus and Car)

Car - About 4.6 Tons CO<sub>2</sub> per year  
Bus - About 17 tons CO<sub>2</sub> per year

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 803 224  
Dist: Nalgonda

Total CO2 emission per year cumulative by electricity usage + diesel + bus and car transportation = (69 ton)

## CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 800 full grown trees and 400 semi grown trees of different species, on the campus spread over 28.36 acres.

Carbon absorption capacity of one full grown tree 22 kg CO2 Therefore Carbon absorption capacity of 800 full-grown trees  $800 \times 22 \text{ kg CO}_2 = 17.6 \text{ tons of CO}_2$ .

The carbon absorption capacity of 400 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption  $400 \times 6.8 \text{ kg of CO}_2 = 2.72 \text{ tons of CO}_2$

There are approximately Hedge Plants 600 of various species being raised in the gardens and grown in the areas where no buildings are built Carbon absorption of bush plants varies widely with their species. Certain bushes absorb very high level of CO2 where as some others absorb very low level of CO2. In the absence of a detailed scientific study, 200g of CO, absorption is taken per bush (in consultation with Environmental Science specialists). Based on this, total carbon absorption of bushes is  $600 \times 200 \text{ g} = 0.12 \text{ tons of CO}_2$

The lawns on the campus have grass and cover a total area of 73797 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area  $73797 \times 365 \times 0.1 \text{ g CO}_2 = 2.69 \text{ tons CO}_2 \text{ per year}$ .

Grand total of carbon absorption capacity of the campus is 23.13 tons.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 603 224  
Dist: Khammam

# GREEN INITIATIVES BY CAMPUS

---

## ➤ Solid Waste Management

- Waste management is done by composting.
- Recycling of used paper is carried out in paper recycling plant.
- There is ban on single use plastic and plastic crockery in the campus.

## ➤ Renewable Energy

- Solar power plant of capacity 60 KW is to be installed on building roof.
- College has signed an agreement with third party solar power provider for 0.06 MW.
- The college is using solar lights for street lights.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist. Nizamabad

➤ **Tree Plantation Drives**

- Five plantation drives were carried out in the current year in the Campus.
- Plants survival rate is around 85%

➤ **Air Pollution Reduction**

- Personal Vehicles (Students) are not allowed in the campus
- College is in process to pursue air quality monitoring by NABL approved lab.

**Environment Committee Initiatives** – KCEA has an environment committee.

## RECOMMENDATIONS

- Environmental parameters should be included in purchase policy to achieve a cradle to grave approach for sustainability.
- College should go for water balancing / audit for monitoring the use and wastage of water.
- Water Meter should be installed at every building of institute for monitoring of water consumption per capita.
- College should start drip irrigation to save water in campus
- College should increase the use of Sprinklers gardening purpose
- Flow rate of taps should be checked, it should not be more than 2.5 liters/minute.
- Increase plantation drives in nearby villages, local bodies, NGO and Municipal Corporation.
- Arrange training programmes on environmental management system and nature conservation for schools and local people.
- Establish an E-waste collection center in campus.

Green building guidelines for future expansion projects of the campus

Note: Other details will be added later on.

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: P. N. T. mab



# AUDIT CERTIFICATE

PRESENTED TO

## **KSHATRIYA COLLEGE OF ENGINEERING** NIZAMABAD, TELANGANA.

Has been assess by MQCIUL for the comprehensive study of environmental impacts on institutional working framework to fulfil the requirements of

### **GREEN AUDIT**

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

Auditor Signature

Date of Audit: 21.06.2023



*Amil*

MARK CERTIFICATION CONSULTANTS, 8-1-402/A/5/2, TOLICHOWKI, HYDERABAD -500008, TELANGANA, INDIA.

Website: [WWW.MARKCERTIFICATION.COM](http://WWW.MARKCERTIFICATION.COM)

Email: [INFO@MARKCERTIFICATION.COM](mailto:INFO@MARKCERTIFICATION.COM)

*[Signature]*  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

**2. How does your institute store water? Are there any water saving techniques followed in your institute?**

There are total 17000 liters water storage of water and boosting within the College campus.

Sl. No	Storage Type	Capacity	Quantity	Total (in Litres)
1	OVER HEAD TANK	8000	1	8000
2	OVER HEAD TANK	2000	2	4000
3	OVER HEAD TANK			
4	OVER HEAD TANK			
4	OVER HEAD TANK			
5	UNDER GROUND TANK (Fire tank)	5000	1	5000
6	UNDER GROUND TANK			
7	UNDER GROUND HEAD TANK			
	<b>TOTAL STORAGE CAPACITY</b>	<b>15000</b>		<b>17000</b>

**Saving Techniques**

- Avoid overflow of water controlled valves are provided in water supply system.
- Close supervision for water supply system.
- Water Conservation awareness for new students
- Sprinklers usage for gardening and grass cover

**3. Locate the point of entry of water and point of exit of waste water in your institute.**

Entry – South-West or Open Area

Exit- North-East or Main Bulding

**4. Write down ways that could reduce the amount of water used in your institute**

**Basic ways:**

- Close the taps after usage
- Water Conservation awareness for new students
- Maintenance and monitoring of valves in supply system to avoid overflow, leakage and spillage
- In new block, push tap are installed to save water

*(Handwritten Signature)*  
**Principal**  
**Kshatriya College of Engg.**  
**CHEER-ARM-DOOR - 503 224**  
 Dist. Jhansi, M.P.

## 1.5 ANIMAL WELFARE

1. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds, insects, etc.)

Dogs , Squirrels, Birds, Insects , Peacocks

2. Does your institute have a Biodiversity Program or a KARUNA CLUB?

No

## 1.6 CARBON FOOTPRINT - EMISSION & ABSORPTION

1. Electricity used per year - CO<sub>2</sub> emission from Electricity

(electricity used per year in kWh/1000) x 0.84  
= 48,768 kWh /1000x0.84  
= 40.97 ton

2. LPG/PNG used per year - CO<sub>2</sub> emission from LPG/PNG


(LPG/PNG used per year in KG) x 2.99  
x 2.99  
= x 2.99  
= ton

3. Diesel used per year CO<sub>2</sub> emission from HDS (Diesel)

(Diesel used per year in litres) x 2.68  
2400 x 2.68  
=6.432 ton

4. Transportation per year (car) CO<sub>2</sub> emission from transportation (Bus and Car)

Car - About 4.6 Tons r co<sub>2</sub> per year  
Bus – About 17 ons r co<sub>2</sub> per year

  
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Dist. Tiruvallur



Total CO<sub>2</sub> emission per year cumulative by electricity usage + diesel + bus and car transportation = (69 ton)

## CARBON ABSORPTION BY FLORA IN THE INSTITUTION

There are 800 full grown trees and 400 semi grown trees of different species, on the campus spread over 28.36 acres.


Carbon absorption capacity of one full grown tree 22 kg CO<sub>2</sub> Therefore Carbon absorption capacity of 800 full-grown trees  $800 \times 22 \text{ kg CO}_2 = 17.6 \text{ tons of CO}_2$ .

The carbon absorption capacity of 400 semi-grown trees is 50% of that of full-grown trees. Hence the carbon absorption  $400 \times 6.8 \text{ kg of CO}_2 = 2.72 \text{ tons of CO}_2$

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The lawns on the campus have grass and cover a total area of 73797 sq. ft. Carbon absorption capacity of a 10 sq. ft. area of lawn is 1 g per day Therefore, carbon absorption by lawn area  $73797 \times 365 \times 0.1 \text{ g CO}_2 = 2.69 \text{ tons CO}_2 \text{ per year}$ .

Grand total of carbon absorption capacity of the campus is 23.13 tons.

  
Principal  
Kshatriya College of Engg.  
CHETUR-APRABODR - 513 224  
Dist. Chittoor, Andhra Pradesh

# GREEN INITIATIVES BY CAMPUS

---

➤ **Solid Waste Management**

- Waste management is done by composting.
- Recycling of used paper is carried out in paper recycling plant.
- There is ban on single use plastic and plastic crockery in the campus.

➤ **Renewable Energy**

- Solar power plant of capacity 60 KW is to be installed on building roof.
- College has signed an agreement with third party solar power provider for 0.06 MW.
- The college is using solar lights for street lights.

  
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Kshatriya College of Engg.  
CHEPUR-ARMOOR - 603 224  
Dist: Nilgiris

- **Tree Plantation Drives**
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Note: Other details will be added later on.

  
**Principal**  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad



# AUDIT CERTIFICATE

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## **KSHATRIYA COLLEGE OF ENGINEERING** NIZAMABAD, TELANGANA.

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Auditor Signature

Date of Audit: 21.06.2023



*Amil*

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*[Signature]*  
Principal  
Kshatriya College of Engg  
CHE NIZAMABAD  
22nd



# KSHATRIYA COLLEGE OF ENGINEERING

NIZAMABAD, TELANGANA.

Has been assessed by BGS for the environmental impacts to fulfil the requirements of

## GREEN AUDIT

The initiatives carried out by the institution have been found to be satisfactory.

Auditor Signature

A handwritten signature in black ink, appearing to be 'Anil', written over a horizontal line.

Date of Audit: 24.06.2020

BGS Certification Services.  
Email: [bgscertification@gmail.com](mailto:bgscertification@gmail.com).  
Thane.

A handwritten signature in green ink, appearing to be 'OJ', written over a horizontal line.

Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad



Kshatriya College of Engineering  
Nizamabad, Telangana.

Green Audit Report  
2023-24

A handwritten signature in green ink, consisting of a stylized 'A' followed by a horizontal line.

Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist. Nizamabad

# Green Audit Report Structure

INTRODUCTION

OVERVIEW OF COLLEGE

VISION AND MISSION

AUDIT PARTICIPANTS

EXECUTIVE SUMMARY

GREEN AUDIT ANALYSIS

1.1 GENERAL INFORMATION OF COLLEGE

1.2 WASTE MINIMIZATION AND RECYCLING

1.3 GREENING THE CAMPUS

1.4 WATER & WASTE WATER MANAGEMENT

1.5 ANIMAL WELFARE

1.6 CARBON FOOTPRINTS

INITIATIVES TAKEN BY COLLEGE

RECOMMENDATION

CONCLUSION



Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad

# Acknowledgement

We would like to thank the management of KCEA for assigning this important work of Green Audit. We appreciate the co-operation to the teams for completion of assessment.

We would also like to thank Dr. V. Vedprakash – Coordinator, IQAC, for her continuous support and guidance, without which the completion of the project will not be possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We are also thankful to the IQAC team last but not the least, we would like to thank Prof. Dr. R. K. Pandey (*Principal*), KCEA for giving us an opportunity to evaluate the environmental performance of the campus.



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Kshatriya College of Engg.  
603 224  
ARMOOR  
Tamil Nadu



# Disclaimer

MQCIUL Audit Team has prepared this report for **KCEA** based on input data submitted by the representatives of College complemented with the best judgment capacity of the expert team.


While all sensible care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

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Dist: Nizamabad

## Concept & Context

The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory from the academic year 2019–20 onwards that all Higher Educational Institutions should submit an annual Green, Environment and Energy Audit Report. Green Audit is assigned to the Criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India that declares the institutions as Grade A, Grade B or Grade C according to the scores assigned at the time of accreditation. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through Carbon Footprint reduction measures.

In view of the NAAC circular regarding Green auditing, the College management decided to conduct an external environment assessment study by a competent external professional auditor. The green audit aims to examine environmental practices within and outside the College campus, which impact directly or indirectly on the atmosphere. Green audit can be defined as systematic identification, quantification, recording, reporting and analysis of components of College/college environment. It was initiated with the intention of reviewing the efforts within the institutions whose exercises can cause risk to the health of inhabitants and the environment.

Through the green audit, a direction as how to improve the structure of environment and inclusion of several factors that can protect the environment can be commenced. This audit focuses on the Green Campus, Waste Management, Water Management, Air Pollution, Energy Management & Carbon Footprint etc. being implemented by the institution. The concepts, structure, objectives, methodology, tools of analysis, objectives of the audit are discussed below.

  
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Dist: Nizamabad

# Introduction

Now a days, the educational institutions are becoming more thoughtful towards the environmental aspects and as a result new and innovative concepts are being introduced to makethem sustainable and eco-friendly. To preserve the environment within the institution, a numberof viewpoints are applied by the several educational institutes to solve their environmental problems such as promotion of the saving the energy, waste recycle, water consumption reduction, water harvesting and many more...

The activities carried out by the institution can also create adverse environmental impacts. Greenaudit is defined as an official inspection of the effects a College has on the environment. Green Audit is conducted to evaluate the actual scenario at the institution campus. Green audit can be a useful tool for a College/college to determine how and where they are using the most of the energy or water or resources; the College can then decide how to implement changes and make savings. It can also be used to determine the nature and volume of waste, which can be used for a recycling project or to improve waste minimization plan.

Green auditing and the application of mitigation measures is a win-win situation for all the institutions, the learners and the mother earth. It can also result in health awareness and can promote the environmental awareness, values and beliefs. It provides a better understanding to staff and students about the Green impact on institution. Green auditing also upholds financial savings through reduction of resource usage. It gives an opportunity to the students and teachers for the development of ownership of the personal and social responsibility. The audit process involves primary data collection, site walk through with the team of College/college including the assessment of policies, activities, documents and records.



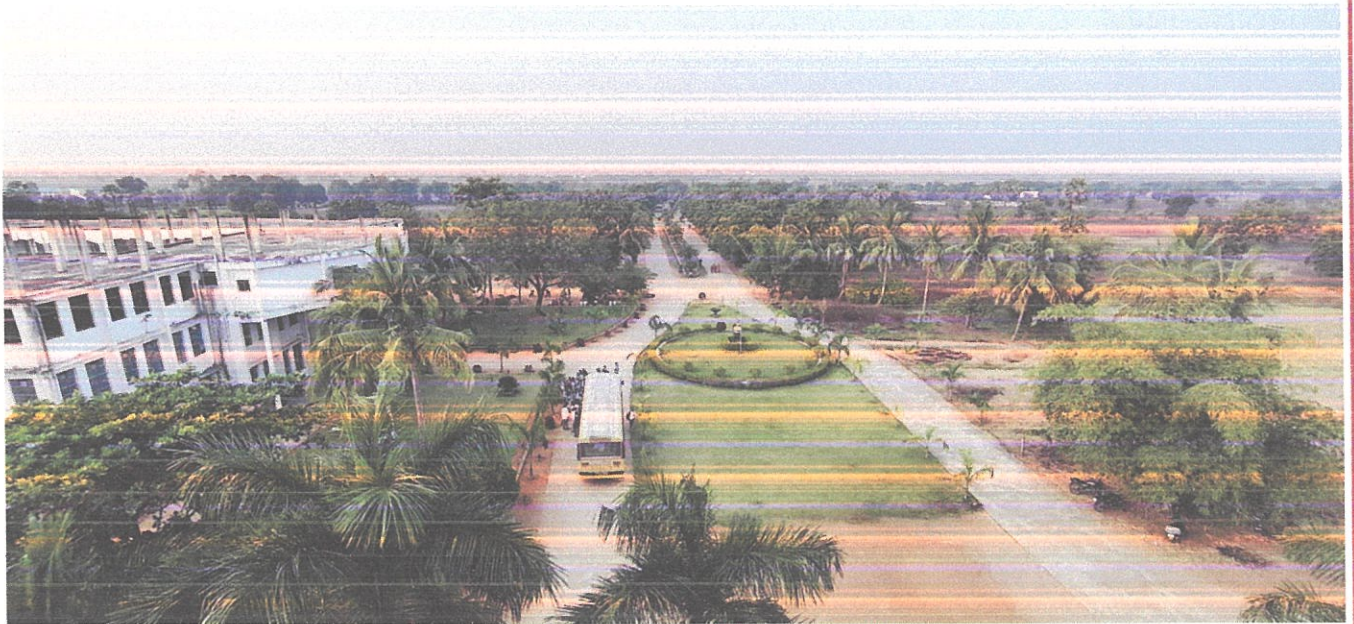
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Kshatriya College of Engg.  
CHEPUR-ARMOOR - 603 224  
Dist: Nilgiris

# Overview of the College

The educated is the one who has learned how to learn ...and change. "It is only through Right Education one can bring a desired and positive change in this society. Goyal Group of Industries envisaged the need of right education and so as an extension to the philosophy of, "SERVICE TO CUSTOMERS".

KCEA today is the name to reckon with for its Student Centric interventions to meet the objective of imparting Quality Engineering and Management Education aiming for the sole motto of making the leaders in chosen disciplines, ready to take on the challenges of world of work effectively and efficiently. The courseware addresses the educational and emotional needs of the students which in turn help them to advocate the cause of "Responsible Citizenship" not only at workplace but in all walks of life in the dynamic world order.

Kshatriya College of Engineering (KCEA) was established in the year 2001 under the aegis of Pandit Deendayal Upadhyay Educational Society. KCEA is located on a sprawling 40 acres campus. It is located on the serene NH-16 highway, 30 km away from Nizamabad district. KCEA is affiliated to the Jawaharlal Nehru Technology University Hyderabad. (JNTUH) offering graduate programs in engineering and postgraduate programs in the streams of Engineering, Business Administration, and Polytechnic.



  
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## Vision & Mission



### ***Our Vision:***

To be a center of excellence in technical education with research orientation and to develop human resources to serve the society and nation building.



### ***Our Mission:***

- To provide comprehensive technical education programmes in various disciplines and to contribute effectively to the profession and the society.
- Establishing centre of excellence in inter disciplinary areas which are important and relevant to industry and employment with scope for research.
- To inculcate human values and ethical practices to the graduates through co- curricular and extracurricular activities.

A handwritten signature in green ink, appearing to be 'A. S. S.', written over a blue horizontal line.

Principal  
Kshatriya College of Engg.  
CHEFUR-ARMOOR - 503 224  
Dist: Miramab...

## Audit Participants

On behalf of college:

1. M. Laxman.
2. A. Kailash.
3. M. Subhash.
4. Dr. C. Dayanand.
5. A. Kiran Kumar.

On behalf of Audit Team:

Mr. Anilkumar G Swami. (Lead Auditor – ISO 14001 & ISO 50001)

  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMDOOR - 503 224  
Dist: Nellore

## Executive Summary


Green auditing is an essential step to identify and determine whether the institutions practices are sustainable and ecological. Traditionally, we were upright and efficient users of natural resources. But over the period of time, excessive usage of resources like water, electricity, petrol, etc. have become habitual for everyone especially, in urban and semi-urban areas. It is actually the right time to check if we (our process) are consuming more than required resources? Whether we are using resources sensibly?

Green audit standardizes all such practices and provides an efficient way to use natural resources. In the time of climate change and resource exhaustion it is necessary to re-check the processes and convert it in to green and sustainable. Green audit provides an approach for it. It also increases overall awareness among the folks working in institution towards the eco-friendly environment.

This is the fifth attempt to conduct green audit of this College campus for fulfilment of NAAC criteria. This Audit was mainly focused on greening indicators like consumption of energy in terms of electricity and

Fossil fuel, quality of soil, water usage, vegetation, waste management practices and carbon foot print of the Campus. Initially a questionnaire was shared to know about the existing resources of the campus and

Resource consumption pattern of the students and staffs in the College.

  
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Dist: Mahabubnagar

# GREEN AUDIT - ANALYSIS

## 1.1 GENERAL INFORMATION

### 1. Does any Green Audit conducted earlier?

Conducted.

### 2. What is the total strength (people count) of the Institute?

#### Students

Male:497 Female:279 Total:794

#### Teachers (including guest faculty)

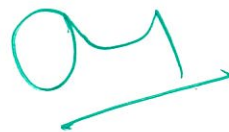
Male:58 Female:23 Total:81

#### Non-Teaching Staff

Male:20 Female:16 Total:36

#### Total Strength

Male:575 Female:336 Total:911



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**3. What is the total number of working days of your campus in a year?**

252

**4. Where is the campus located?**

Adjacent to NH-64, chepur village, Armoor mandal, Nizamabad District, Telangana

**5. Which of the following are available in your institute?**

Garden area: Available  
Playground: Available  
Kitchen: Available  
Toilets: Available  
Garbage Or Waste Store Yard: Available  
Laboratory: Available  
Canteen: Available  
Hostel Facility  
Guest House: Available

**6. Which of the following are found near your institute?**

Municipal dump yard  
Garbage heap  
Public convenience  
Sewer line  
Stagnant water  
Open drainage  
Industry – (Mention the type)  
Bus / Railway station: At a distance 2-3 kms from campus  
Market / Shopping complex: At a distance 2-6 kms from campus


**1.2 WASTE MINIMIZATION AND RECYCLING**

**1. Does your institute generate any waste? If so, what are they?**

Yes  
Electronic waste

**2. What is the approximate amount of waste generated per day? (in KG approx.)**

Biodegradable waste -  
Non-biodegradable waste -

  
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Hazardous Waste <  
Others -

**3. How is the waste managed in the institute? By Composting, Recycling, Reusing, Others (specify)**

Others -

Waste Electronic material is sold out to the 3<sup>rd</sup> party for Recycling / Reusing

**4. Do you use recycled paper in institute?**

No

**5. How would you spread the message of recycling to others in the community?**

Our college NCS unit is organizing often the awareness programs in near the village Chepur, Perkit, Govindpet, Mamadipally, Lakkora etc to spread the message of recycling and its importance

**6. Can you achieve zero garbage in your institute? if yes, how?**

Continuous efforts are put to achieve zero garbage

**1.3 GREENING THE CAMPUS**

**1. Is there a garden in your institute?**

Yes

**2. Do students spend time in the garden?**

Yes

  
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Kshatriya College of Engg.  
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Dist: Khammam

### 3. Total number of Plants in Campus?

Plant type with approx. count 1800

Full grown Trees 800

Small Trees 400

Hedge Plants 600

Grass Cover SQM 6856.96 m<sup>2</sup>

### 4. Is the College campus having any Horticulture Department? (If yes, give details)

No

### 5. How many Tree Plantation Drives organized by campus per annum?

A minimum 3 in a year

### 6. Is there any Plant Distribution Program for Students and Community?

YES

### 8. Is there any Plant Ownership Program?

NO

## 1.4 WATER AND WASTEWATER MANAGEMENT

### 1. List uses of water in your institute

Basic use of water in campus:

Drinking – 2000 liters

Gardening – 8000 liters

Kitchen and Toilets – 1400 liters

Others – 1000 liters

Hostel –

Total = 12.4KL/Month (approximately)

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CHEPUR-ARMOOR - 503 224  
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## 2. How does your institute store water? Are there any water saving techniques followed in your institute?

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**Principal**  
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Kshatriya College of Engg.  
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Principal  
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CHEPUR-ARMOOR - 503 224  
Dist: Nellore, Andhra Pradesh

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- College has signed an agreement with third party solar power provider for 0.06 MW.
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Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 603 224  
Dist: Tirumala

➤ **Tree Plantation Drives**

- Five plantation drives were carried out in the current year in the Campus.
- Plants survival rate is around 85%

➤ **Air Pollution Reduction**

- Personal Vehicles (Students) are not allowed in the campus
- College is in process to pursue air quality monitoring by NABL approved lab.

**Environment Committee Initiatives** – KCEA has an environment committee.

## RECOMMENDATIONS

- Environmental parameters should be included in purchase policy to achieve a cradle to grave approach for sustainability.
- College should go for water balancing / audit for monitoring the use and wastage of water.
- Water Meter should be installed at every building of institute for monitoring of water consumption per capita.
- College should start drip irrigation to save water in campus
- College should increase the use of Sprinklers gardening purpose
- Flow rate of taps should be checked, it should not be more than 2.5 litres/minute.
- Increase plantation drives in nearby villages, local bodies, NGO and Municipal Corporation.
- Arrange training programmes on environmental management system and nature conservation for schools and local people.
- Establish an E-waste collection center in campus.

Green building guidelines for future expansion projects of the campus

Note: Other details will be added later on.



**Principal**  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 513 224  
Dist: Nizamabad





# KSHATRIYA COLLEGE OF ENGINEERING


(Affiliated to JNTU Hyderabad & Approved by AICTE)

7.1.3: The Institution regularly undertakes Quality audits on the environment and energy.

Certification by the Audit Agency

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**PRINCIPAL**  
Kshatriya College of Engg  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad.



# KSHATRIYA COLLEGE OF ENGINEERING

NIZAMABAD, TELANGANA.

Has been assessed by BGS for the environmental impacts to fulfil the requirements of

## GREEN AUDIT

The initiatives carried out by the institution have been found to be satisfactory.

Auditor Signature

A handwritten signature in black ink, appearing to read 'Anil', written over a horizontal line.

Date of Audit: 24.06.2020

BGS Certification Services.  
Email: [bgscertification@gmail.com](mailto:bgscertification@gmail.com).  
Thane.

A handwritten signature in green ink, appearing to be a stylized 'A' or similar character, written over a rectangular stamp.

Principal  
Kshatriya College of Engg.  
CHEPUR-ARJUNNOR - 503 224  
Dist: Nizamabad



## AUDIT CERTIFICATE

PRESENTED TO

### **KSHATRIYA COLLEGE OF ENGINEERING** NIZAMABAD, TELANGANA.

Has been assess by MQCIUL for the comprehensive study of environmental impacts on institutional working framework to fulfil the requirements of

## **GREEN AUDIT**

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

Auditor Signature

Date of Audit: 23.06.2021



*Amil*

MARK CERTIFICATION CONSULTANTS, 8-1-402/A/5/2, TOLICHOWKI, HYDERABAD -500008, TELANGANA, INDIA.

Website: [WWW.MARKCERTIFICATION.COM](http://WWW.MARKCERTIFICATION.COM),

Email: [INFO@MARKCERTIFICATION.COM](mailto:INFO@MARKCERTIFICATION.COM)

*[Signature]*

Principal  
Kshatriya College of Engg.  
CHEPUR-ARMGUR - 503 224  
Dist: Nizamabad



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Has been assess by MQCIUL for the comprehensive study of environmental impacts on institutional working framework to fulfil the requirements of

### **GREEN AUDIT**

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

Auditor Signature

Date of Audit: 22.06.2022



*Amil*

MARK CERTIFICATION CONSULTANTS, 8-1-402/A/5/2, TOLICHOWKI, HYDERABAD -500008, TELANGANA, INDIA.

Website: [WWW.MARKCERTIFICATION.COM](http://WWW.MARKCERTIFICATION.COM),

Email: [INFO@MARKCERTIFICATION.COM](mailto:INFO@MARKCERTIFICATION.COM)

*[Signature]*  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad



# AUDIT CERTIFICATE

PRESENTED TO

## **KSHATRIYA COLLEGE OF ENGINEERING** NIZAMABAD, TELANGANA.

Has been assess by MQCIUL for the comprehensive study of environmental impacts on institutional working framework to fulfil the requirements of

### **GREEN AUDIT**

The green initiatives carried out by the institution have been verified on the report submitted and was found to be satisfactory.

The efforts taken by the management and the faculty towards environment and sustainability are appreciated and noteworthy.

Auditor Signature

Date of Audit: 21.06.2023



*Amil*

MARK CERTIFICATION CONSULTANTS, 8-1-402/A/5/2, TOLICHOWKI, HYDERABAD -500008, TELANGANA, INDIA.

Website: [WWW.MARKCERTIFICATION.COM](http://WWW.MARKCERTIFICATION.COM)

Email: [INFO@MARKCERTIFICATION.COM](mailto:INFO@MARKCERTIFICATION.COM)

*Principal*  
Principal  
Kshatriya College of Engg.  
CHEPUR-ARMOOR - 503 224  
Dist: Nizamabad