



KONGU POLYTECHNIC COLLEGE PERUNDURAI, ERODE – 638 052

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Introduction

Kongu Polytechnic College is one of the institutions run by Kongu Vellalar Institute of Technology Trust (KVITT), Erode, offering 10 different Diploma courses:

1. Civil Engineering
2. Mechanical Engineering
3. Electrical and Electronics Engineering
4. Electronics and Communication Engineering
5. Automobile Engineering
6. Chemical Engineering
7. Information Technology
8. Computer Science
9. Robotics(Electronics)
10. Instrumentation and Controls Engineering



It is certified with ISO 9001:2000 quality management system and also accredited by NBA committee.

Our ENERGY VISION

Energy Independence by 2010

Energy Mission

- Free from LPG
- Free from Grid
- Free from fossil fuels like Petrol, Diesel, etc.,

In order to achieve our vision, the steps taken by us are listed and linked in the front page. As a small institution we are doing our level best to save our planet from global warnings.

We are ready to provide any details on this regard and also happy in touch with you.

As you are doing well in this area, we are sending these details to have a tie up and move ahead to reach our ultimate aim.

For more details and information, please contact

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ENVIRONMENT EDUCATIONAL MANAGEMENT

The rapid development of the Information Technology makes the world as a small village. Our Exploitation of the natural resources and polluting the natural environment had made people talk about – Environment. The use of fossil fuels like coal, petrol pollute the atmosphere. The household waste, Industrial waste and vehicle emission of polluted gases are the other factors which adds to the environmental problems. We are moving towards a Non-return point. Hence taking necessary steps to reduce the above environmental pollution becomes the duty for each and everyone in this world.

Creating awareness on natural sickness and making interest on environment cleanliness to the young generation is one of the easiest solutions for future environmental problems. Hence we decided to launch the following activities with their participation.

Some of the activities are

- i. Establishment of Non Conventional Energy Park
- ii. Formation of Green Mech club
- iii. Awarding Project works related to Environment friendly systems

i. Non Conventional Energy Park

We can enrich our fuel requirements by using the environment friendly, not ended, Non conventional energy sources such as Solar Energy, Wind Energy, Bio-Mass energy, Tidal energy etc., We can meet our requirements at an environment friendly way for life time.

In order to create awareness about such Non Conventional Energy Sources among the student community and in young generations, we established a Demonstration Park on Non-Conventional energy sources named “Energy Park” in collaboration with Ministry of Non-Conventional Energy Sources, India. The total cost of this project is Rs. 6,00,000/-



Equipments installed in this Park are

1. Solar motor
2. Solar Street Light
3. Solar Radio
4. Solar Tube light
5. Solar Lanther light
6. Solar Water Heater
7. Solar Still
8. Solar Drier
9. Solar Cooker
10. Bio – Gas plant model

Benefits

- Awareness among student society on Non conventional energy sources and equipments
- Developing Project ideas among Technical students
- To create Awareness through this park by conducting exhibition particularly on focusing rural people.

ii. Green Mech Club

In our college, we have formed one “Green – Mech Club” with our polytechnic students to implement some activities related to development of Environment.



Some of the activities through our club are

- ❖ Special Lectures
- ❖ Exhibition
- ❖ Tree plantation
- ❖ Sanitation – latrine building
- ❖ Awareness through advertisement, Sign Boards etc.,

iii. Project Works on Environment

As our college is a technical oriented institution with 10 different departments, there is lot of scope for the students to select projects in their field with relevant to environmental friendly. We are guiding and helping them in this way to teach the environmental management.

WASTE LAND DEVELOPMENT

Now a days, the world, specifically our state Government is giving much more importance for developments of waste lands. Accordingly the Government support and helps those who are doing development works on waste land say by seeding Non seasonal plants like Jatropha or planting some other trees. This results not only the development of economy at rural areas but also lot of opportunities for employment.

Based on this, our college has selected 40 acres of its own land for waste land development and started planting energy trees under the banner “Green Plantation”. The works are progressing well.

In this 40 acres, 15 acres are used for Jatropha plantation and remaining 25 acre for suvapul. For this project a borewell is established at a cost of Rs. 2.0 Lakh and is provided with a submersible motor and over head tank at a cost of Rs. 2.0 Lakh.



Benefits

Jatropha

We are going to extract 6000 litres per year of Bio diesel from the 15,000 kilogram Jatropha seeds getting from the 15 acre Jatropha plants. The bio-diesel will be utilized for our college vehicles. With this and other Non Conventional Energy sources projects at our college we are aiming to be energy independent. Apart from this, the slurry, in the process of bio-diesel from Jatropha, called Jatropha press cake will be used to produce Bio-gas, which is a major content of Methane. The gas will be used in our hostel mess for cooking purpose.



Suvapul

We can get 375 tons of suvapul trees at the rate of 15 tonne/ acre from the 25 acres. These trees are utilized in our 100 KWe Bio Mass Gasifier Poer generation system as a raw material to produce a clean, pollution free green power generation.



Other Benefits

- ✓ Waste Land Development
- ✓ Nearly 30 manpower employment opportunities
- ✓ Production of electricity in an Environment friendly manner
- ✓ Self dependency
- ✓ Development of good atmospheric conditions

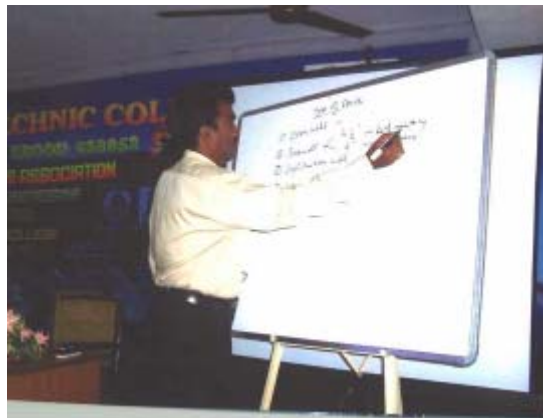
NATURAL DISASTER MANAGEMENT

The unpredicted natural disasters like Earth quake, Cyclone, Flood, etc., are not only affecting a small areas but whole the world. Recent experiences forced us to understand its seriousness.

As nature is not in our control, we have to protect ourselves from the risks of natural disasters.

Creating awareness about safety measures during the natural disasters is the first footstep of natural disaster management.

On this basis, we are arranging various awareness camps special lectures, classes, etc., on Natural disaster Management to school children and college students.



Benefits

- Awareness among the young generation
- Risk Management

NATURE HUMAN RELATION

The basic and main reason for today's environmental pollution is the misunderstanding the qualities of nature and also not living in association with the nature by the human being.

Hence it is important to make them to understand the nature and come forward to live along with nature.

Based on this principle, in our college we are arranging "Eco-Tour" to our student and staff members in order to make them to love nature. And also, through tree plantation we manipulate the real interest on environment.



SOCIAL WELFARE ACTIVITIES

ABOLITION OF PLASTICS IN ENVIRONMENT

In order to avoid the mixing of plastic in environment, our students are having regular camps on removal of such plastic items.

HERBAL PLANTATION

In order to promote natural medicine, our students have planted planting herbal plants at Kayithamalai (Mount area) near Uthukuli.



WASTE MANAGEMENT

Due to Globalization, waste management is a tusk challenge against our human society. The environment loss its own qualities due to wastes day by day at speedy rate. These wastes are joined together with us when disposing after using them. When we approach them with a concept of "Waste to Wealth", we can resolve the problems due to wastes and also can get new products at lower or no cost.

Based on this, our college involved in waste management by three ways as

1. Solid Waste Management
2. Liquid Waste Management
3. Gaseous Waste Management

1. SOLID WASTE MANAGEMENT

The solid wastes from our college hostel – Mess wastes, Vegetable wastes and human excreta from hostel toilets – are scavenged in a safe way by "Bio-Gas Plant"(based on Human excreta and Kitchen wastes). With this plant we scavenge at a rate of 300 Kg/day.

And also we are producing 25 m³ of Methane gas (Equivalent to 17 Kg of LPG) utilized for our kitchen purpose. The Total cost incurred for this project was Rs. 4,50,000/- with Tamilnadu Government subsidy of Rs. 1,50,000/-



2. LIQUID WASTE MANAGEMENT

Our Kongu Polytechnic College also put our dedicated interest on water management through the following ways

- I. Rain water harvesting tanks
- II. Rain water Dam
- III. Recycling of waste water
- IV. Drip irrigation
- V. Sprinkler irrigation

I. Rain Water Harvesting Tanks

We had built rain water harvesting tanks to save the rain water, which are collected from our college and hostel buildings. Really, our ground water level is improving significantly.

As it is crucial and meaningful work, we extend our works to our college surrounding villages also. We built rain water conservation tanks at our own cost in the following village.

- a. Kuttapalayam at cost of Rs. 50,000 /-
- b. Uthukuli at cost of Rs. 10,0000 /-



II. Rain Water Conservation Check Dam

In order to conserve rain water in the land markings, we built Cannels and collect the water and save it in a check dam. Doing so, the open well which is in our college premises, water level maintained in favorable level constantly throughout the year even in summer days also. The total cost spent for this project was Rs.1,00,0000 /-



III. Waste Water Treatment and Recycling

According to waste management, there are 4Rs which means

1. Reduce
2. Recycle
3. Reuse
4. Refuse

When the used waste water gets into the environment, problem arises in the form of mosquito tortures, odor, land pollution etc. Hence avoiding polluted water into ground is a basic thing to keep the environment in a safe way.

Hence, we **Recycle**, the waste water from our hostel mess and bathrooms with a water treatment plant at cost of Rs.8,00,000 /- in our Kongu Polytechnic College. The treated water is **Reused** for Green band of our college to various trees and plants through water minimizing (**Reduce**) plans like Drip Irrigation, Sprinkler irrigation etc. for 10 acres of land. We approximately purify 2.5 Laks of waste water per day.



IV. Drip Irrigation

We are using the treated waste water to the plants and trees in our college premises using drip irrigation method to maintain the green band and pleasure atmosphere.



V. Sprinkler Irrigation

The green band of our college grounds with grass is maintained with sprinkler irrigation of the treated waste water.



3. GASEOUS WASTE MANAGEMENT

The main factors causes the atmosphere to pollute are

1. Smoke from Industries
2. Smoke from vehicles
3. Wastes due to human and animals

We can protect the above pollutants, by avoiding the production and using the wastes for a newer processes.

On this basis our college is doing the following activities in a remarkable way.

- i. Bio gas plant based on Human excreta
- ii. Smoke testing equipments
- iii. Tree plantation
- iv. Bio Mass Gasifier unit
- v. Carbon Trading

i. Bio Gas Plant

This 25m³ capacity plant is working with Human excreta and mess wastes as raw materials. We are getting 25m³ of Methane gas which is utilized for cooking purpose. This green house gas is protected in mixing with environment and utilized for our regular purpose. Hence, atmosphere is safe from pollution.

ii. Smoke Testing Equipments

We are having vehicle smoke tester in our Automobile Laboratory, through which vehicles are checked for emission of gases like CO, CO₂ etc., If the levels goes beyond the prescribed levels, recommendations are given for improving it.

iii. Tree Plantation

In order to promote the trend against afforestation, we planting trees in the following levels

- ✓ Mango Trees in a 2 ½ acres
- ✓ Tree plantation by our college NSS volunteers
- ✓ 1000 neem trees at SIPCOT area
- ✓ 100 Neem trees at Semmandampalayam
- ✓ 150 trees at Govt. Higher Secondary School, Uthukuli



iv. Bio – Mass Gasifier Unit

In India, 50% of electricity produced using coal. But this process emits lot of pollutants to atmosphere. Bio-Mass gasifier unit is used to produce electricity without affecting the environment.

On this basis, a 100 KWe capacity Bio-Mass Gasifier unit is installed in our college produces electricity by using bio wastes as raw material. The bio wastes are getting from our waste land development project.



v. Carbon Trading

As per the resolutions of Environmental meet in 1999 at Koyotto, Japan, each country in the world should decrease the emitting level of CO₂ to 10 % from present level.

If it is unable to reduce the emission of CO₂, that countries can tie up with the countries those are effectively launching the environmental friendly projects. They can borrow the Carbon Credit by equal amount of cost.

On this basis, Ms. Malgorzata Sieuice from Europe visited our Polytechnic College. The Carbon Trading is in process.

Conclusion

In sum, we have realized that it is not only the Ozone layer but the entire atmosphere that needs protection. What we have done and what we are going to do are only a few measures in this direction but in the long run, it will entail collective cooperation in this noble task. Thanks to the effort taken for the preservation of the environment, the earth will continue to remain, in our opinion, a safer place to live in the future. Let us all be up and going about doing our part to reserve our mother – our green planet.