



# SWAMI VIVEKANAND SUBHARTI UNIVERSITY

(Established under U.P. Govt. Act no. 29 of 2008 and approved under section 2(f) of UGC Act 1956)

## Distinctiveness of University

### **Title: Improving Environment Friendly Ecosystem by Adopting Newer Innovative Strategies'**

We all have faced a very difficult situation in the past one year with the COVID pandemic, wherein Mother Nature has taught us that if we don't give her the love and respect she deserves, then like a strict mother she can teach us in many other ways.

**Vision:** Swami Vivekanand Subharti University always aims to protect and improve the environment as a valuable asset to provide a clean, healthy and well protected environment to all employees and students. To achieve this, our university has projected a vision to engage the youth in environment protection which would create direct and indirect impact on changing youth behavior and attitude towards sustainable conservation of the existing natural resources.

**Priority:** At Swami Vivekanand Subharti University we have always been vigilant towards our duties towards Mother Nature. We have started numerous projects towards a 'Greener India' in alignment with 'National Objectives' and initiated many steps to 'awaken' our youth towards their duty towards the environment.

The 'Subhartian' student is encouraged to make their homes, institutes environment friendly by adopting environmentally friendly practices, recycling of different materials as well as preserving resources such as water and electricity.

The students are encouraged to ditch paper use & adopt digital platform, save water & electricity, buy recyclable bags, recycle books and buy eco-friendly supplies and so on.

**Thrust Aspects:** The following initiatives have been taken up for improvement of the surrounding environment.

1. Paperless Reforms.
2. Battery operated Vehicles.
3. Solar Power
4. Sensor based lights
5. Reclaiming the waste
6. Segregate and recycle
7. Awareness, Encouragement and Involvement

**1) Paperless Reforms:**

- a. 'Around 15 billion trees are cut down each year to make paper'. With the aim to make the university on paperless functioning system our in-house IT cell has made several modules of ERP such that most of the functioning of the university happens from, 'computer to computer'.
- b. 'KIOSKS' are installed from which the students can check their profiles and are encouraged to make online entries, online queries, online payments etc. Soon we are planning to launch a '**Subharti App**' to further strengthen our initiative.
- c. There are places where paper is needed. Then use of rough or single side used paper is encouraged. Students are encouraged to take prints on both sides to utilize every bit of the paper they are using.



STUDENT USING THE 'KIOSK'

## 2) Battery Operated Vehicles:

Another contribution towards environment protection is to minimize the pollution created as a result of several activities. In the same league we encourage the use of battery-operated vehicles. The university is using battery operated rickshaws, scooters, and cart for in campus transport. Our students are also encouraged to build and use the same.

a. **E Cycle:** An E-cycle made by our student of Subharti Institute of Engineering is successfully made and is even in production. The e cycle assists the rider's pedal-power, and uses rechargeable batteries. It has the top speed of 25 km/h. E-bikes are acting as a source of exercise and also allows the rider to take short breaks from pedaling. The University intends to make this as a part of cardiac rehabilitation programmes, as a study has shown that it can reduce deaths in people with coronary heart disease by around 27%.

## सुभारती इंजीनियरिंग कॉलेज ने बनाई ई-साइकिल

सुभारती इंस्टीट्यूट ऑफ टेक्नोलॉजी एंड इंजीनियरिंग कॉलेज में हुआ इनोवेटिव प्रोजेक्ट का उद्घाटन

**शानदार**

प्रकृति को संरक्षण देना  
मुख्य उद्देश्य

प्रभात ब्यूरो

**भेदा।** स्वामी विवेकानंद सुभारती विश्वविद्यालय के सुभारती इंस्टीट्यूट ऑफ टेक्नोलॉजी एंड इंजीनियरिंग में ई-बाइसाइकिल एवं लिथियम आयन फास्ट से बनी बैटरी का उद्घाटन किया गया। कुलपति विमोदियर डा. वीपी सिंह एवं मुख्य कार्यकारी अधिकारी डा. शल्य राज ने इनोवेटिव प्रोजेक्ट ई-बाइसाइकिल एवं लिथियम आयन फास्ट से बनी बैटरी का फीता काट कर उद्घाटन किया।

मैकेनिकल इंजीनियरिंग डिपार्टमेंट द्वारा बनाई गई ई-बाइसाइकिल किफायती दरों पे चलने वाले यातायात को संभव बनाती हैं और लिथियम आयन फास्ट से बनी बैटरी के बदैलत महज डेढ़ ग्रुनिट बिजली में 1 घंटे में चार्ज हो जाती हैं और 100 किलोग्राम भार के साथ 120 किलोमीटर की दूरी तय करने में सक्षम हैं। वहीं इलेक्ट्रॉनिक्स एंड



कम्प्यूटेशन इंजीनियरिंग सुभारती विश्वविद्यालय प्रकृति का संरक्षण करने हेतु हमेशा से प्रतिबद्ध हैं और विश्वविद्यालय का यहाँ प्रयास रहता है कि नए अनुसंधान द्वारा इस प्रकार के संसाधनों को विकसित किया जाए जो प्रकृति के लिये लाभकारी हों। उन्होंने कहा कि प्रकृति के संरक्षण हेतु विश्वविद्यालय में शोध जारी है और भविष्य में भी विभिन्न अविष्कार द्वारा प्राकृतिक संसाधनों को प्रोत्साहन देने के कार्य किये जाएंगे। उन्होंने कहा कि ई-बाइसाइकिल एवं लिथियम बैटरी के प्रयोग करने की सभी से अपील करते हुए कॉलेज के सभी सदस्यों को बधाई देते हुए अपनी शुभकामनाएं दीं।

मुख्य कार्यकारी अधिकारी डा. शल्य राज ने कहा कि ई-बाइसाइकिल एवं लिथियम बैटरी से संसाधनों को बचत होगी बल्कि ये पर्यावरण को संजो के रखने में भी अपना योगदान देगी। उन्होंने कहा कि पर्यावरण को प्रदूषण से बचाने हेतु हमें प्राकृतिक संसाधनों के उपयोग पर बल देना होगा ताकि हमारे यातावरण में शुद्धता बनी रहे। उन्होंने विशेष धनाया कि बड़े स्तर पर ई-बाइसाइकिल का उत्पादन होने से यह मध्यम वर्ग के लिये बहुत आसानी से उपलब्ध होगी जिसमें अधिक व्यय भी बहुत कम होगा और यह मध्यम वर्ग का फायदेमंद वाहन साबित होगा। उन्होंने इंजीनियरिंग कॉलेज के सदस्यों को इनोवेटिव प्रोजेक्ट बनाने पर गव प्रकट करते हुए मंगलकामनाएं दीं।

कार्यक्रम के आयोजन में इंजीनियरिंग कॉलेज के डीन एवं प्राचार्य डा. मनोज कपिल, डा. रविश कुमार श्रीवास्तव, इंजीनियर अमित कुमार एवं इंजीनियर अजरुहीन की भूमिका प्रमुख रही।

News on the E-Cycle made by our student.

b. **Twin Bicycle:** John F Kennedy very aptly said “Nothing compares to the simple pleasure of riding a bicycle” and what makes it more pleasurable is when you have someone to ride with you. The twin bicycle has been designed by Dr Krishna Murty, an illustrious student of Subharti Medical College and the design has been industrial designed too

(Reg No. 306717). The twin cycle is available for use both for the residents and non residents of the campus within the campus. The twin cycle, campus residents have started enjoying evening rides rather than taking any other form of transportation. The residents can take the cycles from the designated parking places and can leave them at other dedicated parking spaces. The concept has gained popularity just like car pooling; the residents prefer the cycle pooling



Children enjoying a ride on the TWIN BYCYCLE

- b. Garbage Van:** The garbage van of the University was made by the students of mechanical engineering department to be fully mechanised and electrically driven. The University's all garbage is collected and thrown in the designated place with the help of this van.



### सुभारती इंजीनियरिंग कॉलिज के विद्यार्थियों ने बनाई बैट्री संचालित गार्बेज ई-रिक्शा

प्रभात ब्यूरो

मेरठ। स्वामी विवेकानंद सुभारती विश्वविद्यालय के सुभारती इंजीनियरिंग कॉलिज के विद्यार्थियों ने मैकेनिकल इंजीनियर अजहरूद्दीन के साथ मिलकर बैट्री संचालित गार्बेज ई-रिक्शा बनाई है जो पर्यावरण को दूषित किये बगैर विश्वविद्यालय परिसर से कूड़े एकत्र किया करेगी।

शहीद अशफाक उल्लाह खान खंड के बाहर कुलपति डिपॉजिटर डा.पी.सिंह ने इरी इंडी दिखाकर ई-रिक्शा को रवाना किया। उन्होंने इंजीनियरिंग कॉलिज के प्राचार्य डा. मनोज कपिल एवं मैकेनिकल इंजीनियर अजहरूद्दीन को बधाई दी। उन्होंने कहा कि बैट्री संचालित ई-रिक्शा द्वारा पेट्रोल व डीजल के वाहनों का प्रयोग कम होगा एवं प्रदूषण को रोकने में सहयोग भी मिलेगा। उन्होंने कहा कि सुभारती विश्वविद्यालय प्रकृति के संरक्षण हेतु हमेशा से प्रतिबद्ध है और इसी क्रम में इंजीनियरिंग कॉलिज के विद्यार्थियों ने कूड़ा उठाने वाली ई-रिक्शा बनाई है वह बहुत सराहनीय है। उन्होंने बताया कि गार्बेज ई-रिक्शा में 400 केजी लोडिंग क्षमता है जो एक चार चार्ज करते के पश्चात 80 किलोमीटर तक चलती है और इसको चार्ज होने हेतु केवल 5 युनिट बिजली चाहिए। इस अवसर पर उन्होंने सभी विद्यार्थियों को अपनी शुभकामनाएं देते हुए प्रकृति संरक्षण का संकल्प दिलाया। सुभारती विश्वविद्यालय की मुख्य कार्यकारी अधिकारी डा.शल्या राज ने हर्ष प्रकट करते हुए कहा कि प्रकृति को संरक्षित करने की दिशा में यह बहुत अहम कदम है। उन्होंने कहा कि पेट्रोल व डीजल के वाहनों से प्रदूषण निरन्तर बढ रहा है और इलेक्ट्रिक वाहनों के प्रयोग से इसपर अंकुश लगाया जा सकता है। उन्होंने गार्बेज ई-रिक्शा बनाने वाले मैकेनिकल इंजीनियर अजहरूद्दीन एवं सम्बन्धित विद्यार्थियों को मंगलकामनाएं देते हुए सभी को प्राकृतिक संसाधनों को प्रोत्साहन देकर उनका उपयोग करने को अपील की। इस मौके पर प्रतिकूलपति डा.विजय वधावन, इंजीनियरिंग कॉलिज के प्राचार्य डा. मनोज कपिल, परिवहन प्रबन्धक राजकुमार सागर, इस्सरा आदि उपस्थित रहे।

### The Launch of Garbage van

### 3) Solar Power:

The University has been slowly getting solar electricity panels, solar heaters etc installed.

Meanwhile our students took inspiration and built;

- a. **Solar Rickshaw:** Another variant of the e-Rickshaw which has been designed by the students of Subharti Technical Campus is solar-powered e Rickshaw that is fitted with solar panels. It is directly solar-powered, driven solely by electric motors, powered by solar panels mounted on the vehicle and capable of operating while the vehicle is in motion. The solar panels provide power directly to the motor without the need for batteries. These solar panel fitted rickshaws are used exclusively for the waste disposal. Currently two solar rickshaws are plying in the campus and the efforts are on to redesign the same as it looks bulkier in its present state.

**b. Solar based water purifier:** Solar water purifier has been designed by the students of Subharti Technical campus and has been installed near the Vice Chancellor office. The water is purified based on solar radiation treatment and water distillation with additional use of solar heating. The system consists of three main components: the solar energy collector, the solar distillation system and the solar water disinfection system. The solar energy collector collects solar radiations and converts it into thermal energy for the solar distillation process. Solar water disinfection system takes low turbidity, micro-biologically contaminated water and disinfects it to drinkable water with utilization of solar radiation. The main advantages associated with are Free of charge sun energy and it is reliable and almost maintenance free. However, it has low production capacity so the students are working on increasing the same.



#### 4. Sensor Based Lights:

Our students committed towards adopting the newer means of energy conservation and a firm belief that every unit of energy saved can be utilized in the future. The students of Subharti Institute of Technology and Engineering have been instrumental in installing the electronic motion detector-based sensor lights at 125 different locations in the University campus. Motion detectors are being used in activating street lights as well as indoor lights in walkways, lobbies and staircases. Due to these lighting systems, energy is conserved by only powering the



lights for the duration of a timer, after which the person has presumably left the area.

### 5. Reclaiming the Waste:

Our multitalented founder who has started a blog of her own called 'busy bee' (<https://subharti.org/blog/category/busybee/>) has inspired many of our students to do the same. Our students from the Faculty of fine arts, department of interior design, have been making several sculptures and art items from 'scrap'. This not only redefines creativity but also reduces the waste created. Some examples for such are Lamp Shades from waste, Cartoon characters from discarded newspapers; waste carrying man sculpture and many more.



SCULPTURES AND ART PIECES MADE FROM SCRAP



## 6. Segregate and Recycle:

The University initiates, encourages and ensures the segregation of waste along with its adequate disposal. Along with it we involve our students to become participants in recycling the green waste into compost.



DUSTBINS FOR RESIDENTS  
FOR SEGREGATION OF  
WASTE

BIO FERTILIZER  
PROGRAMME  
(BIOCOMPOST,  
VERMICOMPOST)



- a. **Biocompost:** The University has 3 pits for utilising the green waste and making it into bio compost.
- b. **Vermi-compost:** The University has defined an area for making vermicompost.

In both the projects the students of Faculty of Science, department of agriculture are made to participate to help them learn and also inspire them to do it at homes, spread its awareness.

## 7. Encouragement, Awareness, and Involvement:

- a. All days like 'Environment day' 'Plantation day' are celebrated, our students are encouraged to plant saplings, donate trees to encourage them to realize the importance of nature.



Plantation of Saplings



- b. The University gifts planters on all events, and gets students to prevent plucking of flowers, and encourage growing of plants.
- c. Students are involved in ‘*nukkadnatak*’, ‘poster competition’ etc, on such themes to encourage their mindset towards encouraging ‘Green India’



Welcome of guests with Saplings

- d. Regular Blogs, Facebook campaigns for using environment friendly things, like ‘own cloth bags’ instead of plastic ones, carry own bottles instead of using plastic bottles, not using single time plastic etc..



Few snapshots of blog

## FEW MORE GLIMPSES



### Subharti University: A message of environmental protection on World Car Free Day

#### Transparent News Bureau

Meerut It is a car-free day every Wednesday on the campus at Swami Vivekanand Subharti University, Meerut but today the University shares the day with the whole world uniting as we all celebrate The World Car Free Day. On the occasion of World Car Free Day, no vehicle was used in Subharti University and all the faculty members and students enjoyed walking and cycling on the open roads of the campus. Subharti University has been promoting the health and preservation of the environment since its inception. The campus is laden with beautiful trees and lush green gardens that are not only pleasing to the eye

but help the environment by reducing pollution and increasing the level of oxygen. The shaded walkways within the campus aid walking by providing much-needed respite during the summer season. The campus also promotes sustainability by rainwater harvesting, solar-powered buildings and street lights, vermicompost unit, and a horticulture nursery. On the occasion of World Car Free Day, Brigadier Dr.VP Singh, Vice-Chancellor of Subharti University, wished everyone a healthy and sustainable future. He said "Car Free Day is already celebrated in Subharti University every Wednesday. The main purpose of a Car Free



Day is to eliminate pollution from petrol-diesel and inducting a habit in every individual for walking and cycling. By not operating any vehicles within the campus we give mother nature a much required day off when she can replenish her health". Dr. Shalya Raj, Chief Executive Officer of Swami

Vivekanand Subharti University said that Subharti University is also an environmental exemplar with its green and sustainable practices along with health promotion. Dr. Shalya is known and admired for her affinity to nature and best practices for environmental sustainability. She

often tweets to promote daily practices such as conservation of water by watering plants with wastewater and the importance of energy-saving habits in individuals. She said that by celebrating Car Free Day every Wednesday in the university, pollution is prevented by saving fuel, carbon & toxic emissions along with a respite from noise pollution. She said that it is our moral responsibility to conserve the environment and Subharti University is committed to conserving the environment by encouraging sustainable habits and technology. She also said that the core value of Subharti University are Shiksha (education)

Sewa (service) Sanskar (human values) & Rashtriya (nationalism), through which the country can become atmanirbhar (self-empowered) by preparing the younger generation who follow the values of Sanskriti and Indian moral code. To bring meaning and practice these core values, small work is done with great importance every day, in which all the faculties, officers, and students ensure the lights, fans, and air-conditioners are switched off after classes or when the work in that area is finished. Apart from this, solar energy is used throughout the university, with solar systems installed on the roof of the buildings located on the campus

### FACULTY SETS EXAMPLES FOR STUDENTS BY APARTING WHAT THEY PREACH



RESEARCH PROJECTS MADE BY STUDENTS FOR ENVIRONMENT



सुभारती इंजीनियरिंग के छात्रों ने बनाया ईको फ्रेंडली ई-रिक्शा

सोलर से चलने वाला गार्बेज डिस्पोजल ई-रिक्शा पारंपरिक ई-रिक्शा में बेहतर, बाजार के मॉडलों से 70 प्रतिशत कम लागत में बन सकेगा यह रिक्शा, ग्रीन हाउस गैसेस को घटाने में भी होगा सक्षम

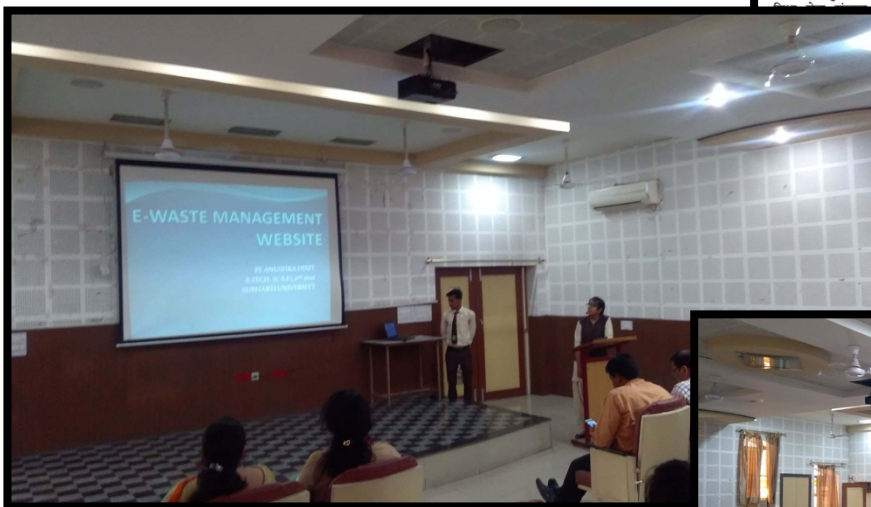


E- RICKSHAW



ई-रिक्शा को देखती डा. शल्प्या राज व कुलपति डा. एनके आहूजा। प्रभात

से चलने वाले गार्बेज डिस्पोजल ई-रिक्शा का ईजाद किया है जो पारंपरिक ई-रिक्शा की तुलना में हर मायने में पर्यावरण को संजो के रखने में कारगर सिद्ध होगा। ये ई-रिक्शा न केवल मार्किट में मिलने वाले बाकि मॉडलों में से 70 प्रतिशत कम लागत में बन सकेगा बल्कि ग्रीन हाउस गैसेस को घटाने में भी उतना ही सक्षम होगा। विश्व पर्यावरण दिवस 6 जून 2019 को महाविद्यालय में विश्व पर्यावरण दिवस को धूमधाम से मनाया गया जिसमें मैकेनिकल इंजीनियरिंग के विद्यार्थी और शिक्षकों द्वारा ईजाद किए हुए इस ई-रिक्शा का एक प्रदर्शन भी कराया गया। जिसका शुभारम्भ कुलपति डा. एन के आहूजा के उपस्थिति में मुख्य कार्यकारी अधिकारी डा. शल्प्या राज के हाथों से हुआ। इस कार्यक्रम में विश्वविद्यालय के नर्सिंग के छात्र-छात्राओं ने एक नाट्य प्रस्तुत किया। इसके अलावा डा. विजय भटनागर, डा. पवन पराशर, डा. नीरज करण सिंह ने भी पर्यावरण दिवस के ऊपर अपने विचार प्रकट किये। सभी गणमान्य अतिथियों ने महाविद्यालय के प्रधानाचार्य डा. मनोज कपिल, डा. रविश कुमार श्रीवास्तव तथा इंजीनियर अजहरुद्दीन के द्वारा लिए गए इस पहल को सराहा। इस कार्यक्रम को सफल बनाने के लिए डा. मुकेश शहेला एवं इंजि. गरिमा जैन का योगदान प्रमुख रहा।



Presentation of students on research ideas for Environment

