

# APS College of Engineering

Somanahalli, Bangalore – 82



(AICTE Approved, VTU Affiliated and Accredited by NAAC)

## RESEARCH, INNOVATION AND EXTENSION



### Our Vision:

To empower, encourage and inspire students and faculties by being the essential Centre of research and innovation.

### Our Mission:

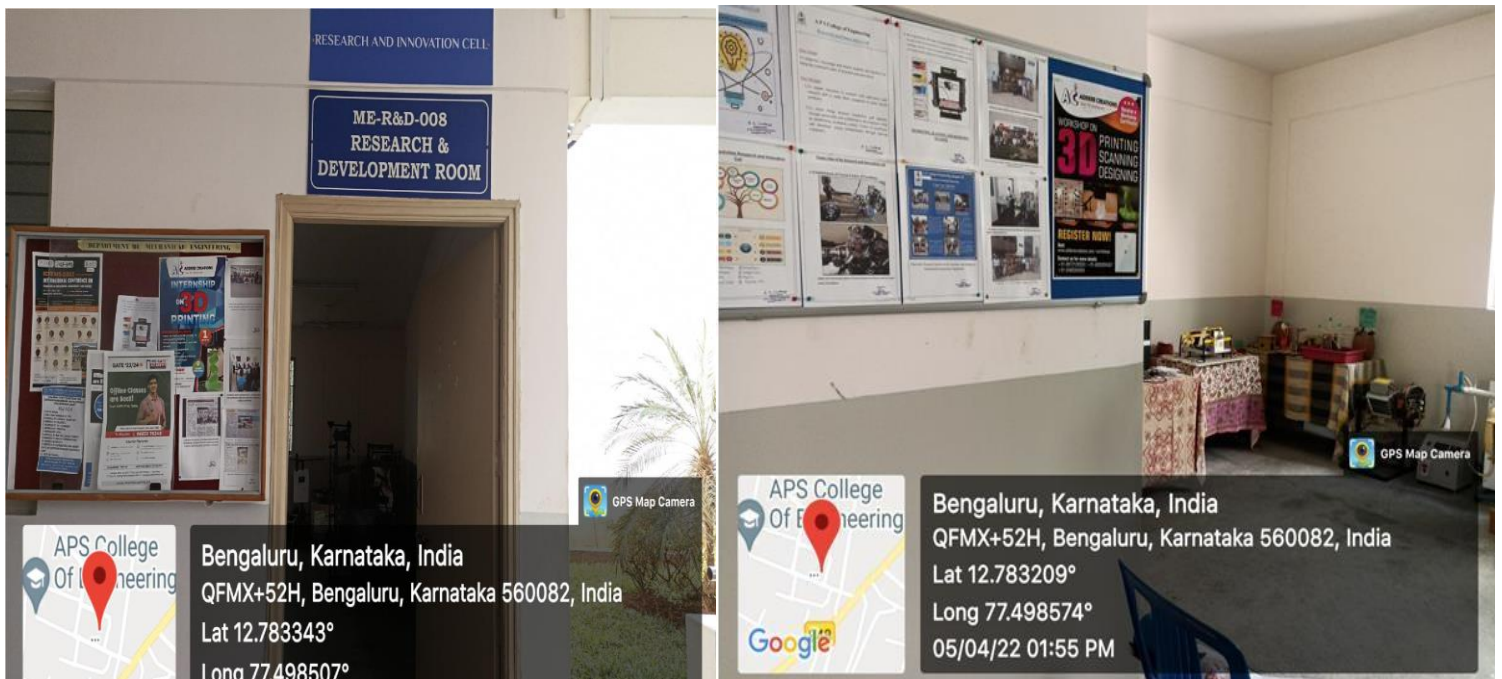
To impart education to students with innovative and research skill to make them competent to solve social problems.

To create bridge between Academics and Industry through partnership and collaborative development work by establishing incubation centers, Centre of excellence and encourage young entrepreneurs through start-up companies.

## Number of Teachers recognized as research guides Latest Completed Year

Full time Teachers with PhD.	Qualification	Whether recognized as Research Guide	Year of Recognized Guide	Name of Research Scholar	Year of registration of Scholar
Dr. B M SATHISH	PhD	Yes	2005/06	Dr.K MAHESHA Dr.H R VITTALA SADANANDA SURAPURE	2006 2007 2015
Dr.Ravindranath G	PhD	Yes	2015/16	Mrs.JAYASHREE ZOPE	2015
Dr.A Hareesh	PhD	Yes	2022/23	MAHESH T	2023

## Research and Innovation Cell





# ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

("ವಿಶ್ವವಿದ್ಯಾನಿಲಯ ಕಾಯಿದೆ" ಅನ್ವಯದಲ್ಲಿ ಸರ್ಕಾರದ ಸಹಾಯದಿಂದ ಸ್ಥಾಪಿಸಲಾದ ವಿಶ್ವವಿದ್ಯಾಲಯ  
'ಜ್ಞಾನ ಸಂಗಮ', ಬೆಂಗಳೂರು - 590 018 ಕರ್ನಾಟಕ ರಾಜ್ಯ

## Visvesvaraya Technological University

(State University of Government of Karnataka Established as per the VTU Act, 1994)

"Jnana Sangama", Belagavi-590 018, Karnataka State, India

Dr. B. E. Rangaswamy Ph.D.  
REGISTRAR

Phone: (0831) 2498100  
Fax: (0831) 2405467

Ref VTU/Aca./Res. Cent./A4/2022-23/ 6270/1  
NOTIFICATION

Date: 23 JAN 2023

Sub: Grant of Recognition / Continuation (Extension) of Research Centers to offer Ph.D/M.Sc.(Engg.) by research reg.....  
Ref: Executive Council Resolution No. 2.1.6, dated 30.07.2022.

In Pursuant to the resolution of Executive Council referred to the above, it is hereby notified that the following Department/s are Recognized as Research Centre/s to offer Ph.D / M. Sc.(Engg.) by Research programs under section (41) of the VTU Act 1994, in accordance with the Regulations and Guidelines in force (visit our VTU website [www.vtu.ac.in](http://www.vtu.ac.in) for Regulations & Guidelines). The College / Institution may apply for the continuation of recognition against the University Notification after completion of Recognition period of the Research Centre/s.

Name of the college: A.P.S COLLEGE OF ENGINEERING, BENGALURU

Type of Recognition	Department	Recognition	Period of the Recognition
Continuation Research Centre Recognition	Electronics & Communication Engineering	Recommended	2022-23
	Civil Engineering	Recommended	2022-23
	Physics	Recommended	2022-23
New Research Centre Recognition	Information Science & Engineering	Recommended	2022-23
	Computer Science & Engineering	Recommended	2022-23
	Mechanical Engineering	Recommended	2022-23

Rg 23/01/2023 BE  
REGISTRAR  
23/01/23

### Extension Letter of Research Centers Under Visvesvaraya Technological University for the Academic Year 022-23

Sl., No.,	Guides	STUDENTS UNDER THE GUIDE	STATUS
1	Dr. A HAREESH	Mr. Mahesh T	Registered for M.SC (Engg)



## VTU - Research Supervisor Online Account

3 messages

Researcher <vtu@examinater.com>  
Reply-To: "Researcher-V.T.U-PHD" <research@vtu.ac.in>  
To: hareeshcmy@gmail.com



### Visvesvaraya Technological University

Jnana Sangama, Belagavi, Karnataka 590018

**STRICTLY CONFIDENTIAL**

**Supervisor Account Credential**

Date: 04-Feb-2023

Dear Professor,

We are happy to inform that your online account has been activated in the "Recognition of Research Supervisor Online System".

Username: [hareeshcmy@gmail.com](mailto:hareeshcmy@gmail.com)

Password: @pYvJ

We recommend you to [Login](#) and change password as soon as possible.

Yours sincerely,

Sd/-

REGISTRAR

This automated email sent by V.T.U., Belagavi using the software application [Researcher](#)

## Recognition of Supervisor letter from VTU



## Activity Under Research Innovation Cell

### Installation of 3D Printer (FDM)



**Product :** 3D printer

**Model :** eDee

**Trade name :** YSoft be3D eDee

**Printing technology :** FFF (Fused Filament Fabrication) **Printing area:** 150 × 150 × 150 mm

**Nozzle diameter :** 0.4 mm (expected lifetime 1 500 h)

**Print bed type:** Glass, removable

**Calibration:** Automatic

**Safety elements:** Door locks, print bed sensor

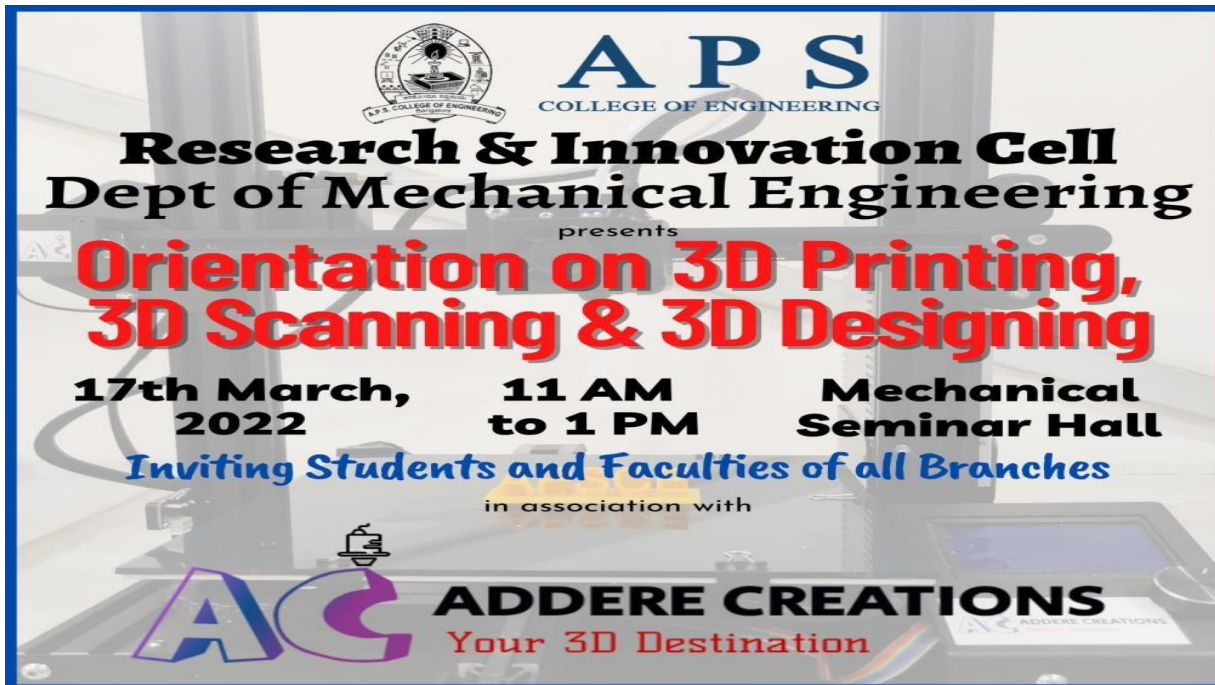
**Total dimensions :** 496 × 414 × 397 mm

**Weight :** 27.5 kg

**Recommended operation conditions**

15-30 °C (59-86 °F), max. 60% humidity

**Supply voltage:** External source 24 V/3.75 A (90 W, input 230 V/110



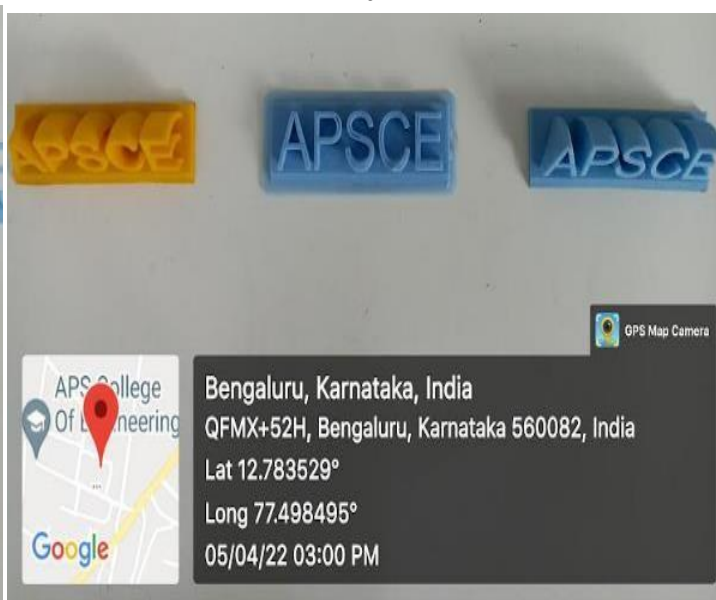
3 D printing Machine was installed in Research and Innovation Lab. Demonstration of the machine was conducted 17 th March 2022 in Mechanical Engineering Seminar Hall at 11 Am in the presence of Dr. A.G Nataraj, Principal, APS College of Engineering, Dr.Haressh A, HOD, Mechanical Engineering Dept, Dr. Kumar BID, HOD, Dept. of Information Science Engineering, and Dr. S.T Kumar, HOD, Basic Science Department. Mr. Rohan Raghunanda CEO, M/s Addere Creations Pvt., Ltd, presented demonstration to students of final year engineering regarding 3D scanning, Printing and Designing. He also explained



regarding projects that will defiantly involving in Innovative work in applications of Medicine, Automobile, PCB design.



Students of 7th Semester Mechanical Engineering are involved in Setting up of Filament PLA on the Nozzle cavity of 3D Printer.



APSCE 3D Printed Letter created in Research and Innovation Cell. Department of Mechanical Engineering



# **Innovation Ecosystem**

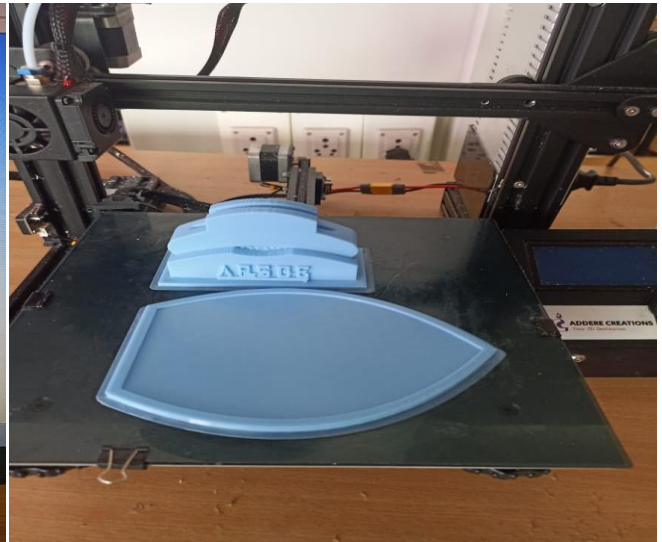
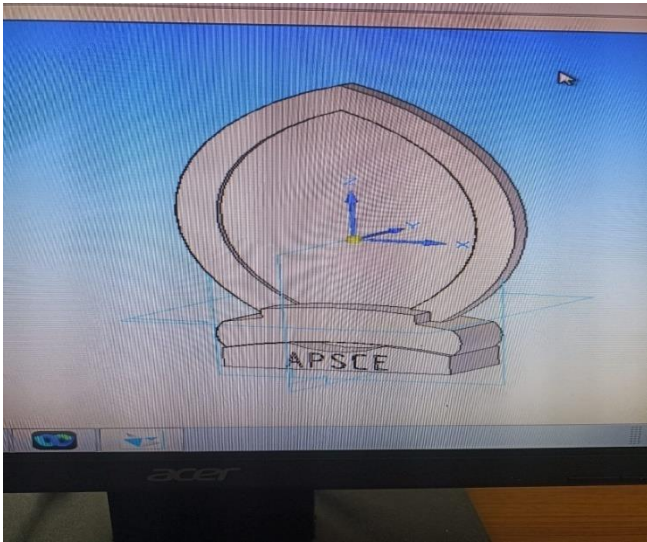
## **Report on Design and 3d Printing of College Memento**

As a part of practicing Innovation among students of Engineering College, there is regular conduction of Innovative practice among student and faculty groups. This year APS College of Engineering took initiative to build Innovative Ecosystem by knowledge sharing among student community and faculty fraternity.

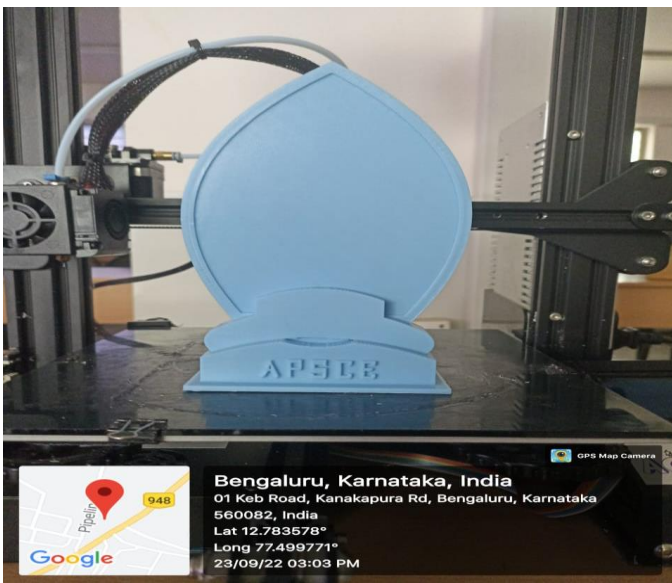
Department of Mechanical Engineering involved in practicing Innovative Ecosystem in the domain of 3d Printing, 3d Designing and 3D scanning under the research facility at Research and Innovation Cell. It was decided within department to develop Customized design of APS College Memento which can be utilized for Facilitating Chief Guest during their visit in Placement Activity, Inaugural Function of College Function or 25 years of Silver Jubilee College function. Other than procuring mementos from vendors to become self reliant among our self and also to reduce economical cost involved during procurement.

- 1.** The material available was Polylactic Acid (**PLA**) Filament. The faculties involved in developing CAD model of the College memento. After number of optimization final CAD Model was completed using CATIA V5 version software which is shown in Image 1.
- 2.** Later by using stl. Format of file the CAD model was sliced using Ultimaker Cura software and then converted to G-codes of the file.
- 3.** The next step is to load file in the 3D printer, which was done by uploading through memory card device. After setting Infill density, printing speed, orientation of the model, it was finally given for Printing. Image shows front view of 3d printed model of APS College Memento created using Creality Ender 3 Printer in Research and Innovation Lab.
- 4.** Image Shows 3D printed form of College Memento developed in Research and Innovation Lab.





**1. Image shows CAD Model of APS College Memento create using CATia V5 Software. 2. Image Shows 3D printed form of College Memento developed in Research and Innovation Lab.**



**3. Image shows front view of 3d printed model of APS College Memento created using Creality Ender 3 Printer in Research and Innovation Lab. 4. Image Shows 3D printed form of College Memento developed in Research and Innovation Lab.**

**Development of Six- Axis Arduino Controlled Robotic Arm Fabricated Through Fused Filament Technology (FDM) under Research and Innovation Cell**

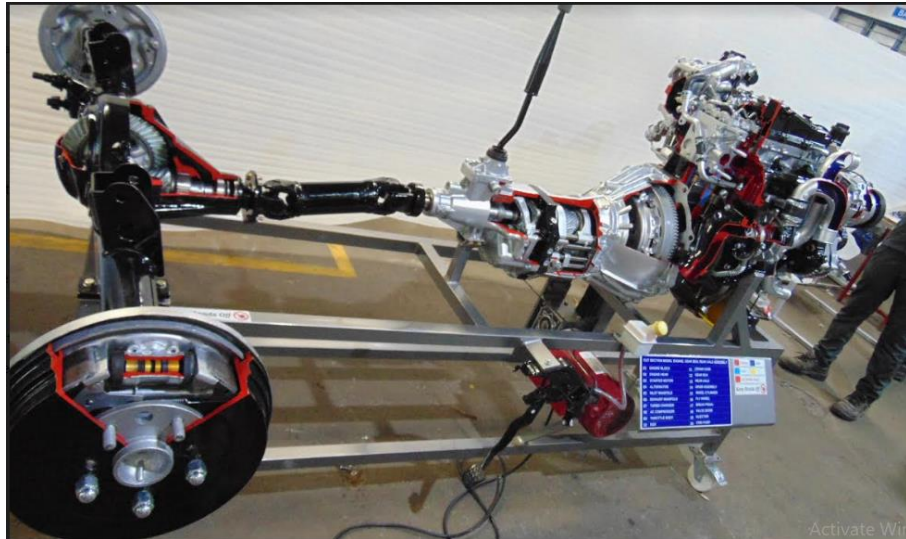


**Figure: Final Testing and Inspection of 3D printed Robotic Arm**



## **Futuristic Approach to conduct following Activities under Research and Innovation Cell.**

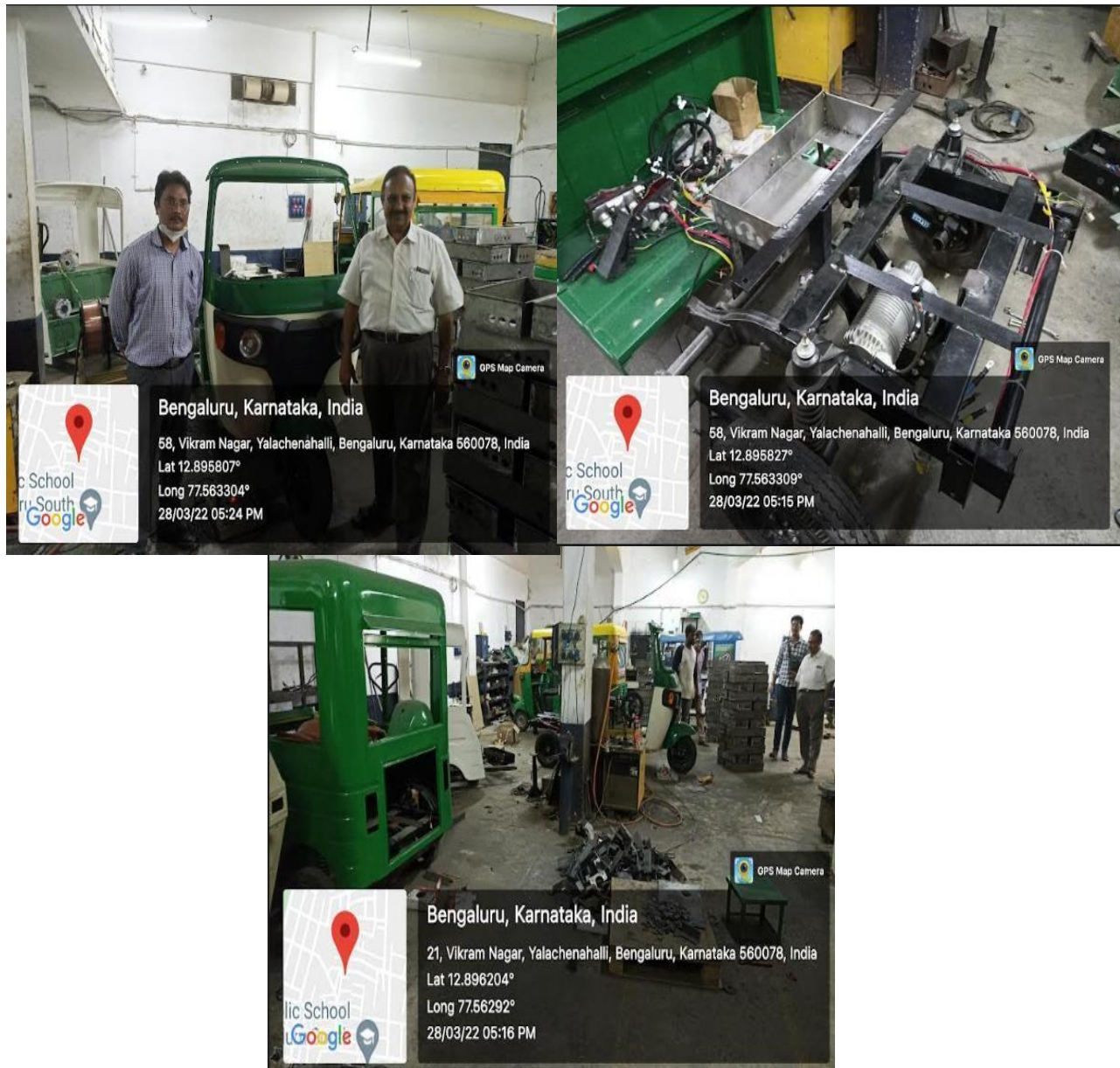
### **Establishment of Toyota Centre of Excellence**



### **Engine and transmission system of Toyota Fortuner and Etios as a part of Toyota Centre of Excellence**

Research and Innovation cell has taken initiative to establish Toyota Centre of Excellence for the Faculties and students to cater the advanced technology in Automobile engineering. This facility will help to conduct various workshops and seminars to create awareness about modern and advanced technology in Mechanical Engineering domain.

## Establishment of Skill Development Centre in EV-Technology in Association with Clen Innovation Technology Ltd, Bangalore



Research and Innovation cell has taken initiative to establish of **APS College-Clen Innovation Technology Skill Development Centre**. This will help the faculties and students to cater the advanced technology in Electric Vehicle Automobile engineering. This facility will help to conduct various workshops and seminars to create awareness about modern and advanced technology in Mechanical Engineering domain.