VISHWKARMA GOVERNMENT ENGINEERING COLLEGE, CHANDKHEDA

Brief Report on **DRONE MAKING WITH RASPBERRY PI**

Name of Department/Organizer	:	IEEE VGEC Student Branch
Date & Time	:	27 June'17 to 29 June'17
Venue	:	VGEC Chandkheda (L Block Vikram Sarabhai Seminar Hall)
No of Participants	:	20

- **Objective of the Event**

  Vishwakarma Government Engineering College, Chandkheda visions to create an echo system for creating engineers who will be technically sound and socially responsible for sustainable and environmental friendly solutions. IEEE VGEC Student Branch took up the challenge to explore the use of Drones in the Smart City plan. As a part of their quest, they successfully conducted a 3-day workshop on Drone making with Raspberry Pi. The uniqueness of this event lies in the fact that it was <u>entirely conducted for the students by the students themselves</u>. Thus they got the dual advantage of learning about sophisticated Drone making as well learning employability skills such as team work, leadership, articulation and technical content. The 3-day workshop was focused on delivering the interactive session which was primarily focused on Drones. Drones have been around for years, and they are used for different purposes. Recently, these devices are becoming increasingly popular and their applications are expanding in numerous fields. Hands on training was given for actually making Drones with Artificial Intelligence using various software and hardware tools like python, processing, arduino, 3D-printing and raspberry pi.

- **Outcome of the Event**

  - **Day-1**

    The workshop began with a recap of the previous workshop on Robotics (Arduino and its basics), followed by basics of python and processing using python. Arduino projects were then demonstrated using processing. The attendees witnessed about 10+ project demos.

  - **Day-2**

    Second day unlocked the main feature of the workshop – Raspberry PI. It included introduction to PI, and its comparison with arduino. This was taken over by basics of Python with PI (GPIO port). Day-2 was concluded by two project demonstrations by seniors and a few intermediate arduino demos: 3D-LED cube, CNC machine and Voice controlled robot.

- **Day-3**
  The final day came up with Drone making – introduction and applications of drone, drone hardware explanation and coding. The drone was built using 3D prints of drone parts (base, frame and support part for motors). Finally the aim was achieved by coding the drone using PI.
- **Event Photographs**