

METHODIST COLLEGE OF ENGINEERING AND TECHNOLOGY  
INNOVATIONS AND ENTREPRENEURSHIP DEVELOPMENT CELL

Dr. RAGHU CHANDRA GARIMELLA  
Coordinator, IEDC

Oct. 1, 2019

To  
The Director  
MCET

Dear Sir,

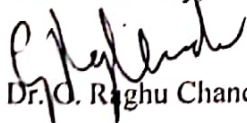
Sub: Requisition for provision of financial support for the IV EEE student batch for perceiving the project work entitled "Design of Multipurpose Unmanned Aerial Vehicle (UAV) – A Drone"...

In connection with final year project work, our IV EEE students (guiding by Sri Namburi Nireekshan, Assistant Professor, Department of EEE, and HOD/EEE) are planning to work upon the project based on drone technology. The proposed system mainly concentrates on development of UAV for **carrying weapons in defence sector**, which may further be used to convert as a **CONSULTANCY WORK**. Moreover, the students were also extending the design for irrigation purpose for watering the garden area using the proposed unmanned vehicle.

Our students made an approximate expenditure of about 35,660 INR (detailed list is attached herewith) for completion of this project. They have requested me for any possible financial support (at least about 50%) from the institution. Henceforth, I request you to provide the possible financial support as a token of encouragement from our side. I would be thankful to you for the same.

Thanking you,

Yours sincerely,

  
Dr. R. Raghu Chandra

- Encl.: 1. Details of components proposed to develop the UAV  
2. Abstract of the project

Recommendation &  
Forwarded.

S. Venkatesh  
4/10/2019


Mr. Sanchin  
50% financial help may be  
given. The student may also  
approach TS COST with  
financial assistance.  
4/10


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Details of components required for the design of proposed unmanned aerial vehicle system:

Sl. No.	Name of the Component	Unit Price (INR)	Quantity Required	Total Price (INR)
1.	Frame (Eg.: S550)	2,600	1	2,600
2.	BLDC Motor	460	6	2,760
3.	Propeller	250	6	1,500
4.	Flight Controller	3,000	1	3,000
5.	Electronic Speed Controller	450	6	2,700
6.	Power Module	850	1	850
7.	Transmitter and Receiver (Sky Fly)	5,000	1	5,000
8.	First Person View (FPV) Camera	3,500	1	3,500
9.	FPV Monitor	3,000	1	3,000
10.	Gimbal	1,000	1	1,000
11.	GPS	3,000	1	3,000
12.	Telemetry	1,500	1	1,500
13.	Tank and Sprayer/Holder for carrying weapons	1,500	1	1,500
14.	Lipo Battery Charger	2,250	1	2,250
15.	Li-ion Battery (2200 mAh)	1,500	1	1,500
<b>Total Approximate Expenditure</b>				<b>35,660</b>

  
Mr. N. Nireekshan  
Assistant Professor, EEE

  
B. Srikanth  
160716734301

  
G. Naveen  
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# DESIGN OF MULTIPURPOSE UAV (UNMANNED AERIAL VEHICLE) – A DRONE

## ABSTRACT

Drones may also be used for various applications other than agricultural activities, viz. House framing, Product delivery, Metal detectors, Geo surveys, Fire control and **mainly**, for **defence purpose**. In **Defence** fields, the proposed system will carry weapons to the required destinations without direct human interference. The proposed system will concentrate on carrying physical objects from one place to another place in addition to camera surveillance.

*Moreover, based on the research made by Barbedo in his article Drones (2019) and Alok Kirloskar, Executive Director, Kirloskar Brothers Limited in his article 'Perspectives on India', it was estimated that about 40-50% amount of water might be saved, in case of substituting drones in the place of conventional methods.*

India is mainly depending on the agriculture. Most of the population in our country are dependent on farming. There is a huge requirement of technology in agricultural lands for cultivation of various kinds of plantation. Some kinds of functions that requires technology during farming are spraying of pesticides, sprinkling water, observing the insects in denser greenery areas, etc. Incorporating a drone in agricultural fields will further reduce the time and money. This is due to the fact that an unmanned aerial vehicle may inspect the greeneries as and when required. Further, this technology may be modified further to spray or sprinkle the farms with water, which will deliberately reduce the wastage of water.

*Major components adopted in the proposed system:*

- ✕ BLDC motor
- ✕ Propeller
- ✕ Arduino based Flight Controller
- ✕ Transmitter and Receiver unit
- ✕ Electronic speed controller
- ✕ Li-ion Battery pack
- ✕ Power Module

We sincerely request the management of MCET to extend the financial support for making our dream (drone project) true.

B. Srikanth

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