



(Approved by AICTE, Affiliated to MGU / APJ Abdul Kalam Technological University, NAAC Accredited & ISO Certified Institution)

3.1.3 Number of departments having Research projects funded by government and non-government agencies during the last five years

AY: 2019-20

SL NO	ID NO	NAME OF FACULTY	DESIGNATION	SUBJECT	DEPARTMENT	TITLE OF THE FUNDED PROJECT	AMOUNT GRANTED	NAME OF FUNDING AGENCY
1	KTU-F24723	Mr. Amal R	Assistant Professor	Machine Design	Mechanical Engineering	Portable Mechanical Ventilator	10,000	Mangalam Publications India Pvt. Limited
2	KTU-F1496	Ms. Eugene Peter	Assistant Professor	Travel Grant	Electrical & Electronics Engineering	Travel Grant for conference	7000	ICG Srinivasan Institute Society
3	KTU-F30452	DR.T D SUBASH	PROFESSOR	RESEARCH FUNDING	ECE	MAJOR PROJECTS	Rs.100000	International Center for Entrepreneurship Technology (ICREATE), Aham edabad, Gujarat
4	KTU-F30452	DR.T D SUBASH	PROFESSOR	RESEARCH FUNDING	ECE	Minor Projects	Rs.10000	New Generation Energy Meter

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MANGALAM COLLEGE OF ENGINEERING
Ettumanoor




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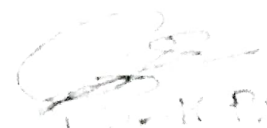
MEMCE/KTU/ACAD/2021/13


24.02.2021

UTILIZATION CERTIFICATE

certified that the total amount of Rs 10000/- (Ten Thousand Only) released by APJAKTU Covid 19 Cell and Centre for Engineering Research and Development(CERD) under APJAKTU towards the funding of "Portable Mechanical Ventilator" under "APJAKTU Emergency Ventilator Challenge" to Ananda Krishnan U B, Kiran Rajendran, Subin K John & Vithun Lal under the guidance of Assistant Professor Amal R, Department of Mechanical Engineering, Mangalam College of Engineering, Ettumanoor, Kottayam was fully utilized for the purpose for which it was sanctioned.

AMAL R 
Name & Signature of Supervising Teacher


Name & Signature of Head of the Dept

Sebastian P. H.

Name & Signature of Finance Officer


Name & Signature of Head of the Institution.



From

Amal R
Assistant Professor
Department of ME

To

The Secretary
Mangalam Educational Society

Sub: Request for sanction the grand for the development of a Portable Mechanical Ventilator.

Sir,

As part of the product development which is useful for the institution as well as community in the fight against Covid 19, our students Anandha Krishnan U B, Kiran Rajendran, Subin K John & Vithun Lalof ME2017-2021 batch is ready to develop a Portable Mechanical Ventilator. Expected budget is as follows.

Milestones	Description	Estimated Time	Estimated Budget
M1	Research & Development of the concept	60 Days	₹2000
M2	Purchase and Manufacturing of Parts	60 Days	₹8000
M3	Assembling	15 Days	-
M4	Testing	15 Days	-
M5	Calibration	30 Days	-
		Total	10000

I Request you to kindly grant the permission for the same.

Thanking You

Date: 01/04/20

Yours Faith fully

Amal R



MANGALAM COLLEGE OF ENGINEERING
KOTTAYAM
Kerala-686 631



MANGALAM EDUCATIONAL SOCIETY,

ETTUMANOOR-686 631



CASH RECEIPT / VOUCHER

Receipt No : 210

Date : 01/04/2020

Received with thanks from Mangalam Educational Society
for the below mentioned program as a seed money for attending FDP/Conference/Workshop/etc...

Faculty Name with designation : Amal R, Assistant Professor

Department: Mechanical

Program Name: Grant for Portable Mechanical Ventilator

Amount (Rs.): 10,000

Amount in words: Ten Thousand.

Received by Amal R

Approved by [Signature]

(HOD / PRINCIPAL)

Amount Issued By [Signature]

(Finance dept)





PRODUCT-DESCRIPTION

Product Name : Portable Mechanical Ventilator

**Developed By : Anandha Krishnan U B, Kiran Rajendran, Subin K John & Vithun Lal
, Department of ME , Students of 2017-2021 Batch**

Guide : Mr. Amal R ,Asst.Prof ME

Abstract:

Portable ventilators are devices that are provided mechanical ventilation in settings where piped gas and mains electricity is not available. Due to COVID-19 situations the need for portable ventilator has increased. Because of this situation there is need for a low cost ventilator design to replace manual ventilation by ambu (Artificial manual Breathing Unit) bag pressing. This project consist of the design of a low-cost portable mechanical ventilator which can easily be constructed and can replace the ambu bag pressing ventilation. This ventilator design has an easy control system with knob to regulate tidal volume, I:E ratio and breath per ratio and breath per minute. These parameters are displayed on inbuilt screen on the device. It is IOT enabled so that a doctor can easily monitor the conditions of the patients from anywhere in the world. The ventilator data's can be adjusted according to doctor's suggestions by a caretaker. By using SPO2 sensor it can continuously monitor patient's oxygen level in blood. And heart rate (BPM) is also monitored. The data are displayed on a computer screen or smartphone.

The following specification are achieved on the device.

- PEEP (usually achieved by a peep device, the value vary accordingly)
- CMV mode of ventilation
- I:E ratios (either 1 or 2)
- Tidal volume (300-550)
- Works on main supply as well as battery (230 V AC ,12 V DC)

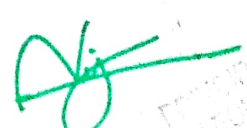

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ELECTRICAL



Figure 1: Students presenting their design prototype in front of Honourable finance minister Dr. T.M. Thomas Issac and Shri T P Ramakrishnan, Minister for Labour & Excise at Kerala State Drugs and Pharmaceuticals Ltd.

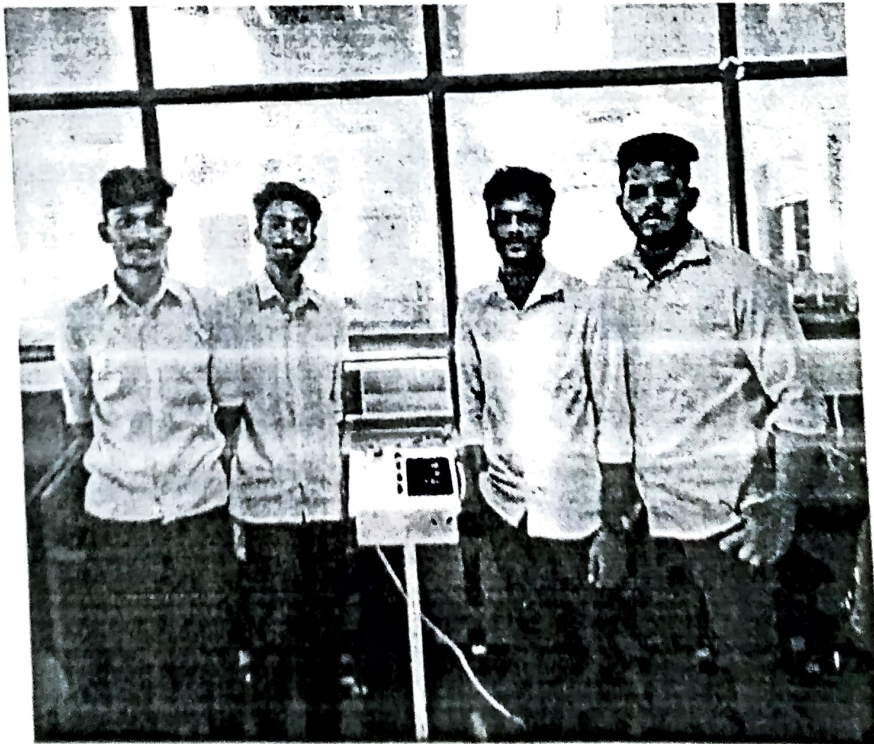


Figure 2: Third year mechanical students of Mangalam College of Engineering, Ananda Krishnan U B, Kiran Rajendran , Subin K John & Vithun Lal with the final working model of the "Portable Mechanical Ventilator."

Handwritten signature in green ink, possibly reading "Vithun Lal".

Budget

Milestones	Description	Estimated Time	Estimated Budget
Milestones	Description	Estimated Time	Estimated Budget
M1	Research & Development of the concept	60 Days	₹2000
M2	Purchase and Manufacturing of Parts	60 Days	₹8000
M3	Assembling	15 Days	-
M4	Testing	15 Days	-
M5	Calibration	30 Days	-
		Total	10000

MANGALAM DEPARTMENT OF ENGINEERING
LUMINA UNIVERSITY
BANGALORE

IEEE 3rd International Test Conference India 2019

21 Jul - 23 Jul 2019, Bengaluru.

EXPLARA

Order No. - QT102R-EEGIJIG-190714-013017-166-47870 Attendees : 1



Name	EUGENE PETER	Registration Type	Early Bird -
Registration No.	538	Faculty/Academicians &	IEEE Members (INR)
		Registration Price	INR 7000

Time & Venue

⌚ Sunday, Jul 21 2019 09:00 AM to Tuesday, Jul 23 2019 05:00 PM

📍 At The Leela Palace, 23,HAL Old Airport Road Kodihalli, Bengaluru, Karnataka, India, 560008

ORGANIZER

ITC SEMICONDUCTOR INDUSTRY SOCIETY .

Note : For any further clarification, you can reach out to **ITC SEMICONDUCTOR INDUSTRY SOCIETY .** at enggneela@gmail.com .

Terms and Conditions

Your Order No - QT102R-EEGIJIG-190714-013017-166-47870

If the event gets cancelled, the event organizer will be responsible for taking decision about refund. Explara.com is not responsible for your cancellation and refund.

Please carry ticket printout for entry to the event.

Please carry valid identity proof to the venue.

Cancellation and Rescheduling of tickets is not allowed.

Handwritten signature and stamp of the organizer.

3.1.1.1. Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs)

ACADEMIC YEAR: 2019-20

SL NO	NAME OF THE PROJECT	NAME OF AWARDING AGENCY	NATURE OF AWARD	AMOUNT OF GRANT FOR RESEARCH	DATE(DD/MM/YYYY)& DURATION
1	MAJOR PROJECTS	International Center for Entrepreneurship Technology (ICREATE), Ahmedabad, Gujarat	Non-Government	Rs.100000	2019-2020
2	Minor Projects	New Generation Energy Meter	Government	Rs.10000	2019-2020

PRINCIPAL


 KANGALAM COLLEGE OF ENGINEERING
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Fwd: iCreate SparkUp Idea Fund :important!

1 message

Emmanuel Joseph Shaji <shajiemmanueljoseph@gmail.com>
To: mariya.stephen@mangalam.in <mariya.stephen@mangalam.in>

Tue, Apr 12, 2022 at 13:35

----- Forwarded message -----

From: Udit N. Sia <udit_sia@icreate.org.in>

Date: Wed, 15 Apr, 2020, 12:30 pm

Subject: iCreate SparkUp Idea Fund :important!

To: Emmanuel Joseph Shaji <shajiemmanueljoseph@gmail.com>, Shantanu Chaturvedi <Shantanu.chaturvedi@icreate.org.in>, Vijoy KR <vijoy.kr@icreate.org.in>, Ashish Macwan <ashish.macwan@icreate.org.in>

Hello,

Congratulations! you have been selected for iCreate's SparkUp-Idea fund.

SparkUp Idea fund is given to the students who are aspiring to be entrepreneurs and to take their tech innovation-based idea to the next level. It is a fund of Rs.50,000 which is disbursed in 2 tranches. With this, you get access to our mentors, lab facilities and accommodation at iCreate campus.

Project UID: SP_0420_18

*note Project UID is required for further formalities.

Fund rules and guidelines:

- The fund can only be used for product development.
- A POC needs to be developed in 90 days.
- Funds will only be transferred after the due diligence document form is submitted and verified.
- Hard copies of the original bill with bank statements are required for next tranche.
- The team needs to visit the iCreate campus once a month for SparkUp update meetings.


Rules for tranche request and bills:

- All the bills need to be original and addressed to the individual's name.
- Bill should contain the authorised signature as required.
- Bill should have an invoice number and date.
- Bank statement of the individual with respective transactions are required.
- In the case of an online invoice, it should be a computer-generated invoice and self-attested.
- Your tranche request's first page needs to be filled Application for tranche. (Format link below)
- Your tranche request second page needs to be filled Top Sheet. (Format link below)

Reporting Format:

- There will be monthly update calls and campus visits.
- You need to fill the weekly update form attached below.
- **Progress Update form:** <https://forms.gle/otE2fmsfjBwuVO4aA>

Due diligence Form:


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- Due Diligence Form is mandatory and needed for fund disbursement.
- The bank details of the Team Lead will only be accepted. (Name needs to be same as the application)
- **Due Diligence Form:** <https://forms.gle/pcwzBD8Akj5J9RDs7>

(Please download the document formats below and send the hard copies with original bills)

Post Name: Udit Narayan Sia, Technology analyst (Software), iCreate

Post Address: iCreate, First floor, GMDC Building, 132 Ft Ring Road, Vastrapur, Ahmedabad 380052, India.

Application for Trance Request: https://docs.google.com/document/d/1PngMdV_Icn8I7gGM4aNYkj-nkAQSyTCqgzuzQVH_aCM/edit?usp=sharing

Top Sheet: https://docs.google.com/spreadsheets/d/1eBI45CL6qGAhWVe_Rw7m5jfujSEaZMf_BXKxnx3-8PY/edit?usp=sharing

*(The document, links and information above is confidential)

Udit N. Sia
Technology Analyst (Software)



linkedin: <https://www.linkedin.com/in/udit-narayan-sia-0baa9020/>


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STATEMENT OF EXPENDITURE

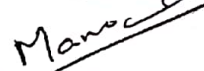
Income and expenditure statement for Major Project at Mangalam College of Engineering in the academic year 2019-2020(ICREATE)

Total income received-Rs 25000

Expenditure

Sl no	Items	Quantity	Annual cost(Rs)
1	Man Power,(Technical assistants)	4	8000
2	Consumables		13124.6
3	MISCELLANEOUS		3050
Total expenses			24174.6


Principal Investigator


Principal


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MANGALAM COLLEGE OF ENGINEERING
Ettimanoor



Anal E S <esanal1998@gmail.com> 1:18 PM (10 minutes ago)

to me

----- Forwarded message -----

From: Udit N. Sia <udit.sia@icreate.org.in>

Date: Fri, Mar 6, 2020, 10:14 PM

Subject: iCreate SparkUp Idea Fund :important!

To: <esanal1998@gmail.com>, Shantanu Chaturvedi <Shantanu.chaturvedi@icreate.org.in>, Ashish Macwan <ashish.macwan@icreate.org.in>, Vijoy KR <vijoy.kr@icreate.org.in>

Hello,

Congratulations! you have been selected for iCreate's SparkUp-Idea fund. SparkUp Idea fund is given to the students who are aspiring to be entrepreneurs and to take their tech innovation-based idea to the next level. It is a fund of Rs.50,000 which is disbursed in 2 tranches. With this, you get access to our mentors, lab facilities and accommodation at iCreate campus.

Project UID: SP_0320_17

*note Project UID is required for further formalities.

Fund rules and guidelines:

- The fund can only be used for product development.
- A POC needs to be developed in 90 days.
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- as the application)
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Post Address: iCreate, First floor, GMDC Building, 132 Ft Ring Road, Vastrapur, Ahmedabad 380052, India.

Application for Trance Request:

<https://docs.google.com/document/d/1PngMdV lcn8I7qGM4aNYkj-nkAQSyTCqqzzuQVH aCM/edit?usp=sharing>

Top Sheet:

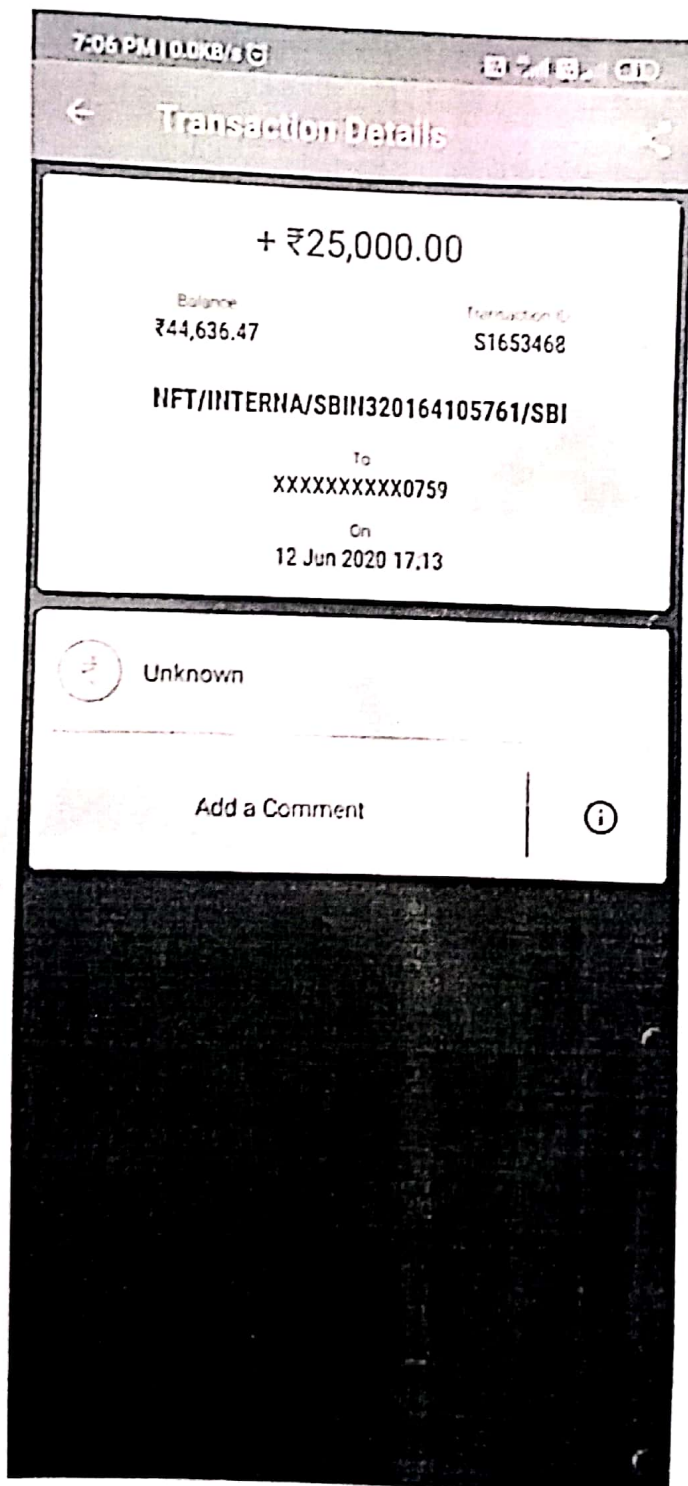
<https://docs.google.com/spreadsheets/d/1eBI45CL6qGAhWVe Rw7m5jfujSEaZMf BXKxnx3-8PY/edit?usp=sharing>

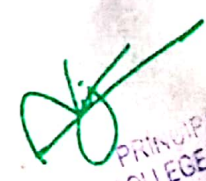
*(The document, links and information above is confidential)

Udit N. Sia
Technology Analyst (Software)



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STATEMENT OF EXPENDITURE

Income and expenditure statement for Major Project at Mangalam College of Engineering in the academic year 2019-2020(ICREATE)
Total income received-Rs 25000

Expenditure					
Sl no	Items	Date	Invoice no.	Quantity	Annual cost(Rs)
1	Round pipe	30/12/2019	PM-G-1186		
	Rect. Tube 2 1/2x1 1/2 6S			3.4kgs	250
2	x40mm 16Gu	27/12/2019	PM-G-1172		
3	Square Tube 20x20	27/12/2019	PM-G-1172	12.5kgs	
4	MS FLAT 25X3MM	27/12/2019	PM-G-1172	2kgs	
5	Square Tube 20x20	7/1/2020	PM-G-1232	1.8kgs	1000
6	MS FLAT 25X6 MM	7/1/2020	PM-G-1232	2.6kgs	
7	freewheel 24th	30/01/2020	PM-G-1232	8kgs	550
8	16* 1.75 c/j tube	30/01/2020	BC2913	2 nos	
9	MS FLAT 12X3MM	23/01/2020	BC2913	1 no	290
10	MS FLAT 20X3MM	23/01/2020	I/B4616/19-20	2kgs	
11	Round pipe 20mm	27/12/2019	I/B4616/19-20	2kgs	259
	Rect. Tube 2 1/2x1 1/2 6S		PM-G-1173	3.5kgs	
12	x40mm 16Gu	27/12/2019	PM-G-1173		
13	Arc welder	26/12/2019	3786	6.2kgs	640
14	Angle winder	26/12/2019	3786	1no	
15	4 ddc wheel	26/12/2019	3786	1no	
16	4" c o wheel	26/12/2019	3786	1no	
17	Welding rod 2.5m	26/12/2019	3786	4nos	
18	BM total impat	23/12/2019	6758	10nos	6617.6
19	Driller set	23/12/2019	6758	1no	
20	MS Angle 40x6mm	3/1/2020	6758	1no	2248
	HUB BACK 36 hole-		PM-G-1205	4.4KGS	
21	MTB	30/12/2019	BC2853	2NOS	200
	HUB AXLE BACK		BC2853		
22	BHOGAL	30/12/2019	BC2853	1no	
23	BALLS 1/4"	30/12/2019	BC2853	1 grs	240
24	Infra Square Tube	18/01/2020	PM-G-1295	2.1kgs	
25	MS Angle 25X3mm	11/5/2020	PM-G-157	5.900 kgs	140
	GI WELD MESH 1X1/2				
26	10G 4F	11/5/2020	PM-G-157		
27	MISCELLANEOUS	11/5/2020		24 SQ.FT	690
					10000
Total expenses					23124.6

Principal Investigator

Principal


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 MANGALAM COLLEGE OF ENGINEERING
 Ettumanoor



Kerala State Council for Science, Technology and Environment

Prof (Dr.) K.P. Sudheer
Executive Vice President
KSCSTE, Pattom

16.01.2020

Letter No. 01/SS/SPN/G/2019, KSCSTE

Dear Dr. Subash T.P.

Sub: Financial assistance for Student Project scheme of KSCSTE (reg).
Re: Your application received under Student Project scheme.

This is to invite your attention to the reference cited and to inform that the project proposal titled "NEW GENERATION ENERGY METER" submitted by Dr. Subash T.D as P.I. and Nimmi Cherian, C.V. Raveja James, Abin Thomas Sherin Sherivel as student investigator(s) has been approved. An amount of ₹9905/- is sanctioned by the Council. The budget estimate of the project is as detailed below.

SL.NO.	ITEMS	AMOUNT (₹)
1	Consumables	9085
2	Minor equipments	250
3	Travel	200
4	Research Literature & Documentation	300
5	Others (for analysis)	120
	Total	9905

The PI has to submit the signed Terms and Conditions (as per the guidelines) and the date of start of the project within two weeks to the undersigned. The project should be completed within six months and submit the certified soft copy of the final report (in pdf to ged.kscste@kerala.gov.in), audited Statement of Expenditure and Utilization Certificate counter signed by the Head of the Institution for releasing the grant. The format for final report, SE and UC can be downloaded from www.kscste.kerala.gov.in.

Thanking you,

Yours sincerely,

Prof (Dr.) K.P. Sudheer

To

Dr. Subash T.D, Professor, Dept. of Electrical & Electronics Engineering, Mangalam College Of Engineering, College Road, Mangalam Hills, Vettimukal, Ettimanoor, Kerala 686631

Copy to

The Principal, Mangalam College Of Engineering, College Road, Mangalam Hills, Vettimukal, Ettimanoor, Kerala 686631

Nimmi Cherian, C.V. Raveja James, Abin Thomas, Sherin Sherivel, Student(s), Bachelor of Technology (B.Tech) Electrical & Electronics Engineering, Mangalam College Of Engineering, College Road, Mangalam Hills, Vettimukal, Ettimanoor, Kerala 686631

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Ettimanoor

Sasthina Bhavan, Pattom P.O., Thiruvananthapuram - 695 004, Kerala State, India
Tel : 0471 - 2548200-09, EVP - 2543557, 2548222, MS - 2534605, 2548220, CoA - 2543556, 2548248
Fax : 0471 - 2540085, 2534605 e-mail : kscste@gmail.com, www.kscste.kerala.gov.in