# MANUFACTURING AND FABRICATION SPECIAL LAB PROJECT

Place: **AS Block, Underground floor**

Date: 1**/05/2022 to 18/09/2022**

## 1) Student Details

| NAME | DEPARTMENT |
|---|---|
| 1. RAGUVARADHAN S V<br>2. SUDHARSUN B<br>3. SOUNDER M<br>4. DARSHAN R<br>5. BALAKARRTHIKEYAN B<br>6. JAIDHANUSH C D K<br>7. KAUSHIK P<br>8. HARISH D<br>9. NAVEEN S<br>10.NALIN<br>PRIYADHARSHAN R | **ELECTRICAL AND ELECTRONICS ENGINEERING**<br><br>**MECHANICAL ENGINEERING** |

## FACULTY INCHARGE

**Mr. VIVEK KUMAR P**

## 2)Project Schedule:

| Timing | MONTH 1 | | MONTH 2 | MONTH 3 | MONTH 4 | MONTH 5 |
|---|---|---|---|---|---|---|
| 8:30 AM | Planning, what to gather | Discussion to programme | Preparing an idea to design | Gathering parts to assemble | Preparing the stage | Preparing by taking safety measures |
| 9:30 AM | Learning software | Designing | Designing body | Assembly | Corrections | Painting |
| 10:30 AM | | | | | | |
| 10:45 AM | Tea Break | Tea Break | Tea Break | Tea Break | Tea Break | Tea Break |
| 11:45 AM | Learning software | Checking the hardware by testing | Checking the stability | Sticking | Testing | Drying |
| 12:30 PM | | | | Assembly | Checking | |
| 1:30 PM | Lunch | Lunch | Lunch | Lunch | Lunch | Lunch |
| 2:30 PM | Learning hardware | Designing | Designing | Uploading the Code | Modification | Painting |
| 3:15 PM | | | | | Checking | |
| 3:30 PM | Tea Break | Tea Break | Tea Break | Tea Break | Tea Break | Tea Break |
| 4:10 PM | Concluding the task done | Concluding the task done | Concluding the task done | Checking | modification | Concluding the task done |
| 4:15 PM | | | | Concluding the task done | Concluding the task done | |

## 3) DAY WISE CONTENT:

| PROJECT SCHEDULE | | | | | | |
|---|---|---|---|---|---|---|
| **DESCRIPTION** | **MONTH 1** | **MONTH 2** | **MONTH 3** | **MONTH 4** | **MONTH 5** | **CONTIBUTION** |
| Learning the contents required for hardware | | | | | | **80%** |
| Developing the hardware | | | | | | **100%** |
| Designing the body and testing the body | | | | | | **70%** |
| Assembling the body parts and loading the components | | | | | | **70%** |
| Testing the prototype | | | | | | **100%** |
| painting and finishing | | | | | | **100%** |

## 4) PROJECT CONTENT:

**Modules**

i) Work Organization Management
ii) Learning hardware and about components
iii) Designing the body
iv) Assembling the body parts
vi) Corrections

## 5) PRODUCT DESCRIPTION

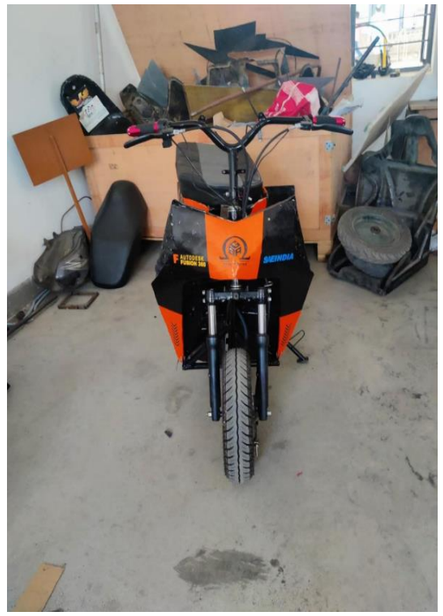
### ELECTRIC TWO WHEELER

In our electric bike, we have fixed a BLDC hub motor connected with the wheel which also produces regenerative braking. User control is usually attached to the handlebar to brake and adjust the speed. The electricity is stored using a battery and the locomotion and movement of the vehicle are hence propelled using an electric hub motor. In our electric scooter, we use a 48v lithium-ion battery. Its lifespan is 1000- 3000 charging cycles and 4 to 5 years. There is a provision for charging the battery by ejecting it from the main system. The controller gathers electricity from the battery and delivers an acceptable amount of electricity to the hub motor. We designed and implemented some features in display and innovations in our electric scooter. The design and chasing of our electric scooter are completed.

**PRODUCT COMPARISION**

| Our E-bike | Market E-bike |
|---|---|
| 1.We have made a prototype helmet which acts as a switch to start the bike | 1. There is no any Vehicle fault diagnosis |
| 2.To increases millage innovative millage switch is fixed. | 2. Only speed mode switch is available |
| 4. FRP body works is done to our vehicle | 4. Normal plastic materials are used |

## 6) PRODUCT PHOTOGRAPH



**ELECTRIC BIKE**

| S. No | PROJECT PRESENTATION | PAPER PRESENTATION | PATENT |
|---|---|---|---|
| 1 | SAE ETWDC -2022 | NIL | NIL |