

October 2020

**Subject:** Electric Vehicle Project Centre

**Title 1: Design of an Electric GP Motor Bike** for NADL, FMAE 2020

**Statement of purpose: Project Diary**

We expect to record details as per the format below

1. Introduction to motorcycles and automotive components
2. Geometry of the motorcycle with data on wheel base, caster angle, trail etc
3. 3D Modelling (main submission with assembly files, part files, views of the bike)
4. Basis of Electric DriveTrain with details on Brushless DC Motor Battery & Controller, DC-to-DC converters, BMS & HV contractor, Auxiliaries of the tractive system
5. Calculation of parameters like rate of discharge, voltage, current, power based on technical specifications with feature descriptions on steering, braking, frame, suspension, drive train, tractive system
6. Frame designing and simulation, with analysis on Frame of bike, frontal impact, steering handle, rims, shock absorbers, sprockets

7. Report presentation based on Ergonomics, Electric Drivetrain, Steering Wheel and Assembly, Braking system, Suspension design and analysis, Safety measures, Wheels and tyres, Benefits estimation